The Journal of Curriculum Theorizing

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Editor's Note

This issue opens with Janet Miller's poetic breaking of a long silence in curriculum literature. Follo[w]ing is Peter Taubman's fascinating analysis of discursive systems' part in the creation of gender divisi[on]ness. Using Foucault's work on discourse systems, Peter warns that concepts like "feminism" and "[gay] liberation" risk creating the divisions they want to mend . He has much more to say, and I recomme[nd] his and Janet's pieces with enthusiasm.

From these "landscapes of learning," as Maxine Greene might characterize them, we move to m[ore] specific issues of curriculum development and research, at least as they are understood from the tradit[ion] I have described as "conceptual-empirical." Leon Pines formulates a sophisticated frame for curricul[um] development which advances considerably Mauritz Johnson's well-known work on curriculum as '[in]tended learning outcomes." Next is George Posner's succinct summary of recent curriculum resear[ch] followed by Professor Searles' judicious history and analysis of science curriculum development.

In the third section of this over-sized issue are two fine studies in curriculum evaluation. Both wri[ters] are former students of Professor Eisner, whose The Educational Imagination has expanded in import[ant] ways our understanding of educational evaluation. First is Thomas Barone's well-written demonstra[tion] of one form of curriculum criticism. Then comes Gail McCutcheon's useful reflection on basic is[sues] in such criticism.

The first essay in the "special subjects" section is Jacques Daignault's and Glermont Gauthier's exci[ting] "The Indecent Curriculum Machine." While this work may prove initially irksome for those of us [im]merged in the Anglo-philosophic tradition, it merits a patient and sympathetic reading. I hope to [hear] more from these colleagues in Quebec. Next is Mary Doll's extremely interesting description of a Jung[ian] inspired course on dreams. Then comes Bonnie Meath-Lang's welcome discussion of Victor Frankl's v[iews] and its import for curriculum and teaching. Edward Milner's fine poem is next, followed by Philip Tay[lor's] useful recounting of the dominant metaphors in curriculum discourse and development.

The final section opens with Florence Krall's moving account of her exploration of the human[/] natural curriculum. It closes with Conrad Pritscher's at once amusing and sober contemplation of [edu]cational experience.

The book reviews -- edited by Madeleine R. Grumet -- conclude the issue.

Volume four will be the last volume published in two issues. Beginning with volume five the jo[urnal] will be published quarterly. The cover will be redesigned, and its size will be smaller. For those readers who have stayed with us since 1:1, let me take this opportunity to thank you. For those wh[o are] new readers, our thanks for subscribing; we hope you will stay. We look forward to seeing all o[f you] at the Airlie House next October.

W.P.

The Sound of Silence Breaking:
Feminist Pedagogy and Curriculum Theory

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The dream is recurring: The quiet is everywhere. It surrounds my classroom, penetrates the halls of the building in which I teach. I wait with my students for the voices, horrified that they might scream in rage, trembling that they may never whisper. We are on the edge, not quite knowing what holds back the sound, what prevents the total shattering of our silences.

The silence, of both myself and my students, belies the claim that we have overcome the social, economic, racial, sexual and personal constraints which have denied us our own hegemony over knowledge, our own power to decide about curriculum. The students, women and men——still tentative, passive, anxious to please, defensive, angry——separating their readings and classroom experiences from their everyday lives. And I, teacher, still struggling to speak, still laboring through years of internalized suppression of my own voice, still frightened at times by the strident cadence which accompanies utterance. How much it takes to break silence:

> how much conviction as to the importance of what one has to say, one's right to say it. And the will, the measureless store of belief in oneself to be able to come to, cleave to, find the form for one's own life comprehensions. Difficult for any male not born into a class that breeds such confidence. Almost impossible for a girl, a woman.[1]

I have attempted to break my own silences; I have voiced my concerns, especially of the "educational consciousness" of women. I have questioned the ways in which I transferred expectations of myself as woman into my profession of teaching. I ask: to what extent and in what manner do the layers of societal as well as personal expectations shape women's perceptions of themselves and their potentials to be educated as well as to educate?[2]

As I raise these questions, however, I am frightened by the silences which fall after the asking. I fear these silences. These are not, as Tillie Olsen explains,

> natural silences, that necessary time for renewal, lying fallow, gestation, in the natural cycle of creation. The silences...here are unnatural; the unnatural thwarting of what struggles to come into being, but cannot. In the old, the obvious parallels: when the seed strikes stone; the soil will not sustain; the spring is false: the time is drought or blight or infestation; the frost comes premature.[3]

The fear is that the unnatural silences will wrap us in complacency, lull us into comforting murmurs of completeness, or totally refute the existence of the questions, when, in fact, we only now are beginning to give voice to the questions which may increase and diversify our understanding of the field of curriculum and of the influences upon its development. The heretofore unspoken connections among gender, sexuality and curriculum are now emerging as central issues within the field. These issues carry the risk of being met with the unnatural silence, which stultifies, masks, thwarts.

To confront this unnatural silence then becomes the task which, in turn, may give form to my conceptions of feminist pedagogy and curriculum theory which reciprocate, inform, and alter one another. Curri-

Acknowledging this risk, Pinar notes that analysis of curriculum as gender text may function to make curriculum appear "...more contingent and historically constructed, necessarily subject to political and psychological critique."[14] He then raises questions regarding the importance of gender in curriculum research, and these questions provide a framework in which we may continue to intrude upon the unnatural silences. Among the questions:

1. How influential is the pre-oedipal period, the oedipal crisis, and its resolution in the determination of fundamental cognitive tendencies?
2. Is there and/or can there be a "women's" or "feminist" epistemology, and relatedly, a feminist curriculum?
3. Is there a male epistemology, and is "objectivism" in its various forms a symbolic male cogntive form?
4. How significant would a change in child-rearing patterns be in the development of character in children, and in the learning styles and successes of these children? What are the political and cultural problems and possible consequences of such changes?
5. Does the incipient discussion of gender borrow uncritically from languages which create rather than portray psychological phenomena?
6. What are the relationships between gender analyses of curriculum and autobiographical curriculum theory, between gender analyses of curriculum and political and economically-oriented curriculum scholarship?
7. To what extent does curriculum represent and reproduce heterosexuality and repress homosexuality?
8. What political issues will educators encounter as they study issues of gender and sexuality?[15]

The questions are not comfortable ones; however, they represent a series of spiraling concerns which have emerged from initial and divergent reconceptualist viewpoints. The process of the asking of such questions continues the work thus far within the reconceived curriculum field and enlarges the range of our voiced concerns.

The working through of these questions will necessarily require the integration of theories and methodologies which are derived from a variety of perspectives. I believe that tenets of feminist theory and pedagogy can contribute to the evolving conceptualization of issues of gender, sexuality and curriculum studies.

Feminist theory, much like curriculum, has emerged out of pragmatic experience and need. Reformists the first wave of feminists, produced little theory; they have concentrated on understanding the organiza tional strategies of the traditional patriarchal system; they have promoted the belief that women can do what men do, given the chance, but they have given little analysis to the underlying structures which shape men's actions. In attempting to "master" the management strategies of the prevailing system, reformist are much like the first curriculum people, who emerged as a response to administrative needs rather than a "an extension or application of an extant field..." Reformist feminists resemble those who first worked in the curriculum field, which

began and has remained until this past decade a field interested in 'solving practical problems rather than in intellectually understanding, in coherent, systematized ways, the multi-dimer sional functions of curriculum, and specifically its function in the phenomenon of huma learning.[16]

The critiques which since have emerged from the women's movement mirror recent perspectives of curriculum theorists. Socialist/Marxist feminists argue for an analysis of the class system which they claim is at the root of women's oppression. Women as an exploited labor force and as reproducers of the work force are issues which Socialist/Marxist feminists claim reveal the crux of the reformist contradiction. Similarly, curriculum theorists, Neo-Marxist in approach, work to reveal contradictions that reside in educational experience and to expose the structural relations that link class interest to curriculum.[17]

Radical feminists have extended the Socialist/Marxist analysis to include sexual oppression as the paradigm of all oppression. The revolutionary act resides in the creating of a new definition of women. Such an act requires a reconstitution of all knowledge and a concomitant creation of a new discourse. By declaring that the "personal is political," the radical feminists, like the reconceptualists who choose autobiography, introspection and psychoanalytic style of analysis, force the silence to be broken between the public and private domain.

Extensions of such work are now represented by the focus upon analysis of gender, sexuality and curriculum and by the feminist pedagogical processes which reflect an acknowledgement of the issues of diversity that such analyses imply.

Feminist pedagogy can provide an evolving conceptualization as well as enactment of the transforming of knowledge and culture. Feminist pedagogy forces redefinition of the relationship between teacher and student and recognition of the balance required to accomodate the new definitions of men and women.

Frances Smith Foster, teaching women's literature from a regional perspective in California:

> A good part of our courses could not be predetermined. Much of the subject matter would be identified and researched by the students themselves. It was they who were to determine individual projects, locate the data, and create new information for us all...for an understanding of the cultural and personal relationships between women, their literary filiations beyond region alone, and the sources of their creativity and sometimes of the silences...
> We found ourselves using the testimony, written and oral, of California women as sources for the study of their lives, of women's history, rather than purely as literary artifacts. The old distinctions between literary and historical study blurred for us; what mattered was the holistic encounter with the text.[18]

Sherna Gluck, describing women's oral history as one means by which to revision knowledge:

> Refusing to be rendered historically voiceless any longer, women are creating a new history-using our own voices and experiences. We are challenging the traditional concepts of history of what is 'historically important', and we are affirming that our everyday lives are history. Using an oral tradition, as old as human memory we are reconstructing our own past... Women's oral history, then is a feminist encounter, even if the interviewer is not herself a feminist. It is the creation of a new type of material on women; it is the validation of women's experiences; it is the communication among women of different generations; it is the discovery of our own roots and the development of a continuity which has been denied us in traditional historical accounts.[19]

Francine Krasno, on teaching a feminist writing workshop:

> Feminist writing makes a conscious attempt to show the lives of women as women see them, not as reflections of male fantasies or sexist myths; feminist writing uses a language in new

ways, considers the oppressive ways it has been used and changes them...
We never did away entirely with the student/teacher dichotomy; my role evolved out of the
needs of the students into one of facilitator/lecturer. I felt most comfortable facilitating the
open discussions although there was always the problem of students deferring to my opinion.
I countered this by asking them pointedly, "Well, what do you think about that?" and then
keeping quiet while they started to talk to one another.[20]

Melanie Kaye, on developing women's studies courses:

I constructed the course out of my thinking process, what I am aware of in the world, trying
to analyze how I problem-solve, how I assess situations and figure out how to act and what is
possible. I defined the goal of the class as providing necessary skills to attack the institution of
helplessness.[21]

I share these descriptions of the various approaches and purposes of women who are involved in the
teaching process to illustrate the aspects which comprise an evolving feminist pedagogy.

Such a pedagogy will emerge as we break through the boundaries of silence which have encompassed our
conception of ourselves and our powerlessness within the classroom. Pedagogy, which attends to authentic
concepts of teachers and students sharing their lives together, forces an articulation of identity as well as of
problems which are inherent in that articulation of the personal and the public. The pedagogy which emer
ges from the perspectives of curriculum and feminist theories is an active process; the pedagogy constantly
challenges the theory as we attempt to give life to our conceptions. As Charlotte Bunch notes:

Theory is a tool for passing on the knowledge we have gained from our life experiences... (We
need) to analyze personal experiences as well as political developments, to sort out our initial
assumptions about goals and analysis, to look at the strategies we used and why, and to eva
uate the results in terms of what could be leaned for the future... Then, to get students per
sonally involved, a teacher must challenge them to develop their own ideas and to analyze the
assumptions behind their actions... Such thinking involves an active, not a passive, relationship
to the world. It requires confidence that your thoughts are worth pursuing and that you can
make a difference. And it demands looking beyond how to make do, and into how to make
"making do" different——how to change the structures that control our lives.[22]

The process of changing the "structures that control our lives" is the process of challenging the unna
tural silences, of squelching the fear that overrides the asking of crucial questions which may direct us into
regions beyond the traditional realm of educational studies. The study of the relationships of gender, sexu
ality and curriculum may lead us in several directions, as Sandra Wallenstein has enumerated; we might ex
plore

1. an historical analysis of gender relations,
2. a socio-economic analysis that looks at the relation of gender to work, status, income
   and
3. a psychological analysis with respect to sexual relations and body consciousness.[2]

Extending these explorations, I strive to develop a conception of pedagogy which encompasses the reci
procal as well as contradictory relationship of theory to practice; breaking silence with my students create
a way for me to ground my fears of the unnatural silences and to focus my voice, my energies upon the
articulation of our work together. The silences will still move into uncomfortable corners of our mind

will still threaten to thwart in unnatural ways, will imply unspeakable thoughts. The silence has been broken, however, and will be broken again and again. The sound of silence breaking is harsh, resonant, soft, battering, small, chaotic, furious, terrified, triumphant. The tentative first murmurs are becoming a chorus.

> "And in breaking those silences, naming ourselves, uncovering the hidden, making ourselves present, we being to define a reality which resonates to us, which affirms our being, which allows the teacher and the student alike to take ourselves, and each other, seriously: meaning, to begin taking charge of our lives."[24]

FOOTNOTES

1. Tillie Olsen, *Silences* (New York: Delacorte Press/Seymour Lawrence, 1978), p. 27.
2. Janet L. Miller, "Women: The Evolving Educational Consciousness," *The Journal of Curriculum Theorizing*, 2:1, P. 238.
3. Olsen, p. 6.
4. Florence Howe, "Feminism and the Education of Women," *The Frontiers of Knowledge*, ed. Judith Stiehm (Los Angeles: University of Southern California Press, 1976), p. 90.
5. William F. Pinar and Madeleine R. Grumet, "Theory and Practice and the Reconceptualization of Curriculum Studies" in *Self and Structure*, eds. L. Barton and M. Lawn, p. 23, forthcoming.
6. Ibid., pp. 24-25.
7. William F. Pinar, "Gender, Sexuality and Curriculum Studies: The Beginning of the Debate," *McGill Journal of Education*, in press.
8. Peter M. Taubman, "Gender and Curriculum: Discourse and the Politics of Sexuality," *The Journal of Curriculum Theorizing*, 4:1.
9. Gayle Rubin, "The Traffic in Women: Notes on the 'Political Economy' of Sex," in *Toward an Anthropology of Women*, ed. Rayna Reiter (New York: Monthly Review Press, 1975), p. 200.
10. Pinar, "Gender, Sexuality and Curriculum Studies...," p. 7.
11. Ibid., pp. 7-8.
12. Ibid., P. 10.
13. Ibid., p. 12.
14. Ibid., pp. 12-13.
15. Ibid., p.13.
16. Pinar and Grumet, p.3.
17. Ibid., p. 24.
18. Frances Smith Foster, "Voices Unheard, Stories Untold," *Radical Teacher*, December 1979, pp. 19-20.
19. Sherna Gluck, "What's So Special About Women: Women's Oral History," *Frontiers: A Journal of Women Studies II* (Summer 1977): 3-5.
20. Francine Krasno, "On Teaching a Feminist Writing Workshop," *Women's Studies Newsletter V* (Fall 1977): 16-17.
21. Melanie Kaye, "Closeup on Women's Studies Courses: Feminist Theory and Practice," *Women's Studies Newsletter VI.* (Summer 1978): 21-22.
22. Charlotte Bunch, "Feminism and Education," *Quest*, 5:1, pp. 13-14.
23. Sandra Wallenstein, "The Reflexive Method in Curriculum Theory: An Autobiographical Case Study." (Rochester, N.Y.: The University of Rochester, 1980), p. 23.
24. Adrienne Rich, *On Lies, Secrets, and Silence* (New York: W.W. Norton and Company, 1979), p. 245.

Gender and Curriculum:
Discourse and the Politics of Sexuality

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Chapter 1
Gender and Curriculum

First as to curriculum: As the hitherto "invisible" and marginal agent in culture, whose native culture has been effectively denied, women need a reorganization of knowledge, of perspectives and analytical tools that can help us know our foremothers, evaluate our present historical, political and personal situation, and take ourselves seriously in the creation of a more balanced culture. (Rich, 1975, p. 30)

It is not a mind, it is not a body that we erect, but it is a man.... (Montaigne: Essays I, xxv)

Every educational system is a political means of maintaining or of modifying the appropriation of discourse, with the knowledge and the powers it carries with it. (Foucault, 1972, p. 227)

There can be little doubt that the feminist movement and more generally the 'sexual political' movements of the last decade have had a profound impact on schooling and education. Given the fact that schools exist in society, it is hardly surprising that those movements which have sought to alter prevailing structures in society would also affect the schools and the way education is conceptualized. Those 'sexual political' analyses and critiques which specifically address schools and education do so on two distinct but perhaps complementary levels. On one level, the criticism has taken the form of analyzing the sexism and gender-stereotyping embodied in the external aspects of schooling, that is those aspects which include the physical setting, the textbooks, the rules and norms, classroom interaction, the official and unofficial policies of the school and the power structures in schools. This approach can be seen as similar to what Jaggar (1977) has termed the "liberal" branch of feminism, or in terms of educational theory, what Kliebard (1975) has termed an "ameliorative orientation". The critiques and analyses proffered on this level tend to utilize mainstream research methodology, although not exclusively (Daniels, 1975; Kantner, 1975; Millman, 1975), and the conclusions or recommendations tend to be in terms of piecemeal reform. On the other level, 'sexual political' analyses and critiques have taken the form of analyzing the way gender differences are produced and maintained in the society and the schools and the ramifications of this for our concepts of education, educational research and our very notions of knowledge and human existence. The orientation here tends to be more theoretical and is akin to what some writers have called "radical feminism" (Jaggar, 1977; Firestone, 1972) or in terms of educational theory what Pinar (1975) has called "reconceptualizations" (Mitrano, 1978; Wallenstein, 1978; Miller, 1980). Recommendations or conclusions tend to call for a change in social structures or individual consciousness. I want briefly to summarize the critiques and analyses of education and schooling that can be seen as an outgrowth of or linked to the 'sexual political' movements that have expanded during the last decade.

Walum (1977) characterizes schools as an institution which systematically teaches all of its future citizens how they should think, feel and behave. They transmit and reflect the values, attitudes and social structures embedded in the general society. These attitudes, values and structures are seen as oppressing and dehumanizing women. Much of the liberal 'sexual political' literature on schooling has critiqued the

way they are transmitted. For example, within the last ten years there has evolved a body of literature criticizing the gender-stereotyping in the reading materials students are exposed to (U'Ren, 1971; Fisher, 1974; Joffe, 1974; Women on Words and Images, 1979; Steffere, 1975). These writers found that gender-stereotyping was pervasive in a variety of reading materials. Girls were depicted overall much less frequently than boys (Frasher and Walker, 1975). When females appeared at all, they were depicted as passive, other-directed, manipulative, delicate, dependent, cautious and lacking initiative, imagination and personhood. U'Ren (1971) found that femlaes were frequently depicted as the butt of jokes and the objects of humiliation. Not only were particular personality traits found to be differentiated between males and females with less socially acceptable traits (Broverman, 1970) assigned to females, but females were found to be depicted in vocations which are not highly valued in the society, while males were identified with vocations that are valued. Adult males and females were also found to be depicted according to gender stereotypes. Almost always shown in the generative role, women were not, however, depicted as carrying out some of the more creative functions of that role. These were assigned to males. Gender-stereotyping was also found to be prevalent in math books (Federbush, 1974) and history texts (Trecker, 1975).

Criticism of gender-stereotyping in textbooks has not only focused on its detrimental effects regarding women. Brannon and David (1976) and Walum (1977) have pointed out how gender-stereotyping can be viewed as also fixing males into particular roles and assigning particular personality traits to them. Although these roles and traits are generally esteemed by society, they also work to submerge males in a model of aggressiveness, competitiveness and psychic rigidity which, although consonant with the demands of a capitalist economy (Bowles and Gintis, 1976), inhibit the development of a multi-faceted personality.

There is another aspect to gender-stereotyping in the textbooks which has been addressed, although not extensively, by the liberal 'sexual political' critique of schooling. This aspect concerns the promulgation of paradigms for hetersosexual relationships (Lehne, 1976). Boys are most frequently pictured with other boys, whereas girls are rarely pictured with other girls. When depicted together females derive their identity from their relationship to males. They are the 'other'. Males necessarily then are relied on, and assume the position of power vis-a-vis females. It is only when depicted in male groups that males can relinquish the spotlight, the responsibility for leadership. Aside from being depicted as 'other', females are also shown as dangerous for they can manipulate men (U'Ren, 1971). To be manipulated though, the male must appear childlike, gullible. The only way that women are pictured as exerting power over men is in the role of manipulator/vamp (Haskell, 1974) and the only way for males to relinquish power is to become gullible children or to be subsumed in a group of other males. This whole paradigm is permeated with an ideology of romance (Greer, 1970). There are no alternatives presented. Any change in the paradigm seemingly requires the adoption of roles which have negative valences.

Reading materials are not the only embodiment of sexist values and gender-stereotyping in the school to be addressed. Sexual stratification also exists. Women have been found to be frequently guided into home economics courses and men guided to courses which are career oriented (Frazier and Sadlek, 1973). There is some evidence that guidance counselors channel women into what have been considered traditional female professions (Bull, 1974), and the sexual biases of vocational tests have been amply documented (Tittle, 1974). The athletic programs in high schools have also been analyzed in terms of their biases against women (Walum, 1977) and adverse effects on men (Coleman, 1976).

Aside from reading materials, stratification, vocational tests and athletic policies, the area of classroom interaction has also been analyzed in terms of gender-stereotyping in the classroom. The results have been inconclusive and somewhat contradictory, but a few generalizations seem warranted. Teachers appear to pay more attention to boys than to girls. Sears and Feldman (1974) found that boys received more disapproval or blame than girls did but also received more praise or approval. Serbin and O'Leary (1975) confirmed these findings. Some studies have also found that: (1) teachers use a harsher tone of voice when

addressing boys; (2) teachers' descriptions of good male and good female students adhered to a stereotypic view of both sexes; (3) girls are rewarded for staying closer to teachers, boys for venturing out on their own; (4) boys are more frequently punished for straying from gender-stereotypes than girls are.

Much criticism has also addressed the sexual inequality existing in schools as it manifests itself in the stratification of authority. For example whereas in the United States in 1973, 66% of elementary and secondary teachers were women only 19% of elementary school principals were women, 5% of junior high school principals were women. Administrative positions in the school seem to be overwhelmingly filled by males. Students then are exposed to a model of power which relegates women to low status positions.

One other area that has been analyzed in terms of sexism from a liberal 'sexual political' point of view concerns the rules governing conduct in the schools. Haubrich (1975) has said that the vast majority of laws governing schools tend to be a set of uncodified traditions. These traditions infringe on student rights in general but in particular reflect discriminatory attitudes toward women. Those traditions which are codified also tend to reflect discriminatory attitudes. For example, in the twenty-five states which allow dress codes, the overwhelming majority have much stricter codes for females than for males.

The criticism and analyses I have briefly summarized above point out the sexual stratification and gender stereotyping that the schools reflect and perpetuate. The implicit and at times explicit normative stance of these analyses and critiques is that the solution to these inequities is an equalization in the schools of the treatment of women and men and the division of resources including power. What is not particularly addressed by this criticism are the institutional structures themselves, and the structures of knowledge that have a privileged position in the schools. Furthermore, the criticism tends to be ameliorative, ahistorical and atheoretical in that it does not call for a change in the larger society as much as it calls for specific changes in the school; it does not offer a historical perspective on the way gender has been produced and maintained inside and outside the schools as much as it offers a picture of the asymmetrical ways males and females are treated in today's schools; and it does not intend or offer a larger theoretical perspective on schooling and sexuality as much as it intends or offers a particular description of particular aspects of schooling. This is not in any way to suggest that this level of criticism is invalid. If it were acted on, a major step in the direction of human rights and the eradication of sexual prejudice would be made. There is the possibility, however, that such a step would not necessarily alter the undergirding attitudes and structures that effect and create much of the life in the schools and that can be viewed as intimately linked to the way we produce and maintain gender arrangements in this society. For example, to open up positions of authority to more women or to infuse reading materials with non-discriminatory depictions of men and women would be a great stride forward, but neither would dramatically alter the structure of power itself in the schools, the kind of consciousness the materials promulgated or the ways of conceiving of knowledge that presently occupy a privileged position in the schools. We must turn to the second level of criticism if we wish to see how these issues are addressed and in particular we must look at the theory of patriarchy.

Collins (1974) has characterized patriarchy as being objective, rational, linear, logical, dissecting, abstract, unemotional, expedient, aggressive, hierarchical, exclusive and goal directed. Rich (1975) has suggested these characteristics: a defensive-offensive orientation, combative, status oriented, dualistic, fragmented and depersonalized. She goes on to say that feminism is a criticism and subversion of all patriarchal thought and institutions. During the late 1960's and early 1970's several radical educators depicted the schools as alienating institutions which fragmented individual consciousness and reflected the oppressive hierarchical structure of social institutions (Bowles and Gintis, 1976); employed a banking paradigm of pedagogy which submerged the individual (Freire, 1970); created a technological consciousness (Heubner, 1975); encouraged competitiveness, status seeking and dualistic thinking (Host, 1969); compartmentalized and absolutized knowledge (Silberman, 1970) and promulgated modes of knowing that, disguised as objective

inquiry, smacked of bias (Hampden-Turner, 1971). None of these critics, however, took into account or addressed the sexual roots of these problems. It is those critics and analysts who have been influenced by the 'sexual political' movements of the last decade and who can be seen as akin to radical feminists as opposed to liberal feminists that have sought to reveal the sexual roots of these problems.

The structure of schools, including institutions of higher education, are predominantly hierarchical (Howe, 1975). Kantner (1975) has explored the evolution of this model and in particular what she sees as the institutionalization of the "masculine ethic of rationality" (tough-minded, analytic, cognitive and unemotional). Such a hierarchy according to Daniels (1975) can be seen as a world organized both formally and informally to maintain dominance over females. Formally, the barriers against women are great (Roby, 1973). Informally, the hierarchy, dominated by men, systematically discriminates against women (Harris, 1970). How? For one, it is controlled by men who utilize a reward system biased toward behaviors and activities exhibited more often by men than women (Astin and Bayer, 1973). These behaviors and attitudes include competitiveness (ven den Berghe, 1976) and a split between personal and public worlds (Rich, 1975). Hochschild (1975) has suggested that to rise in the academic heirarchy necessitates having someone take care of the personal domain in one's life. Generally the custodian of this domain is the faculty member's wife. Furthermore, to rise in the hierarchy requires a commitment to research as opposed to teaching, research which is 'hard'. The dichotomy into 'hard' and 'soft' research reflects the dichotomy of personal and public and some of the prevailing attitudes mentioned above. 'Hard' research is good, 'soft' is infrequently rewarded. The latter is often seen as too 'subjective'. Such a dichotomy and value stance perpetuates, according to Carlson (1972), the functional myth that emotionalism is a sign of weakness and lacks 'truth'. Adrienne Rich (1975) sees the hierarchical structure of academia and the consequent emphasis on individual achievement and self-interest as creating isolation and functioning to work against any sense of collective interest.

One can see in these criticisms and analyses an attempt to reveal the sexual roots of the structures of educational institutions. The very structures of knowledge have also come under critique and been, analyzed by radical feminist writers, or more generally by those who write from a radical 'sexual political' orientation. Maxine Greene (1978) talks of a reality interpreted by men. To a large extent that reality is given interpretation in the institutions of higher education. The social sciences tell us who we are, what we are, who we have been and where we are going. Their description of reality constitutes to a large extent our public knowledge of ourselves. The description is compartmentalized into disciplines and it is a description which claims objectivity. Within the last few years, however, each of the disciplines has come under attack by feminist critics (e.g., Weisstein, 1971; Tenov, 1976; Daly 1973; Rubin, 1975; Millman and Kanter, 1975; Carroll, 1976). The gist of this attack has focused on several issues: (1) the methodology used has prevented the elicitation of certain kinds of material; (2) whole areas of inquiry have been overlooked because they have not been considered worthy of study; (3) generalizations to both sexes have been made based on the study of men only; (4) the research itself while claiming objectivity is value laden; (5) knowledge has been seen as something external to human consciousness; (6) the difficulty of introducing new ideas has been exacerbated because the extant knowledge and modes of inquiry produce knowledge consonant with what is already accepted and with the methodology itself; (7) what is considered knowledge of men, not human beings; (8) women have been devalued in all the disciplines; (9) a dualistic perspective, highly rational and technological has guided much extant research. Barabara Mitrano (1978) has summarized much of the radical feminist critique of research methodology and knowledge forms as they exist in schools today. I oversimplify, but basically she argues that mainstream methodology and the way knowledge is conceptualized and purveyed reflect the patriarchal attitudes mentioned above. They are characterized by quantification, objectification, manipulation, self-abnegation, ahistoricalness, technocratic control and dualism.

Some writers, most notably Madeleine Grumet (1979) have sought to analyze the role of gender in

epistemological construction. Simplified, her thesis is that the asymmetry of early childhood caretaking responsibilities creates a different world view for women than for men. The different psychic structures between males and females that evolve during and because of the matri-centered rearing of children are reflected in divergent epistemological structures.

A radical sexual political analysis has also irrupted in the field of curriculum theorizing. Curricularists such as Janet Miller, Barbara Mitrano, Madeleine Grumet, Sandra Wallenstein, Maxine Greene and William Pinar have begun to utilize feminist analysis and gender analysis in their critique of education. Mitrano (1978) writes:

> (F)eminist theology and curriculum theory have more in common than a phenomenological method. These commonalities deal with certain themes: Self, transcendence, education, and praxis. For some curriculum reconceptualists, education is a searching for and an affirming of Self. The meeting of this Self is a spiritual experience. Its manifestation takes place in a world in which one of the most fundamental aspects of one's experience is one's sexuality. (p. 4)

Wallenstein (1978) notes a similar relationship between feminist analysis and a "reconceptualized" curriculum field.

> Both fields evolve in response to the same source, disillusionment with life the way it is. They also display similar patterns of adaption in their stages of development as revolutionary theories... An understanding of how feminist principles when put into action, differ from patriarchal organizational principles, could add a new dimension of depth to curriculum theory. (p. 7)

For Maxine Greene a feminist critique "...is indeed the next step for women in education" (1978, p. 241). Janet Miller (1980) has advocated for both curriculum researchers and teacher-educators an intense scrutinizing of the way the prevailing 'sex/gender system' impacts on social and psychic structures, and Pinar (1979) has suggested the hiring of more males in primary schools to offset the asymmetrical early child care arrangements which he views as creating psychically and socially damaging sexual arrangements.

What is apparent about this level of 'sexual political' critique as it addresses education is that, unlike liberal 'sexual political' critique, it addresses the broader issues of the production and maintenance of gender differences from a more theoretical perspective and seeks to analyze how these differences are reflected in the prevailing power structures and knowledge structures in schools and educational theory. Furthermore, it calls for an excavation and analysis of the sexual roots not only of these structures but also of the individual's psychic structures (Miller, 1980).

We can see then that the 'sexual political' movements that have become increasingly vocal over the last decade have had and continue to have a profound impact on our views of schooling and education. The 'sexual political' discourses that have challenged the truths we have historically found in sexuality have reverberated through the field of education. The evolution of 'sexual political' analyses and critiques within the field of education do not represent some autochthonous transformation within that field but rather suggest the dispersion and infusion of those 'sexual political' movements and critiques that are seeking to alter prevailing social and psychic structures. An understanding of the way schooling and more broadly education are being analyzed in terms of sexuality and the way schooling and education have traditionally produced and maintained gender differences and sexual arrangements requires an investigation of the area of sexuality, both as it has been traditionally constituted and as it has been staked out and analyzed by contemporary 'sexual political' movements. Such an undertaking requires first a sketch of the way 'sexual politics' has infused itself into almost every aspect of our lives. It is to the spread of 'sexual politics' that I now turn.

REFERENCES

Astin, H., & Bayer, A. "Sex discrimination in academe." In A. Rossi & A. Calderwood (Eds.), *Academic women on the move*. New York, N.Y.: Russel Sage Foundation, 1973.

Bowles, S., & Gintis, H. *Schooling in capitalist America: Educational reform and the contradictions of economic life*. New York: Basic Books, 1976.

Brannon, R., & David, D. (Eds.). *The forty-nine percent majority: The male sex role*. Reading, Massachusetts: Addison Wesley Publishing Co., 1976.

Broverman, I. et al. "Sex role stereotypes and clinical judgments of mental health." *Journal of Consulting and Clinical Psychology*, 1970, 34, 1-7.

Bull, J. "High school women: Oppression and liberation." In J. Stacey, S. Bereaud, & J. Daniels (Eds.), *And Jill came tumbling after: Sexism in American education*. New York: Dell Publishing Co., 1974.

Carlson, R. "Understanding women: Implications for personality theory and research." *Journal of Social Issues*, 1972, 28, 17-32.

Carroll, B. (Ed.). *Liberating women's history: Theoretical and critical essays,* Urbana: University of Illinois Press, 1976.

Coleman, J. "Athletics in high school." In R. Brannon & D. David (Eds.), *The forty-nine percent majority: The male sex role*. Reading, Massachusetts: Addison Wesley Publishing Co., 1976.

Collins, S. *A different heaven and earth*. Valley Forge, Pa.: Judson Press, 1974.

Daly, M. *Beyond God the father: Toward a philosophy of women's liberation*. Boston: Beacon Press, 1973.

Daniels, A. "Feminist Perspectives in sociological research." In M. Millman & R. Kanter (Eds.), *Another voice: Feminist perspectives on social life and social science*. Garden City, N.Y.: Anchor Press, Doubleday, 1975.

Federbush, M. "The sex problems of school math books. " In J. Stacey, S. Bereaud, & J. Daniels (Eds.), *And Jill came tumbling after: Sexism in American education*. New York: Dell Publishing Co., 1974.

Firestone, S. *The dialectics of sex*. New York: Bantam, 1972.

Fisher, E. "Children's Books: The second sex, junior division." In J. Stacey, S. Bereaud, & J. Daniels (Eds.), *And Jill came tumbling after: Sexism in American education*. New York: Dell Publishing Co., 1974.

Frasher, R., & Walker, A. "Sex roles in early reading textbooks." In E. Maccia, M. Estep & T. Shiel (Eds.), *Women and education*. Springfield, Illinois: Charles C. Thomas, 1975.

Frazier, N. & Sadlek, M. *Sexism in school and society*. New York: Harper and Row, 1973.

Freire, Paulo. *Pedagogy of the oppressed*. New York: The Seabury Press, 1968.

Greene, M. *Landscapes of learning*. New York: Teachers College Press, 1978.

Greer, G. *The female eunuch*. London: MacGibbon and Kee, 1970.

Grumet, M. "Conception, contradiction and curriculum. *Journal of Curriculum Theorizing,* 3:1.

Hampden-Turner, C. *Radical man*. Garden City, New York: Anchor Books, Doubleday and Co., Inc., 1971.

Harris, A. "The second sex in academe." *American Association of University Professors Bulletin*, 1970, 56, 283-295.

Haskell, M. *From reverence to rape: The treatment of women in the movies*. New York: Holt, Rinehart & Winston, 1974.

Haubrich, V; & Apple, M. (Eds.). *Schooling and the rights of children*. Berkeley: McCutchan Publishing Corporation, 1975.

Hochschild, A. "Inside the clockwork of male careers." In F. Howe (Ed.), *Women and the power to change*. New York: McGraw Hill Book Co., 1975.

Holt, J. *The underachieving school*. New York: Pitman Publishing Corp., 1969.

Howe, F. (Ed.). *Women and the power to change*. New York: McGraw Hill Book Co., 1975.

Huebner, D. "Curricular language and classroom meanings." In W.F. Pinar (Ed.), *Curriculum theorizing: The reconceptualists*. Berkeley: McCutchan, 1975.

Jaggar, A. "Political philosphies of women's liberation." In M. Vetterling-Braggin, F. Elliston & J. English (Eds.), *Feminism and philosophy*. Totowa, New Jersey: Littlefield Adams & Co., 1977.

Joffee, C. "As the twig is bent." In J. Stacey, S. Bereaud, J. Daniels (Eds.), *And Jill came tumbling after: Sexism in American education*. New York: Dell Publishing Co., 1974.

Kantner, R. "Women and the structure of organizations: Explorations in theory and behavior." In M. Millman, R. Kantner (Eds.), *Another voice: Feminist perspectives on social life and social science*. Garden City, New York: Anchor Press, Doubleday, 1975.

Kliebard, H. "Persistent issues in historical perspective." In W.F. Pinar (Ed.), *Curriculum theorizing: The Reconceptualists*. Berkeley: McCutchan, 1975.

Lehne, G. "Homophobia among men." In R. Brannon & D. David (Eds.), *The forty-nine percent majority: The male sex role*. Reading, Massachusetts: Addison Wesley Publishing Co., 1976.

Miller, J. "Women: The evolving educational consciousness." *Journal of Curriculum Theorizing*, 1980, 2 (2).

Millman, M. "She did it all for love: A feminist view of the sociology of deviance." In M. Millman, R. Kantner (Eds.), *Another voice: Feminist perspectives on social life and social science*. Garden City, New York: Anchor Press, Doubleday, 1975.

Mitrano, B. *Feminism and curriculum theory: Implications for teacher education*. The University of Rochester: Rochester, New York, 1979.

Pinar, W. (Ed.). *Curriculum theorizing: The reconceptualists*. Berkeley: McCutchan, 1975.

Pinar, W. & Johnson, L. "Aspects of gender analysis in feminist psychological thought and implications for curriculum." *Journal of Education*.

Rich, A. "Toward a woman centered university." In F. Howe (Ed.), *Women and the power to change*. New York: McGraw Hill Book Co., 1975.

Roby, P. "Institutional barriers to women students in higher education." In A. Rossi & A. Calderwood (Eds.), *Academic women on the move*. New York: Russel Sage Foundation, 1973.

Rubin, G. "The traffic in women: Notes on the 'political economy' of sex. In R. Reiter (Ed.), *Toward an anthropology of of women*. New York: Monthly Review Press, 1975.

Sears, P. & Feldman, D. "Teacher interactions with boys and with girls." In J. Stacey, S. Bereaud & J. Daniels (Eds.), *And Jill came tumbling after: Sexism in American education*. New York: Dell Publishing Co., 1974.

Serbin, L. & O'Leary, K. "How Nursery schools teach girls to shut up." *Psychology Today*, 1975, 9, 56-58.

Silberman, C. *Crisis in the classroom: The remaking of American education*. New York: Random House, 1970.

Steffere, B. "Run, mama, run: Women workers in elementary readers." In E. Maccia, M. Estep & T. Schiel (eds.), *Women and education*. Springfield, Illinois: Charles C. Thomas, 1975.

Tenov, D. *Psychotherapy: The hazardous cure*. Garden City, New York: Anchor Press, Doubleday, 1976.

Tittle, C. "The use and abuse of vocational tests." In J. Stacey, S. Bereaud, J. Daniels (Eds.), *And Jill came tumbling after: Sexism in American education*. New York: Dell Publishing Co., 1974.

Trecker, J. "Women in U.S. history high school textbooks." In E. Maccia, M. Estep & T. Schiel (Eds.), *Women and education*. Springfield, Illinois: Charles C. Thomas, 1975.

U'Ren, M. "The image of woman in textbooks." In V. Gornick & B. Moran (Eds.), *Woman in sexist society*. New York Basic Books, 1971.

van den Berghe, P. "Academic gamesmanship." In R. Brannon, D. David (Eds.), *The forty-nine percent majority: The male sex role*. Reading Massachusetts: Addison Wesley Publishing Co., 1976.

Wallenstein, S. "Notes toward a feminist curriculum theory." *Journal of Curriculum Theorizing*, 1978, 1, (1), 186-190

Walum, L.R. *The dynamics of sex and gender: A sociological perspective*. Chicago: Rand Mcnally, 1977.

Weisstein, Naomi. "Psychology constructs the female." In V. Gornick & B. Moran (Eds.) *Woman in sexist society*. New York: Basic Books, 1971.

"Women on words and Images. Look, Jane, look. See sex stereotypes." In J. Stacey, S. Bereaud, J. Daniels (Eds.), *And Jill came tumbling after: Sexism in American education*. New York: Dell Publishing Co., 1974.

Chapter II
The Most Public Revolution

It may be that a second wave of the sexual revolution might at last accomplish its aim of freeing half the race from its immemorial subordination——and in the process bring us all a great deal closer to humanity. It may be that we shall even be able to retire sex from the harsh realities of politics, but not until we have created a world we can bear out of the desert we inhabit. (Millett, 1971, p. 474)

In 1971 a book appeared entitled Woman's Estate. The author, Juliet Mitchell, called the 'women's liberation movement' "——the most public revolutionary movement ever to have existed". She saw this movement as the embodiment and reformulation of the radical and revolutionary programs that had been advanced in this country during the last several decades:

(T)he revolutionary or radical tradition it draws on: 'the politics of experience', the spontaneist methods of anarcho-syndicalism and the situationists, the separatism of Black Power, socialist theories of the unity in struggle of oppressed peoples, the concept of itself as a grass roots, potentially mass movement. (Mitchell, 1971, p. 13)

Women's liberation includes within its somewhat shadowy circumference most political positions developed during the sixties and before. (Mitchell, 1971, p. 67)

Mitchell saw in feminism a movement which not only drew on previous radical movements, particularly those of the sixties, but subsumes those movements and refocused them on the plight of women. The concerns of other oppressed groups would not be slighted by feminism but rather would be absorbed in what she called a movement of 'totalism'.

'Totalism' is the expression of the protest against all oppressive conditions in the form of an assertion of complete liberation involving the overthrow at one blow of the whole of capitalist society. In 'totalism' the oppression of one group stands for the oppression of all. (Mitchell, 1971, p. 24)

Although Mitchell herself advocated a socialist analysis of social oppression and went so far as to state that the major theoretical battle in the future might well be between "liberationists with a social analysis and feminists with radical feminist analysis" (Mitchell, 1971, p. 91), she was representative of those theoreticians such as de Beauvoir, Friedan, Millet, Morgan, Greer and Firestone who had begun to stake out a whole new area for the movements for radical social change to focus on——the area of women's oppression:

The oppression of women is the primary oppression in all societies. Whatever their mode of production, a revolution here is the priority. (Mitchell, 1971, p. 51)

The starting point in the attempt to analyze and alter prevailing social conditions would be the oppression of women. What became increasingly apparent thought was that any analysis of the 'estate' of women would have to address the broader and vaguer issue of sexuality or to borrow Dorothy Dinnerstein's term, the issue of 'sexual arrangements'.

By sexual arrangements I mean the division of responsibility, opportunity and the privilege that prevails between male and female humans, and the patterns of psychological interdependence that are implicit in this division. The specific nature of such arrangements varies, often dramatically under varying social conditions. (Dinnerstein, 1977, p. 4)

The need to address this broader issue came primarily from two groups: radical lesbians and those men who considered themselves 'men's liberationists'. Radical lesbians such as Jill Johnston and Ti-Grace Atkinson demanded that the women's movement address the whole question of heterosexuality or heterosexism, and some radical lesbian theoreticians advanced the thesis that the women's movement would have to advocate separatism if the movement was to succeed. At the same time, in the early and mid-seventies there arose what was referred to as 'men's liberation'. Writers such as Joseph Pleck and Jack Sawyer advocated a movement of 'feminist men', took up the critique proposed by the women's movement and began to analyze such concepts as 'masculinity', 'male sex-roles', and 'homophobia'. The majority of writing that came out of the male liberation movement focused either on the way men oppress women or on the way men themselves are oppressed by male sex-roles. What is important to understand about both these trends is that in their early stages they saw themselves as part of the general movement of feminism and yet they broadened the area addressed by that movement by raising the question of heterosexuality and masculinity. They infiltrated the whole area of sexuality by both subjecting it to political analysis and by stretching or evolving the meaning of the term.

Within the last few years there has arisen an increasingly vocal gay liberation movement. Although the rise of this movement can be traced to the Stonewall Riot of 1969 and has its own historical antecedents in certain organizations such as the Mattachine Society and in a corpus of writing which includes the works of such authors as Walt Whitman, Edward Carpenter, Alan Ginsberg, William Borroughs and Jean Genet, it has only been recently that an active movement and a comprehensive analysis of society has arisen. The 'radical homosexual analysis' of prevailing social conditions has in a sense incorporated that of the men's liberation movement. As Ginsberg (1978) saw in the early 1970's:

> (T)here's a lot of political and communal development open to the gay lib movement as it includes more and more varieties of love, besides genital, and it may be that the bridge between gay liberation and men's liberation may be in the mutual recognition of the masculine tenderness that was denied both groups for so long. (p. 102)

The gay liberation movement has, like the men's liberation movement, extended the terrain on which "the most public revolutionary movement ever to have existed" lays claim.

What all this means quite simply is that the movement to end the oppression of women has continually over the last few years expanded, diversified and staked out new areas; it has both extended the area called sexuality the starting point for it own genesis and by analyzing and affecting almost every facet of social life from that position, brought almost every facet of social life within the domain of sexuality. Not only have the movements for social change in this country and the movements to resist that change been drawn along sexual lines (Gordon and Hunter, 1977) but the very roots of social reality are increasingly seen as sexual. Furthermore, with the addition of the gay rights movement and the radical lesbian movement, the revolution which originally focused on women's oppression has broadened into what might be called, to use an older term, in a more comprehensive way, 'sexual politics'. Finally, the promise of 'totalism' that Juliet Mitchell wrote of in 1971 has seemingly been kept. More and more writers have sought to analyze what Dorothy Dinnerstein has termed the 'psychopathology' or 'malaise' pervading our culture in terms of its sexual roots. For example, in Black Macho and the Myth of the Superwoman Michele Wallace (1979)

analyzes the lack of success of the 'Black Revolution' of the 1960's in terms of the sexual myths, attitudes and conditions that existed at that time for and throughout the history of the Blacks in this country.

> The Black Revolution (was) a revolution subsequently dissipated and distorted by their inability to see each other clearly through the fog of sexual myths and fallacies. (p. 13)

Mary Daly (1979) discusses the technological state, the proliferation of nuclear weaponry, the holocaust capacity of nuclear energy and the 'energy crisis' in terms of 'patriarchal necrophilia' and the distortion in our sexual arrangements that bring about such a spector of hell on earth.

> Technologists from Christian culture have led the way in acting out the Apocalyptic myth, making the magic mushroom cloud, fathering the fireball. ——————Scientists are priests of patriarchy performing the last rites. (p. 103)

> The civilized governments of patriarchy are run by terrorists. The plutonium has already been hijacked. The Unholy Trinities are in charge of it. The powerful men are possessed by patriarchal myth and faithfully follow the blueprint in the Book of Revelations. (p. 104)

> The ultimately Holy War centers around the only genuine 'energy crisis.' Its focus is the wrenching free of female energy which has been captured and forced into prostitution by patriarchy, degraded into fuel for continuing its necrophilic processions. (p. 105)

Writers who speak from a radical gay perspective have seen homosexuality itself as a position that can be used to put into question the conceptual structures undergirding American society. William Borroughs (1978) writes:

> As far as I'm concerned there are two advantages in being gay. One is that it's absolutely sweet and blissful and everything one would ever want. And second, if used properly, it's like an instrument for cutting through conception and conception has to do with structures which are heterosexual and homosexual. (p. 30)

The whole question of power has been addressed by several writers in terms of its sexual identity. Alan Ginsberg (1978) has questioned the facile way certain groups use the term as if they were ready to take to the streets with guns:

> The question does finally boil down to the machismo, —here in the United States in terms of revolutionary tactics. Gay lib, in a sense, has a good approach to straight people with smug, middle-class ideas about power coming out of the barrel of anything, actually. (p. 117)

Guy Hocquenghem (1978) writing in Homosexual Desire demands that we question the old notions of power:

> We must give up the dream of reconciling the official spokesmen of revolution to the expression of desire. We cannot force desire to identify with a revolution which is already so heavy with the past history of the "workers movement." Revolutionary demands must be derived from the very moment of desire; it isn't only a new revolutionary model that is needed, but a new questioning of the content traditionally associated with the term "revolution," particularly the notion of seizure of power.

The gay movement, along with certain other left-wing movements, has been successful in exposing the reactionary implications of waiting for an upheaval to come from some rough muscle-bound, virile proletariat. (p. 121)

The sexual roots of social reality are increasingly uncovered, ripped out and held up to the intense light of political analysis. I need not catalogue the areas, the facets of social reality that have been brought within the purview of sexual politics. Suffice it to say that they range from the family to schooling, from academic disciplines to theology, from the daily exchanges between individuals to the job market. The environment is seen as man-made both in the sense that Peter Berger (1967) used the term man-made, that is, generically and more importantly in the sense that it is made by 'men'.

It is not only social reality that has been staked out as an area for a sexual-political analysis but also the 'individual'. It should come as no surprise that a feminist or radical homosexual or more generally sexual political analysis of the individual would turn to Freud although a reformulated Freud, a Freud purged of what Lee Johnson (1979) has termed "certain fantastic theoretical conclusions—for instance, the assertion that child-bearing represents the acme of the female's troublesome masculinity" (p. 1). If the sexual roots of psychic structures are to be analyzed Freud would seem to be the logical person/text to whom/which one would turn. Several writers have relied on Freud, although a Freud seen through the lens of feminism in general or in particular through the lens of certain radical French psychoanalysts such as Jacques Lacan. Writers such as Dorothy Dinnerstein (1977), Gayle Rubin (1975), Lee Johnson (1979) and Nancy Chodorow (1978) have attempted to describe the subtle but profound dynamics that exist in the mother-child relationship and that produce psychic structures which perpetuate the 'sexual misery' that pervades a social life.

> A central rule under a strikingly widespread range of conditions is first, that men act sexually more possessive than women and second, that women act less free than men to seek 'selfish' sexual pleasure.——————The rule will not be understood or centrally changed until people see that it rests not only on brute force, practical pressure, societal coercion, but also on something subtler and harder to defy: it is supported within each person on that stubborn wordless level of adult feeling which is continuous with infant feeling and with the emotional realm of early childhood. (Dinnerstein, 1977, p. 38)

The entire constellation of emotions ranging from love to jealousy from hate to fear are seen as derived from the original locus of the individual's character formation——the Oedipal situation.

> For male sexual jealousy exists so strongly because the woman who gives herself to his competitor reawakens in him the situation when the mother, unbearably, did not belong to the baby.

> The girl (daughter) has to some extent become the mother. To the extent that her man is identified with the mother (through physical characteristics) she will be susceptible to the same kind of jealous feelings. (Dinnerstein, 1977, p. 92)

As Chodorow, Dinnerstein, Rubin and Johnson suggest, the fact that women are primary caretakers in this society fixes the configuration of the Oedipal crisis and produces in Johnson's words:

> (an) essential asymmetry in the experience of females and males——(which) insure(s) the kinds of asymmetry in relational potentials that are so tiresomely familiar in everyday life. (Johnson, p. 12)

Other writers, who have focused on the concept of 'sex-roles', have begun to loosen the bonds between facets of the individual's identity and the individual and revealed the sexual roots of those facets. No longer can one identify oneself as a 'bread-winner', 'homemaker', 'jock', 'cheerleader', 'bachelor', 'secretary' without at least being cognizant of the particular sexual ideology that supports these identities. The individual or 'subject' has become sexualized. This is not to say that the individual was not 'sexualized' prior to the rise of feminism and the movement I have termed 'sexual politics'. Men and women have for centruies, perhaps always, constituted their identity on their sexuality. As Michel Foucault (1978) has said:

> Since Christianity the Western World has never ceased saying: 'To know who you are, know what your sexuality is.' Sex has always been the forum where both the future of our species and our 'truth' as human subjects are decided. (p. 152)

With the use of sexual politics, however, the historical configuration of identity has not only been put into question but extended. If in the past men and women based who they were to a great extent on their physical anatomy and what those anatomical differences meant, the putting into question of those meanings has paradoxically resulted in a continued search for identity in sexuality. If in the past an individual's identity was seen as configured around his homosexuality, today that same individual configures his identity on his homosexuality. But of course there is a difference and that difference resides in the particular view of homosexuality. Whether one is 'in the closet' or a radical homosexual or radical lesbian[1] one's identity is still structured along sexual lines. If "(s)ex has always been the forum where both the future of our species and our 'truth' as human subjects are decided," then the revolutionary movement of sexual politics has both entered that forum and questioned the old 'truths' and enlarged that forum with new 'truths'.

Sexual politics then has staked out an area which includes the individual and the social context in which that individual is embedded, has made that area speak of its sexual roots, its sexual ontology, and has sought to change that area, to alter its landscape, to in effect create a new area based on a new sexuality. The movement which started by analyzing and seeking to change 'woman's estate' has expanded, dispersed itself to the point where it also examines 'man's estate' where it ultimately contains in its analysis the 'human estate'. And it is here, on this vast expanse that has been staked out and 'sexualized', that "the most public revolutionary movement ever to have existed" is waging its battle. It is here that the questions of power, the revolution, 'truth' and the future are being asked and answered. It is here that the lines of resistance to change are drawn and the knots and paradoxes in any revolutionary movement are appearing. It is on this terrain that new discourses are emerging and old ones eroding, new 'personages' are forming and old ones fading. It is here that the ruptures, in the form of eruptions and irruptions are occurring in our view of the world. It is here that the potential for a new morality lies and it is here that the possibility of a hideous barbarism with a new face lurks. It is here too that capitalism is being challenged by a feminist socialism and as Juliet Mitchell predicted, a feminist socialism is being challenged by radical feminism. It is here, finally, on this vast 'sexualized' territory that the human body, human consciousness and social reality are being interrogated, defended, reformed and created along sexual lines. It is here that the discourses on sexuality are proliferating, diversifying, circulating, forming and dissolving in a mammoth undertaking to change the world, in a monumental march 'toward the truth'.

It is this vast field that I intend to survey. I shall try to describe the various discourses on sexuality, locate the points of resistance and infiltration, map the erosion of some discourses and the engorgement of others; attempt to analyze the knots and invariance in certain discourses and sketch the way power in its

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[1] The distinction between homosexual and lesbian is at least in recent writing being made since as one critic has stated, the writing on radical homosexuality has frequently neglected the issue of lesbianism and incorrectly subsumed the radical lesbian analysis under the male homosexual one.

various forms moves like an invisible stream on this surface. I wish to address how it is that the discourses which form this territory of sexuality can result in the alleviation of misery or in the creation of it. How is it that the movement I have labeled 'sexual politics' which starts with sexuality and the sexual attitudes and structures we are caught in, and stretches through questioning these attitudes and structures to their limits, how is it that this movement which exists relative to these attitudes and structures can transcend them?

Having set myself the task of surveying the various discourses on sexuality with particular attention to those I have temporarily grouped under the term 'sexual politics', it is time for me to explain exactly what is meant by this term 'discourse' and the kind of analysis required to investigate it. But first, a few prefatory comments.

I have used the term 'sexual politics' to refer loosely to those movements and viewpoints as feminism, radical lesbianism, radical homosexual analysis, men's liberation and gay liberation. I suggested that the term which was originally coined by Kate Millett (1971) to refer to the relations of power between men and women and the formation of those realtions and to politicize and thereby put into question the historical subordination of women by men, had over the last decade broadened its purview to include all aspects of our existence and had expanded with the infusion of other movements whose foci were other than, although not exclusive of, the specific oppression of women by men. On the most general level then, 'sexual politics' can be seen as a reaction and challenge to the 'truths' we have historically sought and found in our sexuality and as an attempt to re-divide, re-categorize and re-formulate the grid of sexualtiy that has shaped and continues to shape social/psychic phenomena. On another level, however, the unityof 'sexual politics' is far from evident. Even within feminism there are divergent and incompatible theories, viewpoints and attitudes, and these divergent perspectives not only divide up and formulate sexuality in very different ways but also produce versions of society and the individual that are profoundly different from each other. The task then is to analyze the way 'sexuality' in its broadest and most specific senses has been produced and re-produced, divided up and re-divided, employed and deployed in both the movements to alter society and the individual and the movements to resist that alteration, in the analyses that explain phenomena in terms of their 'sexual' roots and those which neglect 'sexuality'. To carry out this task requires that I hold in suspension the unities that have traditionally grouped phenomena into such figures as 'man', 'woman', 'homosexual', 'heterosexual', or that have emerged in the variety of 'sexual-political' writings and regrouped phenomena into such figures and constructs as 'patriarchy, 'gays', lesbians', 'woman', 'man'. But I also wish to suspend such unifying constructs as 'the subject', 'consciousness', 'ideology' and notions which are often used in an analysis of social reality such as tradition, continuity, influence. This suspension serves several purposes. First, it allows a whole field of heterogeneous phenomena to emerge which can be analyzed in terms of how they are grouped, divided and produced. Second, it allows certain questions to be asked. For example, is there a body of thought which can be unified under the term 'sexual politics'? What is it that holds this body of thought together and will this unity be the same or different from the assumed unity of it now? If, for example, 'feminism' or 'gay liberation' are challenges to the historical 'truths' that we have traditionally found in sexuality, do they reflect or perpetuate on some level the very sexual grids they are challenging? If sexuality is the grid applied to social/psychic phenomena in order to re-divide, re-categorize and re-formulate these phenomena, how is sexuality itself divided, categorized and formulated in that effort and on what is its ordering based? If terms such as 'patriarchy', 'feminism', 'radical homosexual' or 'radical lesbian' require 'the Other', how is that 'Other' defined and what is their relationship? Finally, to paraphrase Jean Genet's question in his preface to The Blacks, what is a 'man' and what is his sex? What is a woman and what is her sex? What is a homosexual and what is his sexual preference? What is a lesbian and what is her sexual preference? What is a heterosexual and what is her/his sexual preference?

The third purpose of a suspension of generally accepted unities is to allow the issue of power to emerge in a particular light. Power becomes less an asset that one possesses or does not possess and is seen rather as a process of immobilizingexperience throughan orderingof it and as existing in the very process of ordering.

In this sense the very grids that divide and produce, re-divide and re-produce sexuality, for that matter the entire ordering of phenomena becomes political, is a question of power. The consequence of this is that one must question whether such unities as 'the individual' as opposed to 'the State' or 'the feminist' as opposed to 'Patriarchy' or the 'lesbian' or 'homosexual' as opposed to 'heterosexist society' are in and of themselves categories caught up in a web of power relations to which they are ostensibly opposed. It also puts into question certain notions of power articulated in terms of repression and liberation. To take one example, one which I shall expand on later, the generally accepted version of Victorian sexuality presents a picture of sexual repression. Overly simplified the story generally goes that the open sexuality of the seventeenth century was gradually repressed by the Victorian bourgeosie. Silence replaced openness and sexuality moved from the home to the brothel. Emergent capitalism required a population divested of sexual energy except reproductive energy. Gradually, however, over the following decades and culminating in the 1920's and 1960's, sexuality was again liberated from its repression. Over-simplified, that is how the story goes. By suspending the unity of 'sexuality' as well as other unities a different picture emerges. First, as Michel Foucault points out in Vol I of The History of Sexuality (1978), the Victorian silence was far from silent. A proliferation of medical and psychological discourses on sexuality emerged suggesting that the production of discourse rather than its repression constituted the functioning of power. Second, and more to the point, the 'sexuality' that was repressed was a sexuality divided up, formulated and produced by a specific grid that was necessarily tied to the general construction of sexuality at the time. Which leads to two separate but complementary questions. Was the 'sexuality' that was repressed in Victorian times the same sexuality that was liberated in recent times, in which case it would remain in the larger construct of sexuality that such a liberation opposed? Or if on the other hand it was not the same or similar, does not the notion of repression as one where in 'truth' is held down by 'falsity' or 'half-truth' dissolve into a question of what use particular discourses served in the maintenance and construction of social reality. It may well be that the model of repression/liberation serves to perpetuate the very power structures it seeks to dismantle.

Fourth, and finally the suspension of unifying constructs and notions allows for an examination of how these constructs are used, exchanged and employed, the conditions that create and are created by them and the way the various grids that produce and divide up sexuality are inscribed in the social life, the institutions and the materiality of existence at a particular historical moment. 'Sexuality' rather than treated as a unified substance emerges as a series of structured relations to objects which determine the organization of the body.

These then are the purposes of suspending the generally accepted unities such as 'sexuality', 'man', 'woman', etc. But what are these phenomena that are freed and of what do the grids that order these phenomena that are freed and of what do the grids that order these phenomena consist? In what realm are we? The phenomena that are freed are at the most basic level 'statements' or 'discursive events'. The grids that order them are discursive formations. And, as should be apparent the realm we are in is the realm of language and discourse.

The domain in which I wish to situate this investigation of 'sexuality', 'sexual politics' and "the most public revolutionary movement ever to have existed" is broadly speaking the domain of language. This is not to say that the method of investigation is analogous to linguistic analysis or logical analysis or the methods employed in semantic anthropology. Rather I have employed what has been termed 'discursive analysis' (McDonell, 1977) or 'anthropological analysis' (Foucault, 1972). Defined and articulated by the French post-structural, social historian/philosopher Michel Foucault, the method has had a profound impact on French intellectual thought (Robert D'Amico, 1978). The project which Michel Foucault has outlined in several books can be seen as an attempt to describe the functioning of discursive systems which interacting with non-discursive systems create social reality and can lead to increased domination and control over individuals and populations.

Let us turn then to the work of Michel Foucault, particularly The Archeology of Knowledge, wherein Foucault defines his method of analysis.

REFERENCES

Atkinson, T. *Amazonian odyssey*. New York: Music Sales Corporation, 1974.

Berger, P. & Luckman, T. *The social construction of reality*. Garden City, New York: Anchor Books, Doubleday and Co., 1967.

Burroughs, W. "An interview with William Burroughs." In W. Leyland (Ed.) *Gay sunshine interviews*. San Francisco: Gay Sunshine Press, 1978.

Chodorow, N. *The reproduction of mothering: Psychoanalysis and the sociology of gender*. Berkeley: University of California Press, 1978.

Daly, M. *Gyn/ecology: The metaethics of radical feminism*. Boston: Beacon Press, 1978.

D'Amico, R. "Reviews." *Telos*, 1978, 36, 167-182.

Dinnerstein, D. *The mermaid and the minotaur: Sexual arrangements and human malaise*. New York: Harper Colophon Books, 1977.

Farrell, W. *The liberated man*. New York: Random House, 1974.

Fasteau, M. *The male machine*. New York: McGraw-Hill, 1974.

Foucault, M. *The archeology of knowledge*. New York: Pantheon Books, 1978.

Foucault, M. *The history of sexuality*. New York: Pantheon Books, 1978.

Foucault, M. "Power and sex: An interview with Michel Foucault." *Telos*, 1977, *32*, 152-161.

Ginsberg, A. "An interview with Allen Ginsberg." In W. Leyland (Ed.) *Gay sunshine interviews*. San Francisco: Gay Sunshine Press, 1978.

Gordon, L. & Hunter, A. "Sex, family and the new right: Anti-feminism as a political force." *Radical America*, 1977, *6*, 9-25.

Hocquenghem, G. *Homosexual desire*. London: Villiers Publications, 1978.

Johnson, L. Unpublished manuscript. Berkeley, California, 1979.

Johnston, J. *Lesbian nation: The feminist solution*. New York: Touchstone Books, Simon and Schuster, 1974.

McDonnell, D. "On Foucault's philosophical method: Notes from the underground." *Canadian Journal of Philosophy*, 1977, *3*, 537-553.

Millett, K. *Sexual politics*. New York: Avon Books, 1971.

Mitchell, J. *Woman's estate*. New York: Pantheon Books, 1971.

Pleck, J. & Sawyer, J. *Men and masculinity*. Englewood Cliffs, New Jersey: Prentice-Hall, 1974.

Rubin, G. "The traffic in women: Notes on the 'political economy' of sex." In R. Reiter (Ed.), *Toward an anthropology of women*. New York: Monthly Review Press, 1975.

Wallace, M. *Black macho and the myth of the superwoman*. New York: Dial Press, 1979.

White, H. "Foucault decoded: Notes from the underground." *History and Theory*, 1973, *12 (1)*, 23-54.

Chapter III
Discursive Analysis

The lordly right of giving names extends so far that one should allow oneself to conceive the origin of language itself as an expression of power on the part of the rulers: they say 'this is this and this', they steal every thing and event with a sound and, as it were, take possession of it. (Nietzsche, 1976, p. 26)

In the sixteenth century, interpretation proceeded from the world (things and texts together) towards the divine word that could be deciphered in it: our interpretation, or at all events that which was formed in the nineteenth century, proceeds from men, from God, from knowledge or fantasies, towards the words that make them possible; and what it reveals is not the sovereignty of a primal discourse, but the fact that we are already, before the very least of our words, governed and paralysed by language. (Foucault, 1973, p. 298)

Words are endless analogies for one another, although the analogies are for the most part orderly ones. Outside the monotonous sequence of analogies, we presume, is a primeval origin but that, like Paradise, is lost forever. Language is one of the actions that succeeds the lost origin: language begins after the Fall. Human discourse, like Paradise Lost, lives with the memory of origins long since violently cut off from it: having begun, discourse can never recover its origins in the unity and unspoken Word of God's Being. (Said, 1975, p. 280)

In 1972 there appeared in this country a book entitled The Archeology of Knowledge by the French historian Michel Foucault. In it Foucault articulated the methodology and theory which had been immanent in his previous works, The Birth of the Clinic, Madness and Civilization and The Order of Things and which would be refined and utilized in his later works Discipline and Punish: The Birth of the Prison and The History of Sexuality of which only volume one is in print. In The Archeology of Knowledge Foucault stated his aim to "uncover the principles and consequences of an autochthonous transformation that is taking place in the field of historical knowledge" (p. 15) and to "define a method of historical analysis freed from the anthropological theme" (p. 16). The kind of history that he saw evolving he called 'general history' as opposed to what he termed 'total history'.

(T)he theme and possiblity of a 'total history' begin to disappear, and we see the emergence of something very different that might be called a 'general history.' The project of a total history is one that seeks to reconstitute the overall form of a civilization, the principle——material or spiritual——of a society, the significance common to all the phenomena of a period, the law that accounts for their cohesion——what is metaphorically called the 'face' of a period. Such a project is linked to two or three hypotheses; it is supposed that between all the events of a well-defined spatio-temporal area, between all the phenomena of which traces have been found, it must be possible to establish a system of homogeneous relations: a network of causality that makes it possible to derive each of them, relations of analogy that show how they symbolize one another, or how they all express one and the same central core; ...lastly, it is supposed that history itself may be articulated into great units——stages or phases——which contain within themselves their own principle of cohesion. These are the postulates that are challenged by the new history when it speaks of series, divisions, limits, differences of level, shifts, chronological specificities particular forms of rehandling, possible types of relation.... A total description draws all phenomena around a single center——a principle, a meaning, a spirit, a world-view, an overall shape; a general history, on the contrary, would deploy the space of dispersion. (p. 9-10).

This 'general history' the practice of which Foucault has termed 'archeological description' takes as its field "that in which the questions of the human being, consciousness, origin and the subject emerge, intersect, mingle and separate off" (p. 16) and establishes a particular perspective which is neither interpretive or formalizing but rather descriptive. To understand this let me offer as an example a quote by Aldous Huxley.

> Every individual is at once the beneficiary and the victim of the linguistic tradition into which he has been born. The beneficiary in as much as language gives access to the accumulated records of other people's experience, the victim in so far as it confirms him in the belief that reduced awareness is the only awareness and as it bedevils his sense of reality so that he is all too apt to take his concepts for data, his words for actual things. That which, in the language of religion is called 'this world' is the universe of reduced awareness, expressed and as it were, petrified by language.... Most people, most of the time, know only (that awareness which) is consecrated as genuinely real by the local language. (Huxley, 1970, p. 74)

Archeological description takes as its field the world "consecrated as geninely real" by language and attempts to describe how that world has been and is woven by language. It does not attempt to discover the 'reality' behind this discursive universe, nor to say what it means. Rather it attempts to describe from a particular perspective the relationships among, and the production and maintenance of discursive phenomena. It makes no claim to objectivity or subjectivity but rather seeks to describe the discourses in which such terms as these circulate, are exchanged and are utilized. It refuses to give a privileged position to any center, be it the subject's sovereign consciousness or the supposed immutable laws external to the individual.

> (Archeological description) is trying to deploy a dispersion that can never be reduced to a single system of differences, a scattering that is not related to absolute axes of reference, it is trying to operate a decentering that leaves no privilege to any center. (Foucault, 1972, p. 205)

Archeological description as Foucault (1972) has defined it questions not only the commonly accepted notions of unity, continuity, tradition and influence but also such unifying constructs as the subject or sovereign consciousness, disciplines, and 'the oeuvre' that have been the foundation and guiding constructs in the behavioral sciences and history, in order to free a field of heterogenous phenomena which can be sovereign consciousness, disciplines, and 'the oeuvre' that have been the foundation and guiding constructs are 'statements' or 'facts of discourse', and the investigation of these phenomena attempts to describe the rules that govern the relationships among them and the conditions which enable their existence or prohibit it.

> The...purpose of such a description of the facts of discourse is that by freeing them of all the groupings that purport to be natural, immediate, universal unities, one is able to describe other unities, but this time by means of a group of controlled decision. (p. 29)

> To reveal in all its purity the space in which discursive events are deployed is...to leave oneself free to describe the interplay of relations within it and outside it. (p. 29)

> The description of the events of discourses poses a...question: how is it that one particular statement appeared rather than another? (p. 27)

> The analysis of thought is always 'allegorical' in relation to the discourse that it employs. Its question is unfailingly: what was being said in what was said: The analysis of the discursive field is oriented in a quite different way; we must grasp the statement in the exact specificity

of its occurrence; determine its conditions of existence, fix at least its limits, establish its correlations with other statements that may be connected with it, and show what other forms of statements it excludes. We do not seek below what is manifest the half silent murmur of another discourse; we must show why it could not be other than it was, in what respect it is exclusive of any other, how it assumes, in the midst of others, and in relation to them a place that no other could occupy. The question proper to such an analysis might be formulated in this way: what is this specific existence that emerges from what is said and nowhere else? (p. 27-28)

By situating his analysis at the level of 'discourse', the 'statement' and the 'discursive field', Foucault can be seen as investigating the nature of language, but he does so in a unique manner. He does not consider himself a linguist for he is not particularly interested in the formalized lexical or syntactical investigation of language, nor in what has been called semantic anthropology which is still bound to a concept of 'man'.

When one describes the formation of the objects of discourse, one tries to locate the relations that characterize a discursive practice; one determines neither a lexical organization, nor the scansions of a semantic field.... The analysis of lexical contents defines either the elements of meaning at the disposal of speaking subjects in a given period, or the semantic structure that appears on the surface of a discourse, that has already been spoken; it does not concern discursive practice as a place in which a tangled plurality––at once superposed and incomplete–– of objects is formed and deformed, appears and disappears. (p. 48)

His approach to language is new although one can see it as related to French structuralism. Hayden White (1973) sees the approach as a response to the discovery signalled by the structuralist writings of Levi-Strauss and Lacan that such concepts as 'man', 'society' and 'culture' refer not to things but rather to "linquisitc formulae that have no specific referents in reality" (p. 24).

(Their approach) proceeds on the assumption that this distinction between language on the one side and human thought and action on the other must be dissolved if human phenomena are to be understood as what they truly are, that is to say, elements of a communication system. (p. 23)

Foucault, then, is interested in the way language is constitutive both of the categories and perceptions ordered by them and the way particular 'systems of thought' "remain captive of the linguistic protocols in which their interpretations of their characteristic objects of study are cast" (White, 1973, p. 24). Just as Foucault dissolves the distinction between thought and language he views knowledge as constituted by a particular discursive practice. The English 'knowledge' translates the French terms 'connaissance' and 'savoir'.

By 'connaissance' I mean the relation of the subject to the object and the formal rules that govern it. 'Savoir' refers to the conditions that are necessary in a particular period for this or that type of 'object' to be given to 'connaissance' and for this or that enunciation to be formulated. (p. 15)

It is this latter area in which he is interested, that is in the way knowledge is constituted by language.

The group of elements, formed in a regular manner by a discursive practice...can be called 'knowledge'. Knowledge is that of which one can speak in a discursive practice and which is specified by that fact: the domain constitued by the different objects that will or will not

acquire a scientific status (the knowledge of psychiatry in the nineteenth century is not the sum of what was thought to be true, but the whole set of practices, singularities and deviations of which one could speak in psychiatric discourse); knowlege is also the space in which the subject may take up a position and speak of the objects with which he deals in a discourse...; knowledge is also the field of coordination and subordination of statements in which concepts appear, and are defined, applied and transformed...; lastly, knowledge is defined by the possibilities of use and appropriation offered by discourse... (T)here is no knowledge without a particular discursive practice; and any discursive practice may be defined by the knowledge that it forms. (Foucault, 1972, 182-183)

It should be said here that Foucault is particularly interested in the relationship of knowledge and power.

Foucault identif(ies) the human sciences as the crucial link in the control and classification of behavior that can be found, for example, in the incarceration of the mad, in the creation of clinics, in the institutionalization of schools and introduction of penal rehabilitation——a 'rationalization' of power that brings it into an internal relationship with the accumulation of knowledge. (D'Amico, 1978, p. 182)

Knowledge then is never disinterested. This is not a particularly new idea. One thinks of the work of Alvin Gouldner, Jurgen Habermas, Luis Althusser. What is distinct though about Foucault's analysis is that he locates knowledge in discourse, in discursive practice, and rejects as we shall see such unifying and interpretive notions as ideology.

One can see in the attempts to free a field of phenomena from assumed continuities, unities and origins, to resist interpretive and formalizing strategies, to resituate the investigation of human behavior at a level where the distinctions between thought and language and knowledge and language dissolve, to resist situating his thought either next to, or under or apart from other thought, to consider thoughts as 'discursive events' and to define the rules that govern the relationships among 'statements', one can see in these attempts a painstaking and radical movement to confront the inexorable force of language and to investigate that force from a new perspective.

Foucault uses two terms, 'langage' and 'langue' which translate into English as the one word 'language', yet which have different meanings. 'Langage' refers to language in general or kinds of language, for example medical and philosophical languages. 'Langue', a term which Foucault has borrowed from Ferdinand de Saussure, the father of semiology, refers to the total collectivity of signs that make up any natural language, for example French or English. This totality makes communication possible yet cannot be possessed by any one individual. Philip Thody (1977) has described it as:

a corporate and virtually anonymous treasure which enables communication to take place. It can never have more than a potential existence in any actual speaker. (p. ix)

It is in the 'langue' that Foucault locates the existence and dynamics of his most important concepts, 'the statement', the 'discursive formation' or 'discursive field', 'discourse' the 'archive', and it is to these categories that we must now turn.

Before entering the world of Michel Foucault's thought it is helpful to note what perhaps could be called the 'fictionalization' of his ideas in the work of Jorge Luis Borges. Foucault (1973) himself, has pointed out the parallel and has noted the impact on him of a particular passage from one of Borges's stories which quotes a 'certain Chinese encyclopaedia' in which a taxonomy for the classification of animals is presented. In this 'fabulous encyclopaedia' it is written that:

Animals are divided into: (a) belonging to the Emperor, (b) embalmed, (c) tame, (d) suckling pigs, (e) sirens, (f) fabulous, (g) stray dogs (h) included in the present classification, (i) frenzied, (j) innumerable, (k) drawn with a very fine camelhair brush, (l) et cetera, (m) having just broken the water pitcher, (n) that from a long way off look like flies. (Quoted in Foucault, 1973, p. xv)

What struck Foucault on reading this passage was "the exotic charm of another system of thought...the limitation of our own, the stark impossibility of thinking 'that'" (p. xv). What became apparent to him was the lack in such a classification of an undergirding site, a ground on which it would be possible for these entities to be juxtaposed.

The monstrous quality that runs through Borges's enunciation consists...in the fact that the common ground on which such meetings are possible has itself been destroyed. What is impossible is not the propinquity of the things listed but the very site on which their propinquity would be possible. The animals '(i) frenzied, (j) innumerable, (k) drawn with a very fine camel-brush'——where could they ever meet except in the immaterial sound of the voice pronouncing their enumeration, or on the page transcribing it? Where else could they be juxtaposed except in the non-place of language? Yet, though language can spread them before us, it can do so only in an unthinkable space.... (Borges) does away with the site, the mute ground upon which it is possible for entities to be juxtaposed. (p. xvi-xvii)

When we establish a considered classification, when we say that a cat and a dog resemble each other less than two greyhounds do, even if both are tame or embalmed, even if both are frenzied, even if both have just broken the water pitcher, what is the ground on which we are able to establish the validity of this classification with complete certainty? On what 'table', according to what grid of identities, similitudes, analogies, have we become accustomed to sort out so many different and similar things? What is this coherence——which, as is immediately apparent, is neither determined by an a priori and necessary concatenation, nor imposed on us by immediately perceptible contents? For it is not a question of linking consequences, but of grouping and isolating, of analyzing, of matching and pigeon-holing concrete contents: there is nothing more tentative, nothing more empirical superficially, at least, than the process of establishing order among things; nothing that demands a sharper eye or a surer better-articulated language; nothing that more insistently requires that one allow oneself to be carried along by the proliferation of qualities and forms. And yet an eye not consciously prepared might well group together certain familiar figures and distinguish between others on the basis of such and such a difference: in fact, there is no similitude and no distinction, even for the wholly untrained perception that is not the result of a precise operation and of the application of a preliminary criterion. A 'system of elements'——a definition of the segments by which the resemblances and differences can be shown, the types of variation by which those segments can be affected, and lastly, the threshold above which there is a difference and below which there is a similitude——is indispensable for the establishment of even the simplest form of order. (p. xix-xx)

This attention to the way phenomena are ordered, to the ground on which phenomena become linked, to the modes of being of order itself becomes the central theme in Foucault's work and because he wishes to analyze these it has been necessary to question or suspend the generally accepted unities, totalities or discursive grids which order phenomena and allow them to emerge or form, and to establish an angle of vision of shift in perspective which enables an investigation of the rules of formation of these grids.

Foucault begins by positing the 'statement' as the atom of discourse. But, he asks, of what does this atom consist? What are its distinctive features? What are its boundaries? He answers these questions first by saying what the 'statement' is not. A statement is of a different order than a proposition, or a sentence or what English analyists call a 'speech act'.

> When one wishes to individualize statements, one cannot therefore accept unreservedly any of the models borrowed from grammar, logic or (linguistic) 'analysis'. In all three cases, one realizes that the criteria proposed are too numerous and too heavy, that they limit the extent of the statement, and that although the statement sometimes takes on the forms described and adjusts itself to them exactly, it does not always do so: one finds statements lacking in legitimate propositional structure; one finds statements where one cannot recognize a sentence; one finds more statements than one can isolate speech acts. (1972, p. 84)

> (The statement is not the same kind of unit as the sentence, the proposition, or the speech act; it cannot be referred therefore to the same criteria; but neither is it the same kind of unit as a material object with its limits and independence. (1972, p. 86)

> The statement is not, therefore, a structure. (1972, p. 86)

> The statement exists, therefore, neither in the same way as the 'langue' (although is is made up of signs that are definable in their individuality only within a...Linguistic system) not in the same way as the objects presented to perception (although it is always endowed with a certain materiality, and can always be situated in accordance with spatio-temporal coordinates). (1972, p. 86)

Given then that 'statements' are not all these things, although they are co-extensive with signs, of what do they consist? Before trying to answer this question, it must be pointed out that the way Foucault answers the question is reflective of the way he defines most of the terms he uses. He is a master at dissolution, and by this I mean that he refuses to fix or reify the very terms he employs but rather refers them to other terms which in turn refer to others. This should not be surprising since he not only has stated his refusal to to write a history of the referent, but also since he views language as a vast library wherein statements continually refer to other statements, signs to other signs, and which comprises a system that is infinitely self-referential, infinitely absorptive. The terms Foucault uses then are not defined in terms of content but rather in terms of function, do not refer to specific units or structures but rather 'spaces' that are formed by other operations, cannot be reduced to a specific referent since they have no specific referent but exist always in relation to other phenomena, and finally do not lend themselves to analyses we generally associate with language, e.g., logic and linguistics, but rather define the possibilities or conditions of appearance and delimitation of that which gives meaning to the propositions (of logic) or the sentences (of linguistic analysis). If all this seems difficult to grasp, it is because Foucault, as Edward Said (1975) has said:

> has created for his evidence a new mental domain...and a new habit of thought.... He has had to reorient and distort the meaning of words and phrases whose use as a means for thought has been so habit-ridden and so literally debasing as to have become completely unthinkable. (p. 291)

With this in mind let us return to the question: what is a 'statement'? A 'statement' is a function which is "caught up in a logical, grammatical, locutory nexus" (Foucault, 1972, p. 86) and which"...cuts across a domain of structures and possible unities, and which reveals them with concrete contents, in time and space" (Foucault, 1972, p. 87). It is written or spoken to oneself or others, but the subject of the statement is not seen as the author of the formulation. 'Statements' do not originate in the author, that is in the subject as he is commonly conceived.

(T)he subject of the statement should not be regarded as identical with the author of the formulation——either in substance, or in function. He is not in fact the cause, origin or starting point of the phenomenon of the written or spoken articulation of a sentence; nor is it that meaningful intention which, silently anticipating words, orders them like the visible body of its intuition... If a proposition, a sentence, a group of signs can be called 'statement' ...it is because the position of the subject can be assigned. To describe a formation qua statement does not consist in analysing the relations between the author and what he says (or wanted to say, or said without wanting to); but in determining what position can and must be occupied by any individual if he is to be the subject. (Foucault, 1972, p. 96)

Foucault has said that for a 'statement' to operate a subject is required but a subject which is not a 'speaking consciousness' but rather "...a position that may be filled in certain conditions by various individuals" (p.115). As we shall see the whole notion of a sovereign consciousness is one which Foucault questions, but for the present let us see how this question formulates itself regarding the 'statement'. Since every 'statement' belongs to a certain regularity, a certain domain within which it functions and which gives it shape, no 'statement' can be regarded as pure creation. The 'statement' is situated at the level of the 'it is said'.

The analysis of statements operates therefore without reference to a cogito. It does not pose the question of the speaking subject who reveals or who conceals himself in what he says, who in speaking, exercises his sovereign freedom, or who, without realizing it, subjects himself to constraints of which he is only dimly aware. In fact it is situated at the level of the 'it is said' ——and we must not understand by this a sort of communal opinion, a collective representation that is imposed on every individual; we must not understand by it a great anonymous voice that must of necessity speak through the discourse of everyone; but we must understand by it the totality of things said, the relations, regularities and the transformations that may be observed in them, the domain of which certain figures, certain intersections indicate the unique place of a speaking subject and may be given the name of author. 'Anyone who speaks', but what he says is not said from anywhere. It is necessarily caught up in the play of exteriority. (Foucault, 1972, p. 122)

" 'Anyone who speaks', but what he says is not said from anywhere." By necessity that which is said when seen from the particular angle of Foucault's analysis functions in a field of statements, an anonymous field, which defines the position of possible speaking subjects. The discursive field in which the 'statement' functions prescribes for the speaking subject a particular status, a particular site or a particular position that the subject must occupy.

(T)he enunciative domain (that is the domain in which the statement functions) refers neither to an individual subject, nor some kind of collective consciousness, nor to a transcendental subjectivity; ...it is described as an anonymous field whose configuration defines the possible position of speaking subjects. Statements should no longer be situated in relation to a sovereign subjectivity, but recognized in the different forms of the speaking subjectivity effects proper to the enunciative field. (Foucault, 1972, p. 122)

The types of 'statements' making up any given discourse do not cohere around a unique empirical or transcendental subject but are united around a set of rules or relations which provide a variety of subjective positions in relation to a specific referential. In this sense then the subject is dissolved in discourse.

A 'statement' then is a formation of signs which, let us say for the time being, exists independently of the subject who articulates it and who could be anyone, and refers to an operation which functions to formulate it. It is in a sense pressed into existence by the borders of other operations and therefore does not exist independently as some free-floating object which passes through individuals and texts. A 'statement' always has borders which are "peopled by other statements" (p. 97).

> (T)here is no statement in general, no free, neutral, independent statement; but a statement always belongs to a series or a whole, always plays a role among other statements deriving support from them and distinguishing itself from them: it is always part of a network of statements in which it has a role, however minimal it may be, to play.... There is no statement that does not presuppose others; there is no statement that is not surrounded by a field of coexistences, effects of series and succession, a distribution of functions and roles. (p 99)

A 'statement' then is always relational and is subject to the conditions imposed on it by other statements which surround it, by the domain in which it can be used or applied and by its function. Foucault (1972) gives an example of the conditionality of statements:

> The affirmation that the earth is round or that the species evolve does not constitute the same statement before and after Copernicus, before and after Darwin; it is not, for such simple formulations, that the meaning of the words has changed; what changed was the relation of these affirmations to other propositions, their conditions of use and reinvestment, the field of experience, of possible verifications, of problems to be resolved, to which they can be referred. (p. 103)

One can note the similarity between Foucault's description of the functioning and conditionality of statements with Thomas Kuhn's description of paradigm changes, a similarity to which I shall return. Discussing the way old terms and concepts fall into new relationships with one another within a new paradigm, Kuhn (1975) uses the Copernican revolution as an example:

> Consider for another example, the men who called Copernicus mad because he claimed that the earth moved. They were neither just wrong or quite wrong. Part of what they meant by 'earth' was fixed position. Their earth, at least, could not be moved. Correspondingly, Copernicus' innovation was not simply to move the earth. Rather it was a whole new way of regarding the problem of physics and astronomy, one that necessarily changed the meaning of both 'earth' and 'motion'. Without those changes the concept of a moving earth was mad. (p. 149-150)

A 'statement' is a function that is conditioned by the domain in which it functions. It may remain the same as a sentence, but its function as a 'statement' changes according to the relational field in which it is situated. "The sentence 'dreams fulfill desires' may have been repeated throughout the centuries; it is not the same 'statement' in Plato and Freud" (Foucault, 1972, p. 103). What makes it different is the way it functions in relating sentences, propositions, fragments of sentences, sets of propositions, series or tables of signs to a field of objects, in fixing the limits of these and placing them in a domain of "coordination and co-existence" and in opening them up to a number of possible subjective positions. To describe a 'statement' then is to describe the conditions in which a sentence, a sentence fragment, proposition or series of signs takes on a specific existence as a 'statement':

> To describe a statement is...(to define) the conditions in which the function that gave a series of signs an existence, and a specific existence, can operate. (Foucault, 1972, p. 108)

The area that surrounds a 'statement', that presses it into existence, that turns a sentence or proposition or a series of signs into a 'statement' Foucault calls an 'enunciative' or 'associative field'.

> It is made up first of all by the series of other formulations within which the statement appears and forms one element (the network of spoken formulations that make up a conversation, the architecture of a demonstration, bound on the one side by its premises and on the other by its conclusions, the series of affirmations that make up a narrative). The associated field is also made up of all the formulations to which the statement refers (implicitly or not), either by repeating them, modifying them, or adapting them, or by opposing them, or by commenting on them; there can be no statement that in one way or another does not reactualize others (ritual elements in a narrative; previously accepted propositions in a demonstration; conventional sentences in a conversation). The associated field is also made up of all the formulations whose subsequent possibility is determined by the statement, and which may follow the statement as its consequence, its natural successor, or its conversational retort ... Lastly, the associated field is made up of all the formulations whose status the statement in question shares, among which it takes its place without regard to linear order, with which it will fade away, or with which on the contrary it will be valued, preserved, sacralized and offered as a possible object to a future discourse (a statement is not dissociable from the status that it may receive as 'literature', or as a scientific truth valid for all time, or as prophetic words, etc.). Generally speaking, one can say that a sequence of linguistic elements is a statement only if it is immersed in an enunciative field, in which it then appears as a unique element. (Foucault, 1972, pp. 98-99)

The statement then is formed by and functions within a particular verbal network, a discursive field, and it does not find its origin in a sovereign consciousness. Furthermore, the description of 'statements' is a description of things said precisely as they were said. The 'statement' characterizes the fact that particular sentences or propositions were given and the way in which they are given.

The issue must be raised here of the difference between sentences, propositions and 'statements'. Although Foucault has said that 'statements' can be composed of propositions, sentences, bits of both, or series or tables of signs, the analysis employed in investigating 'statements' is quite different from that used in investigating sentences or propositions. Furthermore, the relation of a proposition to its referent or of a sentence to its meaning do not serve as models for the relation of a statement to what it states, the relation of a 'statement' to its 'referential'. As 'statements', sentences or propositions cannot be meaningless or referent-less.

> In fact, to say that a sentence like 'colorless green ideas sleep furiously' is meaningless presupposes that one has already excluded a number of possibilities——that it describes a dream, that it is a part of a poetic text, that it is a coded message, that it is spoken by a drug addict—— and that one assumes it to be a certain type of a statement that must refer, in a very definite way to some visible reality. (Foucault, 1972, p. 90)

> (The proposition) 'the present king of France is bald' lacks a referent only if one supposes that the statement refers to the world of contemporary historical information. (Foucault, 1972, p. 90)

As 'statements', sentences or propositions always refer to something but that to which they refer is made up not of 'things', 'realities', 'objects' or 'facts' but rather laws of inclusion or exclusion, of possibility; of rules of existence and relationships that are denied or affirmed; of a domain wherein 'things', 'realities', objects' or 'facts' may appear or be denied.

> Any statement, as simple a statement as one can imagine, does not have as its correlate an individual or a particular object that is designated by this or that word in the sentence: in the case of a proposition like 'The golden mountain is in California', the correlate is not the formation real or imaginary, possible or absurd, that is designated by the nominal syntagma that serves as the subject. But nor is the correlate of the statement a state of things or a relation capable of verifying the proposition (in the example chosen, this would be the spatial inclusion of a particular mountain in a particular region). On the other hand what might be defined as the correlate of the statement is a group of domains in which such objects may appear and to which such relations may be assigned. (Foucault, 1972, p. 91)

> The referential of the statement forms the place, the condition, the field of emergence, the authority to differentiate between individuals or objects, states of things and relations that are brought into play by the statement itself; it defines the possibility of appearance and delimitation of that which gives meaning to the sentence, a value as truth to the proposition. (Foucault, 1972, p. 91)

The referential of the proposition (as a 'statement') 'The earth is round' is not some material orb but rather the domain of other statements and the rules or laws that govern these and that allow for the emergence of a concept such as a round earth. Furthermore, the correlate of such a 'statement' is not the state of things that would verify such a proposition but the domains in which such 'states of things' would or would not verify the proposition. The referential of the 'statement', 'Schools are oppressive' is the laws that "define the possibilities of appearance and delimitation of that which gives meaning to the sentence" (Foucault, 1972, p. 91), and which authorize particular meanings and create a differentiation.

One other facet of the 'statement' that Foucault describes is its materiality. On one level, Foucault's suggestion that the 'statement' has a certain materiality brings to mind the poet Mallarme's dictum that the word is flesh and a sense that words are opaque and must be dealt with as things among many things. But Foucault's notion of the materiality of statements refers to the way 'statements' can be used according to certain conditions.

> (T)he statement (is) a specific and paradoxical object but...one of those objects that men produce, manipulate, use, transform, exchange, combine, decompose and recompose and possibly destroy. Instead of being something said once and for all ...the statement...appears with a status, enters various networks and various fields of use; is subjected to transferences or modifications, is integrated into operations and strategies in which its identity is maintained or effaced. Thus the statement circulates, is used, disappears, allows or prevents the realization of a desire, serves or resists various interests, participates in challenge and struggle and becomes a theme of appropriation or rivalry. (Foucault, 1972, p. 105)

To summarize then, we can say several things about 'statements'. First, a 'statement' is a function that cuts across various unities and structures such as sentences or propositions. It involves various units which may be sentences, propositions, fragments of sentences, series or tables of signs, a set of propositions or equivalent formulations. The 'statement' does not give a meaning to these units or serve as an interpretation of them. Rather cutting across these units, it reorganizes them in a way which is identified with neither grammatical acceptability nor logical correctness. Second, for a 'statement' to operate it requires a referential which is a principle of differentiation; a subject which is not a sovereign consciousness but rather the position that "may be filled in certain conditions by various individuals" (Foucault, 1972, p. 115); an associated field which can be seen as a discursive context; and a materiality which consists of its rules of transcription, status and possibilities of use and re-use. Third, the analysis of 'statements' is a particular way of attacking verbal performances, and of describing the regularities that they obey. It is concerned with the

description of the conditions that made possible the existence of particular 'statements' and not others. It questions 'statements' "as to their mode of existence" (Foucault, 1972, p. 109). Every 'statement' that has appeared has done so within a set of other 'statements' because of certain a priori historical conditions which do not determine the meaning of the 'statements' but the conditions for its functioning, emergence and insertion into other discursive formations or institutional or social practices. Fourth, the analysis of 'statements' is non-interpretive. It does not seek to reveal the hidden or latent meaning of statements.

> The analysis of statements...avoids all interpretation: it does not question things said as to what they are hiding, what they were 'really' saying, in spite of themselves, the unspoken element that they contain. (Foucault, 1972, p. 109)

> Polysemia——which justifies hermeneutics and the discovery of another meaning——concerns the sentence, and the semantic fields that it employs: the same group of words may give rise to several meanings, and to several possible constructions... Similarly, the suppression of one verbal performance by another, their substitution or interference are phenomena that belong to the level of the formulation...; but the statement itself is not concerned with this duplication or this suppression: since it is the modality of existence of the verbal performance as it has taken place. The statement cannot be regarded as the cumulative result or the crystallization of several fluctuating, scarcely articulated and mutually opposed statements. The statement is not haunted by the secret presence of the unsaid, of hidden meanings. of suppressions; on the contrary, the way in which they can be restored depends on the enunciative modality itself: we know that the 'unsaid', the 'suppressed' is not the same...in the case of a mathematical statement, a statement in economics, an autobiography, or the account of a dream. (Foucault, 1972, p. 110)

The aversion to interpretation evident in the above two passages is a reaction to the notion that the original statement, text or document contains a surplus of meaning that is not expressed by it yet which can be "discovered" by continual interrogation of it.

> In principle the commentary implies an infinite project which cannot be limited because what was the case for the original text now applies to the commentary itself. It will not succeed in saying that which it set out to say and yet the intentions of the commentator may be captured by a further interrogation of his text. (McDonell, 1977, p. 542)

Interpretation suggests the presence of some hidden 'truth' which awaits discovery and then claims that its own truth is based on what is already there. It arranges reality in a hierarchical order and reserves for itself the claim to 'truth'. It fails to take into account the conditions that made it, itself, possible, and this failure leads to domination masked as 'the liberation of meaning'.

Fifth and finally, 'statements' belong to what Foucault calls 'discursive formations'. It is the 'discursive formation' that defines the regularity of statements, and it is to this formation that I shall return shortly. But first another question must be addressed: given this 'atom' of the 'statement', given the liberation of a plethora of discursive events called 'statements' how can one form a group of statements? That is, on what basis can one establish the relationships among 'statements'? What links certain 'statements' and not others? How can the heterogeneous statements that are freed by suspending the traditional notions of unity, continuity, tradition, influence, causality and the 'allegorical analysis of thought' be regrouped and according to what criteria?

The rules which govern the regularity and relationships of 'statements' Foucault calls 'discursive regularities' or 'rules of discursive formation', and he divides these into four groups: those that govern the forma-

tion of objects; those that govern the formation of concepts; those that govern the formation of 'enunciative modalities', and those that govern the formation of themes or 'strategies'. These then are the criteria used to determine the relationships and regularity of statements. I shall only briefly describe each.

'Objects' do not for Foucault refer to 'things', to some material phenomena that exist anterior to discourse. They are on the contrary formed by discourse.

> What, in short, we wish to do is to dispense with 'things'. To 'depresentify' them.... To substitute for the enigmatic treasure of 'things' enterior to discourse the regular formation of objects that emerge only in discourse. To define these 'objects' without reference to the 'ground', the 'foundation of things', but by relating them to the body of rules that enable them to form as objects of a discourse and thus constitute the conditions of their historical appearance. To write a history of discursive objects that does not plunge them into the common depth of a primal soil, but deploys the nexus of regularities that govern their dispersion. (Foucault, 1972, pp. 47-48)

One thinks of Lacan's notion that language creates 'things'.

> It is the world of words which creates the world of things—the things originally confused in the hic et nunc of the all-in-the-process-of-becoming-by giving its concrete being to their essence. (Lacan, 1975, p. 39)

This is not however to dissolve 'reality' into a world of semantics. Foucault, as has been stated, is not interested in a linguistic analysis of meaning or treating discourse as a group of signs. His task consists in "treating discourses...as practices that systematically form the objects of which they speak" (Foucault, 1972, p. 49). But how are these objects formed or rather what is required for them to emerge or transform?

> The formations (of objects) is made possible by a group of relations established between authorities of emergence, delimitation and specification. (Foucault, 1972, p. 44)

> These relations are established between institutions, economic and social processes, behavioral patterns, systems of norms, techniques, types of classification, modes of characterization, and these relations are not present in the object; ... They...enable it to appear, to juxtapose itself with other objects to situate itself in relation to them, to define its difference, its irreducibility and even perhaps its heterogeneity. (Foucault, 1972, p. 45)

The surfaces of emergence, the authorities of delimitation, the grids of specification on and by which are formed 'objects' vary, given different societies, periods and discourses. 'Objects' do not exist in some space anterior to discourse waiting for their discovery.

> (T)he object does not await in limbo the order that will free it and enable it to become enbodied in a visible and prolix objectivity; it does not pre-exist itself, held back by some obstacle at the first edges of light. It exists under the positive conditions of a complex group of relations. (Foucault, 1972, p. 45)

Given a particular web of relationships particular 'objects' will appear.

> If in a particular period in the history of our society, the delinquent was psychologized, if criminal behavior could give rise to a whole series of objects of knowledge, this was because a

group of particular relations was adopted for use in psychiatric discourse. The relations between planes of specification like penal categories and degrees of diminished responsibility, and planes of psychological characterization.... The relation between the authority of medical decision and the authority of judicial decision.... The relation between the filter formed by judicial interrogation, police information and the filter formed by the medical questionnaire, clinical examinations, the search for antecedents and biographical accounts. The relation between the family, sexual and penal norms of the behavior of individuals and the table of pathological symptoms and diseases of which they are the signs. The relation between therapeutic confinement in hospital...and punitive confinements in prison. These are the relations that, operating in psychiatric discourse, have made possible the formation of a whole group of various objects. (Foucault, 1972, p. 44)

To take another example one can note the creation of the object 'adolescence'. Given the relationship at a particular time between academic disciplines such as developmental psychology, with its notions of stages, the medical profession with its increasing specialization, and certain juridical operations governing work and school; given the relation between sexual norms and labor demands one can delineate a web of relationships that have created a space in which the 'object' adolescence has emerged. Or, to take a less recent example, one can refer to the emergence of the object 'childhood' that Philip Aries has expanded on in Centuries of Childhood: A Social History of the Family.

The second criterion used to establish the relationship or regularity of statements concerns the formation of 'enunciative modalities'. The 'enunciative modality' refers to the group of rules which determine (1) who has the right to make certain statements; (2) what institutional site legitimates the statements; and (3) what position the subject occupies in relation to the various domains or groups of 'objects'. In other words an 'enunciative modality' consists of those rules which for a particular discourse determine who has the right to speak, who is qualified to speak, who derives from statements made or a particular discourse, a prestige, a particular 'status', what the status is of those given either juridically or spontaneously the right to use particular statements; what the relationship is between one who speaks a particular discourse or 'statements' and society as a whole. Furthermore, these rules determine what sites legitimate the group of 'statements' or discourse made and provide its "legitimate source and point of application (its specific objects and instruments of verification)" (Foucault, 1972, p. 51). For example, not just anyone can make a medical statement. The medical statements made have a particular status which provides a particular position for the enunciator and this status is determined in part by the relations between medicine, the law and society. Furthermore, the site from which medical statements are made, the lab, the hospital, the medical school all provide different positions for the speaker.

Finally, the 'enunciative modality' also defines the positions available to the subject in relation to the various 'objects' or groups of 'objects' in a particular discourse.

The positions of the subject are also defined by the situation that it is possible for him to occupy in relation to the various domains or groups of objects: according to a certain grid of explicit or implicit interrogations, he is the questioning subject and, according to a certain program of information, he is the listening subject; according to a table of characteristic features, he is the seeing subject, and, according to a descriptive type, the observing subject.... To these perceptual situations should be added the positions that the subject can occupy in the information networks. (Foucault, 1972, p. 52.)

What is apparent from this last aspect of the 'enunciative modality' is that the subject of the 'statements' grouped in a particular discourse is not only not seen as their author (we have seen this much before) but the unity of the subject is itself challenged.

In short, I do not refer the various enunciative modalities to the unity of the subject....

In the proposed analysis, instead of referring back to the synthesis or the unifying function of a subject, the various enunciative modalities manifest his dispersion. (Foucault, 1972, p. 54)

The subject is dispersed, fragmented and comes to exist in a discontinuity as part of the variety of status, sites, positions that can be occupied when making a discourse. These various planes then are linked by a system of relations which is not formed by the synthesizing activity of a sovereign conscousness but by "the specificity of a discursive practice" (Foucault, 1972, p. 55).

The third criterion used in grouping 'statements' or analyzing that group concerns the formation of concepts. Foucault does not use the term 'concept' in the way it is generally used, that is as an idea. Rather he treats it as an object. In one sense, if he can be seen as dematerializing things he can be seen as materializing 'concepts'. In his analysis they take on a certain materiality in much the same way that 'statements' do. Undeniably, Foucault uses 'concept' to mean 'theme' or 'notion' but rather than attempt an 'allegorical analysis', that is one which rearticulates what a concept means or a logical analysis, that is one which describes and evaluates the internal logic or coherence of a concept, he is interested in the way concepts are treated or related to each other in a 'discursive formation'.

> But what properly belongs to a discursive formation and what makes it possible to delimit the group of concepts disparate as they may be, that are specific to it, is the way in which the field of memory is linked to the forms of hierarchy and subordination that govern the statements of a text; the way in which the modes of approximation and development of the statements are linked to the modes of criticism, commentary and interpretations of previously formulated statements etc. It is this group of relations that constitutes a system of conceptual formation. (Foucault, 1972, p. 60)

> One stands back in relation to this manifest set of concepts; and one tries to determine according to what schemata...the statements may be linked to one another in a type of discourse.... These schemata make it possible to describe——not the laws of the internal construction of concepts, not their progressive and individual genesis in the mind of man——but their anonymous dispersion through texts, books and ouvres. (Foucault, 1972, p. 60)

One would not seek then to relate heterogeneous, compatible or incompatible 'concepts' according to a unified deductive structure but would try to analyze their relationships, their dispersion, their separation or joining, their appearances and disappearances.

The fourth and final system of formation Foucault describes concerns the formation of 'strategies'. Briefly, strategies refer to the way particular 'concepts' are organized into particular thematics in particular discourses; that is they refer to the rules that govern theoretical choices. These rules can be delineated by describing first, how different 'concepts' in a particular discourse provide alternatives; two, how one alternative was or is chosen rather than another, that is, what authority guided the choice; three, how was the thematic choice or particular systematization interior to a discourse related to other discourses and to "a whole non-discursive field of practices, appropriations, interest and desires" (Foucault, 1972, p. 69).

> (T)hese options must be described as systematically different ways of treating objects of discourse (of delimiting them, regrouping or separating them, linking them together and making them derive from one another) of arranging forms of enunciation (of choosing them, placing them, constituting series, composing them into great rhetorical unities), of manipulating concepts (of giving them rules for their use, inserting them into regional coherences, and thus

constituting conceptual architectures). These options are not seeds of discourse (in which discourses are determined in advance and prefigured in a quasi-microscopic form); they are regulated ways (and describable as such) of practising the possibilities of discourse. (Foucault, 1972, p. 70)

Those rules then that govern the regularity and relationships of 'statements', that is, those rules that constitute a system of discursive formation

> lay down what must be related in a particular discursive practice, for such and such an enunciation to be made for such and such a concept to be used, for such and such a strategy to be organized. (Foucault, 1972, p. 74)

> The conditions to which...objects, modes of statement, concepts, thematic choices, are subjected we shall call the rules of formation. The rules of formation are conditions of existence (but also of coexistence, maintenance, modification and disappearance) in a given discursive division. (Foucault, 1972, p. 38)

Given a heterogeneous mass of statements, a dispersion of discursive elements whose initial groupings have been suspended, one would according to Foucault be able to delineate a discursive formation if one could describe a regularity or the relationships between 'objects', 'enunciative modalities', 'concepts' and 'strategies'.

> (W)henever, between objects, types of statements, concepts or thematic choices, one can define a regularity (an order, correlations, positions and functionings, transformation) we will say...that we are dealing with a discursive formation. (Foucault, 1972, p. 38)

> Now what has been described as discursive formations are strictly speaking groups of statements...which are linked at the statement level. That which implies that one can define the general set of rules that govern their objects, the form of dispersion that regularly divides up what they say, the system of their referentials; that which implies that one defines the general set of rules that govern the different modes of enunciation, the possible distribution of the subjective positions, and the system that defines and prescribes them; that which implies that one defines the set of rules common to all their associated domains, the forms of succession, of simultaneity, of the repetition of which they are capable, and the system that links all these fields of co-existence together; lastly, that which implies that one can define the general set of rules that governs the status of these statements, the way in which they are institutionalized, received, used, re-used, combined together, the mode according to which they become objects of appropriation, instruments of desire of interest, elements for a strategy. To describe statements, to describe the enunciative function of which they are the bearers, to analyze the conditions in which this function operates, to cover the different domains that this function presupposes and the way in which these domains are articulated, is to undertake to uncover what might be called the discursive formation. (Foucault, 1972, p. 116)

One way of looking at discursive formations is to see them as the discursive network or contexts in which the 'statement' is the basic element. Foucault (1972) has said:

> A statement belongs to a discursive formation as a sentence belongs to a text and a proposition to a deductive whole. But whereas the regularity of a sentence is defined by the laws of the 'langue' and that of a proposition by the laws of logic, the regularity of statements is defined

by the discursive formation itself. The fact of its belonging to a discursive formation and the laws that govern it are one and the same thing. (p. 116)

Although discursive formations can be analyzed in terms of the formation of objects, enunciative modalities, concepts and strategies, and although they constitute the system in which and through which 'statements' interact and exist, they are not solid, fixed in time, unresponsive to conditions that exist outside them. The set of relations that constitute a discursive formation do not fix for all time the 'statements', 'objects', 'enunciative modalities', 'concepts' and 'strategies' that it lays down or allow to emerge. It may up to a certain point form new ones, but always according to the rules immanent within the discursive formation itself at a particular time. As Foucault (1972) notes, one can see in the regularity of the nineteenth century discursive practice of psychiatry a system of stable laws of formation yet ones through which

> new objects appear (new types of individuals, new classes of behavior are characterized as pathological) new modalities of enunciation are put into operation (quantitative notations and statistical calculations), new concepts are outlined (such as those of degeneracy, perversion, neurosis) and of course new theoretical structures are built. (p. 75)

It must be said also about discursive formations that they do not operate in isolation. They emerge in a complex web of other formations, both discursive and non-discursive. As discursive formations form objects, enunciative modalities, concepts and strategies according to the rules of their formation which are conditions of existence, they cut across what are commonly referred to as 'disciplines' e.g. economics, history, psychology, medicine, and they intermingle with or come into existence "between such things as social, political and economic institutions in the society, as well as those between diverse forms of behavior, systems, norms, types of classification and ways of characterization" (McDonell, 1977, p. 545).

One more aspect of discursive formations needs to be addressed, and this concerns the 'law of rarity'. Basically what Foucault means by this is that since everything is never said, that is one can always say more about, for example, 'man', 'the world', 'God', 'reality', every discursive formation excludes by its very existence a multitude of formulations. Just as a discursive formation has an interiority in which laws of formation operate, it also has an exteriorty or rather forms an exteriorty. It does this by a procedure of exclusion, by establishing its limits or frontiers "beyond which everything is non-discursive and foreign to it" (Said, 1975, p. 308). It creates in a sense empty spaces, gaps, voids, absences, limits and divisions.

> (I)n relation to what might have been stated in a natural language, in relation to the unlimited combination of linguistic elements, statements (however numerous they may be) are always in deficit; on the basis of the grammar and of the wealth of vocabulary available at a given period, there are in total, relatively few things that are said. We must look therefore for the principle of rarification or at least of non-filling of the field of possible formulations as it is opened up by the language. (Foucault, 1972, p. 119)

It must be noted that the exclusions about which Foucault talks are not linked to a repression.

> However, we are not linking these 'exclusions' to a repression, we do not pre-suppose that beneath manifest statements something remains hidden and subadjacent. We are analyzing statements not as being in the place of other statements that have fallen below the line of possible emergence but as being always in their own place. They are put back into a space that is entirely deployed and involves no reduplication. There is no subtext. And therefore no plethora. The enunciative domain is identical with its own surface. Each statement occupies in it a place that belongs to it alone. The description of a statement (consists) in discovering what special place it occupies, what ramifications of the system of formations make it possible to

map its localization, how it is isolated in the general dispersion of statements. (Foucault, 1972, p. 119)

It is possible now to define the term 'discourse'. Discourse consists of a group of statements which belong to the same discursive formation.

> (I)t does not form a rhetorical or formal unity, endlessly repeatable, whose appearance or use in history might be indicated (and if necessary, explained); it is made up of a limited number of statements for which a group of conditions of existence can be defined. (Foucault, 1972, p. 117)

Because discursive formations can cut across normally accepted unities such as disciplines, oeuvres, or books and yet need not, one can speak for example of a psychological discourse or medical discourse, or one can speak of a discourse on madness or sexuality.

To summarize then, discourse consists of a group of statements that are related or regulated by certain rules of formation, rules which exist within discourse itself, rules which govern the formation of 'objects', 'enunciative modalities', 'concepts' and 'strategies'. A discourse on mental illness for example can be seen as constituted by

> all that was said in all the statements that named it, divided it up, described it, explained it, traced its development, indicated its various correlations, judged it, and possibly gave it speech by articulating, in its name, discourses that were to be taken as its own. (Foucault, 1972, p. 32)

Discourse provides the space in which various 'objects' emerge and can be transformed, in which concepts can emerge as compatible or incompatible, in which a variety of positions which assume or bestow a particular status, which imply a particular angle of vision and which act as a source of legitimation emerge, in which a dispersion of points of choice are available. Discourse materializes, becomes sensate in "the techniques that put them into operation, in practices that derive from them, in the social realtions that they form, or through those relations modify" (Foucault, 1972, p. 124). It must be treated as a finite although mutable asset

> in this sense discourse ceases to be what it is for the exegetic attitude: an inexhaustible treasure from which one can always draw new and always unpredictable riches; a providence that has always spoken in advance and which enables one to hear, when one knows how to listen, retrospective oracles: it appears as an asset––finite, limited, desireable, useful––that has its own rules of appearance, but also its own conditions of appropriation and operation; an asset that consequently, from the moment of its existence (and not only in its 'practical applications'), poses the question of power, an asset that is by nature, the object of a struggle, a political struggle. (Foucault, 1972, p. 120)

Discourse then is tied to the material conditions of social life, to the institutions that exert control over social relations. Discourse can also be seen as an anonymous field in that its origin or locus of formation is neither a sovereign consciousness nor a collective consciousness. It exists at the level of the 'it is said'.

> (W)e must not understand by this a sort of communal opinion, a collective representation that is imposed on every individual; we must not understand by it a great anonymous voice that must of necessity, speak through the discourses of everyone; but we must understand by it the

> totality of things said, the relations, the regularities and the transformations that may be observed in them, the domain of which certain figures, certain intersections indicate the unique place of a speaking subject and may be given the name author. 'Anyone who speaks', but what he says is not said from anywhere. It is necessarily caught up in the play of exteriority. (Foucault, 1972, p. 122)

The individual subject then is dissolved as the constituting figure of discourse and is dispersed and replaced by the various subject positions opened within discourse itself.

If discourses have 'statements' as, in a sense, their atoms, and if one can talk of several discourses which may have casual, intimate or no relations with each other, the question arises whether the variety of discourses partake of or share any organization in common. In other words what governs the various discursive formations taken in their heterogeneous (although at times related and interpenetrating) variety? What governs these formations is what Foucault calls the 'archive'. 'Archive' refers to the total discursive context in which discourses emerge, transform, interact. Because it is totalizing it is impossible for

> us to describe our own archive, since it is from within these rules that we speak, since it is that which gives to what we can say...its modes of appearance, its forms of existence and co-existence, its system of accumulation, historicity and disappearance. The archive cannot be described in its totality; and in its presence it is unavoiable. (Foucault, 1972, p. 130)

One way Foucault's use of the term 'archive' can be clarified is to extend Kuhn's notion of 'paradigm'. In the same way that a paradigm is

> the entire constellation of beliefs, values, techniques and so on shared by the members of a given community, (Kuhn, 1975, p. 175)

and the transformation of one paradigm to a new one

> is a reconstruction of the field from new fundamentals, a reconstruction that changes some of the field's most elementary theoretical generalizations as well as many of its paradigm methods and applications. (Kuhn, 1975, p. 84)

So an archive is seen as determining for its epoch the shared rules of formation found in widely different disciplines, "but used in each to define the objects proper to their own study, to form their concepts, to build their theories." And the transformation from one archive to another is characterized not as in Kuhn's work by a distinct rupture, although Foucault does call it a 'rupture' but rather by transformations of the principles governing different systems of dispersion.

To use an example already given but in another context, the transformation of the 'fabulous encyclopaedia' in Borges's story or rather the transformation of the epistemological space in which such a table of ordering could be produced to an encyclopaedia which classified animals in the way a modern Chinese one might, would suggest although not quite necessitate a transformation of the archive, of an epistemological space. An archive then can be seen as the overarching determinant of a period's possibility of thought.

Having outlined the mode of analysis which Foucault has described and refined, let us once again summarize what 'archeological analysis' is, how it can be employed and some of the broader issues or concerns it raises and addresses. Archeological analysis investigates a particular domain that consists of statements, discursive formations and the archive. It is an angle of vision that cuts across the generally accepted unities

of disciplines and treats knowledge in terms of discourse. It attempts to describe the rules of formation that govern discourses and remains always at the level of discourse. It is not interpretive or 'allegorical' in that it refuses to say what was said in what was said, but defines and individualizes discourses, discursive formations and statements in their specificity. Archeological analysis then is not intended to

> reduce the diversity of discourses and to outline the unity that must totalize them, but is intended to divide up their diversity into different figures. Archeological analysis does not have a unifying but a diversifying effect. (Foucault, 1972, pp. 159-160)

Archeological analysis attempts to reveal the relationships within discursive formations, between and among discursive formations and non-discursive domains. It seeks to reveal for example how a particular discourse inscribes itself on social relations, economic processes, institutional practices. It reveals how discourse itself is produced and controlled, selected and organized, distributed and inscribed in a particular society.

Knowledge, then, which Foucault sees as formed by and in discursive practices, is intimately linked to power. The 'objects' that emerge in a variety of discourses are inextricably linked to systems of domination in society. As Sylvere Lotringer (1977) puts it:

> Power needs to erect an identifiable object in order to exercise its control over it. Knowledge, even in its positive aspects, involves exclusions and repressions of all kinds. It is the exercise of power by other means. Consequently, the individual explored by the human sciences is correlative to a specific form of subjugation. (p. 7)

One can see in The History of Sexuality, Vol I, an application of archeological analysis which reveals how the relationship between a variety of discourses on sexuality and certain non-discursive practices in society led to the incarceration of particular individuals and the oppression of others.

> One could mention other centers which in the eighteenth and nineteenth century began to produce discourses on sex. First there was medicine, via the "nervous disorders"; next psychiatry, when it set out to discover the etiology of mental illness, focusing its gaze first on "excess", then onanism, then frustration, then "frauds against procreation", but especially when it annexed the whole of the sexual perversions as its own province; criminal justice, too, which had long been concerned with sexuality, particularly in the form of the 'heinous' crimes and crimes against nature, but which toward the middle of the nineteenth century, broadened its jurisdiction to include petty offenses, minor indecencies, insignificant perversions; and lastly those social controls cropping up at the end of the last century, which screened the sexuality of couples, parents and children, dangerous and endangered adolescents. (Foucault, 1978, p. 30)

We have seen that for Foucault power can be produced and reproduced in theoretical formulations and inscribed in social operations of control, but the domain of discourse which archeological analysis investigates is also inescapably present in everyday life. Discursive practice is not only manifested in disciplines, in theoretical formulations in the web of social institutions and operations but also "in the statements made and the opinions expressed in daily life" (Thomas, 1977, p. 23). One thinks of Gramsci's notion of 'ideological hegemony', but we have seen that ideology is a unifying construct Foucault wishes to avoid, since it is in its very nature interpretive and 'totalizing'; it is macro-analytic, and archeological analysis establishes a micro-analytic approach by focusing on discursive events in their specificity and the rules that govern them. In the same way we can see that the 'domain assumptions' that Alvin Gouldner talks about or the 'assumptions' bracketed in certain phenomenological reductions are not completely dissimilar from 'discursive formations'. The difference is that the former are 'translated' into the world of discourse. It is impor-

tant to understand this difference more fully. Alfred Schutz (1967) has said

> To none of its experiences while they are actually occurring may the ego ascribe meaning.... But to most experiences meaning may be ascribed in retrospect. We may also ascribe meaning prospectively to future experiences. (p. xxiv)

The 'meaning' we ascribe, however, emerges from, is formed by discourse. There is always that small elision between the sensation, the sense we have and the words or signs which give it shape or meaning. And it is our task, perhaps our fate to continually encroach on that elision, to fill it in with discourse. We push back the darkness or gap between the 'nothingness' of sensation with the being of language. In this sense we become involved and, as noted, fragmented in discourse. The phenomenological exhortation to go beneath preconceptions, assumptions and directly experience 'things in themselves' or a 'pristine reality' differs from the 'archeological analysis' in that the latter suggests that one must emerge from this 'pristine reality' into discourse that is governed by rules and relationships. The former on the other hand suggests that "Things murmur meanings our language has merely to extract..." (Foucault, 1972, p. 228). In this sense archeological analysis seeks to investigate the blind spot of language on the basis of which things around us are arranged as we see them today.

Archeological analysis is not limited to the field of the history of ideas, a field which it sought to change, but touches not only other 'disciplines', but all facets of existence.

> (I)n seeking to define outside all reference to a psychological or constituent subjectivity, the different positions of the subject that may be involved in statements, archeology touches on a question that is being posed today by psychoanalysis; in trying to reveal the rules of formation of concepts, the modes of succession, connexion and coexistence of statements, it touches on the problem of epistemological structures; in studying the formation of objects the fields in which they emerge and are specified, in studying too the conditions of appropriation of discourses, it touches on the analysis of social formations.... Lastly, in so far as it is possible to constitute a general theory of productions, archeology, as the analysis of rules proper to the different discursive practices, will find what might be called its 'enveloping theory.' (Foucault, 1972, p. 207)

In The Archeology of Knowledge Foucault suggests the areas to which such an analysis could be applied.

> There is, for example, the archeological description of 'sexuality'.... (in such a description) one would ask oneself...whether sexuality quite apart from any orientation towards a scientific discourse, is not a group of objects that can be talked about, or that is forbidden to talk about, a field of possible enunciations, ...a group of concepts, which can no doubt be presented in the elementary form of notions or themes, a set of choices. Such an archeology would show ... how the prohibitions, exclusions, limitations, values, freedoms and transgressions of sexuality ...are linked to a particular discursive practice. It would reveal, not of course as the ultimate truth of sexuality, but as one of the dimensions in accordance with which one can describe it, a certain 'way of speaking'; and one would show how this way of speaking is invested not in scientific discourse, but in a system of prohibitions and values. An analysis that would be carried out...in the direction...of what we might call the ethical. (Foucault, 1972, p. 193)

> It seems to me that one might also carry out an analysis of the same type on political knowledge.... (I)t would try to explain the formation of a discursive practice and a body of revolutionary knowledge that are expressed in behavior and strategies, which give rise to a theory of society, and which operate the interference and mutual transformation of that behavior and

those strategies. (Foucault, 1972, p. 195)

The methodology that Foucault outlined in The Archeology of Knowledge and which was immanent in his previous works and refined in his more recent studies is the methodology I shall use in investigating the vast terrain of 'sexuality'. I shall focus on the way 'sexuality' in its broadest and most specific senses has been produced and re-produced, divided and redivided, employed and deployed in those discourses I have temporarily grouped under the term 'sexual politics' and in those discourses which form the sexual terrain such a movement seeks to change. The approach I have outlined allows a field to emerge which is synonymous with neither 'phallocentric culture' nor with 'feminist' or 'radical homosexual' ideology.

One more comment must be made which will bring us to the edge of the field to be surveyed. In the conclusion of The Order of Things Michel Foucault (1973) says:

> As the archeology of our thought easily shows man is an invention of recent date. And perhaps nearing its end. (p. 387)

There can be little doubt that the end of 'man' has also been signalled by the emergence of 'woman'. And that emergence poses questions that reverberate not only through society, not only through our concepts of knowledge but also through the very ways we conceive existence.

REFERENCES

D'Amico, R. "Reviews." *Telos*, 1978, *36*, 167-182.

Foucault, M. *The order of things*. New York: Vintage Books, 1973.

Foucault, M. *Madness and civilization: A history of insanity in the age of reason*. New York: Pantheon Books, 1965.

Foucault, M. *Discipline and punish: The birth of the prison*. New York: Pantheon Books, 1977.

Foucault, M. *The history of sexuality*. New York: Pantheon Books, 1978.

Huxley, A. *The doors of perception*. New York: Harper & Row, 1970.

Kuhn, T. *The structure of scientific revolutions*. Chicago: University of Chicago Press, 1975.

Lacan, J. *The language of the self: The function of language in psychoanalysis*. New York: Delta, 1975.

Lotringer, S. "Libido unbound: The politics of schizophrenia." *Semiotexte*, 1977, *3*, 5-11.

McDonell, D. "On Foucault's philosophical method." *Canadian Journal of Philosophy*, 1977, *3*, 537-553.

Nietzsche, F. *On the genealogy of morals*. New York: Random House, 1976.

Said, E. *Beginnings: Intention and method*. New York: Basic Books, 1975.

Schutz, A. *The phenomenology of the social world*. Illinois: Northwestern University Press, 1967.

Thody, P. *Roland Barthes: A conservative estimate*. London, Macmillan, 1977.

Thomas, D. "Sociology and common sense." *Inquiry*, 1977, *21*, 1-32.

White, H. "Foucault decoded: Notes from the underground." *History and Theory*, 1973, *12* (1), 23-54.

Chapter IV
The Organization of Sexuality

As pines
Keep the shape of the wind
even when the wind has fled and is no longer there

so words
guard the shape of man
even when man has fled and is no longer there

George Seferis

Only as we begin to ask ourselves whether
terms like 'penis envy', 'masochism', even 'homosexual' have any meaning, or what they are actually
describing, do we begin to create a language and world-
view of our own. (Adrienne Rich, 1979, p. 253)

"Sex" is talked about today perhaps more than at any other time in history. According to some people we live in a period of unprecedented sexual freedom, and although there are those who would argue that we are still in the dark ages of sexual restrictions and oppression, it can hardly be denied that as a culture we talk endlessly of sexuality. Our greatest pleasures are seen as arising from the 'joy of sex' and our greatest miseries are seen as stemming from our 'sexual malaise'. We pay counselors, therapists and psychiatrists to listen to accounts of our private sexual landscape, and individuals certified as researchers pay us to relate the details of our erotic worlds and sexual autobiographies. Popular magazines and books, movies and papers abound which in one way or another describe what sexuality is, how we should "have it", and what dangers and rewards it holds. Clubs and baths proliferate where people can go to 'have sex', and licensed centers crop up which offer training programs to overcome sexual dysfunctioning or to heighten sexual enjoyment. Television programming and advertising increasingly utilize depictions of sexuality to draw larger percentages of the viewing audience and to sell products. Sex education courses emerge in the school curriculum, and it is not unusual to find previously banned pornographic movies playing on college campuses. The growing emphasis on body image and physical appearance which Christopher Lasch (1979) sees as symptomatic of our narcissistic culture bespeaks an emphasis on the body as sexual object. It is not only at the level of popular culture that sexuality has emerged in discourse. At the level of traditionally legitimate and sanctioned discourse sexuality has continued to be defined and mined for 'truth'. Disciplines such as medicine and psychology have continued to stake out and define sexual areas which heretofore had been outside their province. One need only think of the work of Masters and Johnson, of the emergence of sex clinics, of the recent attention given to 'adolescent sexuality' and the 'sexuality of the aged' to note the continued infiltration of a psycho/medical discourse into the area of sexuality.

Coupled with the increasing verbosity on sexuality at the level of popular culture and at the level of 'scientific' knowledge is the emergence of sexuality as a political issue. I have already summarized the political positions which have both expanded the definition of sexuality and utilized sexuality as their starting point for changing our social and psychic structures. The most important political and social movement of the period in which we live, challenges us along sexual lines, and issues concerning sexuality have come to define the political Right and Left. Whatever one's position might be regarding the changes that are occurring in our attitudes toward sexuality, the fact is that sexuality has emerged as one of the central concerns of the day and has in varying voices spoken of our entire existence. Sexuality has been made to speak and

and in speaking it has begun to describe our prisons and perhaps point the way to our freedom.

Sexuality, however, has not always been so extensively subjected to interrogation and discursive coloni-zation. According to Michel Foucault (1977) it is only in recent times that sexuality has emerged in dis-course as an entitiy unto itself cut off from what were traditionally seen as both its natural and its divine sources.

> What characterizes modern sexuality from Sade to Freud is not its having found the language of its logic or of its natural process, but rather, through the violence done by such languages, its having been "denatured"——cast into an empty zone where it achieves whatever meager form is bestowed upon it by the establishment of its limits. (pp. 29-30)

What is suggested by this passage is that before the Judeo-Christian 'God' so unceremoniously died leaving behind a kind of secular morality, sexuality was circumscribed by the monolithic discourse of religion. The world which such a discourse wove was one in which sexuality emerged in terms of sin, a fall from grace, mystical transfigurations and spirituality and was divided into the profane and the sacred. But even here in a world which did not seek Truth in anything but the divine word, which did not seek Truth even there since Truth stood revealed for all to see, even here in a world where sexuality was continuous with the divine, since the divine was the source and the end point of all, sexuality was ordered by discourse. It was divided and commented on——one need only think of those figures called 'harlots' and 'sodomites', and it served to solidify the division of human beings into 'men' and 'women', not the 'men' and 'women' we know today, but nevertheless two distinct classes whose identities rested on a sexuality defined and legitimated by the divine word. Simone de Beauvoir (1974) and Mary Daly (1978) have described the differential treatment of men and women within the closed universe of the Judeo-Christian mythology, but for the moment I do not wish to pursue this point. What is important is that sexuality derived its meaning from the divine. For one to act in non-accordance with the sexual laws was to go against God. The inextricable link between re-ligion and sexuality appears even more apparent if one looks at pre-Judeo-Christian civilization. Vern Bul-lough (1976) has discussed, for example, the way Mesopotamian culture fused religion and sexuality. Tem-ple prostitution, homosexuality and anal sex, as well as heterosexual intercourse, were infused with trans-cendent meaning. What all this suggests is that in a culture governed by a monolithic religious discourse, sexuality did not constitute a separate space, a substance to be analyzed, a thematic which preserving its identity ran through daily life. Rather it existed as named only in a spiritualized universe and in a religious discourse. Its boundaries and limits converged with the limitless and boundless of the divine word. The seed spilled on the ground by Onan, the begetting of the sons and daughters of Israel, the communion between the temple prostitute and the votary, the stoning of the harlots of Babylon all were invested with and justified by a language that was circumscribed by religion without its talking of circumscription or be-lieving it was circumscribed. Nor was sexuality given shape by the cry of those reduced to objects by such a discourse. Susan Brownmiller (1976) has described the objectification and treatment of women under the codes and laws of early Judeo-Christian culture. But such treatment had no speech or the speech was si-lenced, forced to retreat into itself until it disappeared.

According to both Foucault and Bullough sexuality did not come to constitute a space separate from nature and God until the mid-eighteenth century. It was neither an area for investigation nor did it serve as an autonomous focal point for establishing truths about an individual's identity. Those prescriptions and proscriptions regarding behavior that we now consider sexual tended to be few in number and quite vague, and Foucault (1978) suggests that the majority of these rules pertained to matrimonial relations rather than a sexuality existing outside the matrimonial couple.

> (The laws were all centered on matrimonial relations: the marital obligation, the ability to fulfill it, the manner in which one complied with it, the requirements and violences that accom-

panied it, the useless or unwarranted caresses for which it was a pretext, its fecundity or the way one went about making it sterile, the moments when one demanded it (dangerous periods of pregnancy or breast-feeding, forbidden times of Lent or abstinence) its frequence or unfrequency and so on.... The marriage relation was the most intense focus of constraints. (p. 37)

Even the manuscript entitled Aristotle's Masterpiece which circulated in colonial America and which Bullough (1976) sees as a kind of early sex manual focused on marriage and defined a sexuality sanctioned by God.

> If married persons would be careful to do their respective duties, there would be but little complaining; nor would any condition in life be so agreeable as the married state.... How much more satisfaction a man receives in the embraces of a loving wife, than in the wanton dalliances of a deceitful harlot. (Quoted in Bullough, 1976, p. 101)

The manual describes the duties of married persons, many of which pertain to the husband's physical attentions to his wife prior to intercourse. What is important is that the sexuality that emerges in the manuscript is a connubial sexuality, and one which derives its status and form from God's word.

Canonical law, civil law and the Christian pastoral divided the licit from the illicit, the sacred from the profane, and although it may have focused on the marital couple, it did address, although vaguely and broadly, sexual behaviors that existed outside the realm of marriage. The point is that the definitions and divisions of this illicit sexuality were few and broad. In discussing seventeenth and eighteenth century America, Bullough (1976) states:

> Americans were fairly open in their discussions of sex but even then there was a lack of 'scientific' precision in their descriptions of sexual activities and almost all types of deviant sexual behavior were classed as sodomy. From surviving sermons and extant law cases it appears that sodomy at times included not only anal intercourse but bestiality, mutual masturbation, oral genital contacts and even some forms of birth control....
>
> If the law was ambiguous on the subject of sodomy, and more or less unenforced, sodomy itself remained a sin to Bible-reading Americans, although they were not clear just exactly what it meant. The result was to classify as sodomites those people who were regarded as evil. (p. 113)

The lack of definition of 'sinful sexuality' is manifested in the legal documents Jonathon Katz (1976) has collected in Gay American History. In the proceedings of the case of Davis vs. Maryland in 1810 one of the presiding judges declared:

> The crime of sodomy is too well known to be misunderstood and too disgusting to be defined farther than by naming it. (Quoted in Katz, 1976, p. 27)

In literally all the legal documents written between 1566 and the beginning of the nineteenth century that Katz has collected, sexual acts which were punishable were defined by a religious discourse (e.g., "If any man layeth with mankinde, as a man lyeth with a woman, both of them have committed abomination..." (Quoted in Katz, 1976, p. 23)) described as 'filthy', 'monstrous', 'unnatural' and contrary to God's plan, left broadly defined and generally grouped under sodomy.

Even as late as 1866 in the proceedings conducted by the Unitarian Church of Brewster, Massachusetts in response to the accusation that Horatio Alger had "been practicing on (two boys) at different times

deeds that are too revolting to relate" (quoted in Katz, 1976, p. 33), the actual 'crime' was not mentioned. The committee wrote it was "too revolting to think of in the most brutal of our race..." (quoted in Katz, 1976, p. 34). This is not to say that the insertion of sexual prescriptions, proscriptions and definitions into practices applied to the body was minimal. On the contrary, death, mutilation and torture were inflicted and made public spectacles (Foucault, 1978). Even in the revised Virginia law of 1777-1779 Thomas Jefferson and other leading citizens suggested that sodomy be punished by castration and "cutting thro' the cartilege of the nose a hole of one-half inch diameter at least" (quoted in Katz, 1976, p. 23), but did not specify what sodomy was apart from its being a "species of the genus Buggery" and of course an abominable sin. What were considered illicit sexual relations between women is even more difficult to establish suggesting the vagueness of such a category.

But what of the daily interactions that involved physical, erotic or sexual contact? Foucault (1978) has described, as has Aries (1962), the bawdy and violent way sexuality was talked about and treated. Foucault notes Erasmus's advice to a disciple on the choice of a good prostitute. Aries (1962) relates and comments on the diary entries made by Henri IV's physician, Heroard, regarding the sexual play between the young Louis XIII and other children and adults.

> One of the unwritten laws of contemporary morality, the strictist and best respected of all, requires adults to avoid any reference...to sexual matters in the presence of children. This notion was entirely foreign to the society of old. The modern reader of the diary in which Henri IV's physician, Heroard, recorded the details of the young Louis XIII's life is astonished by the liberties which people took with children, by the coarseness of the jokes they made, and by the indecency of gestures made in public, which shocked nobody and which were regarded as perfectly natural. (p. 100)

And one need only think of Chaucer's Canterbury Tales to be confronted with a daily sexuality, if one can call it that, that remained undefined and merged into all other aspects of daily life. What seems apparent then is that prior to the eighteenth century, yet extending into it, sexuality emerged in the codification of laws which derived their status from God's word, which divided the illicit from the licit, the sacred from the profane but which focused on the marital relationship leaving the illicit and profane only vaguely defined. Furthermore, in descriptions of daily life sexuality emerged as variously bawdy, violent and lyrical but derived its status from a kind of 'folk wisdom'. The individual's sexual behavior was not monitored or divided up and analyzed but spoken about as continuous with all other behavior unless it transgressed God's stipulations. Again this is not to say that no discourse on sexuality existed but rather that sexuality emerged in various forms on the surface of a religious discourse. It is almost inconceivable that the sex education courses instituted by Basedow in the 1770's in Germany (Foucault, 1978) could have existed earlier in such a legitimated form, since sexuality as a specific discourse did not exist. One learned of sexuality by living and by following God's law. God's law may have been brutal and cemented women into a position of slavery; its insertion into non-discursive practices such as bodily punishment may have been barbaric, but it also left undefined a whole register of sexual behaviors. As Peter Filene (1975) states in Him Her Self:

> Seventeenth-century Puritans...had not been puritanical about sex. They punished adulterers and levied fines on a surprisingly large number of pregnant brides, but they also acknowledged sexual desire within marriage to be a part of God's creation and therefore to be enjoyed along with His other gifts. (p. 83)

We can say that prior to the eighteenth century sexuality emerged in a variety of forms but always on the surface of a religious discourse, or as 'natural' behavior continuous with all other behavior. There is however one exception to this——the treatment of sexuality regarding women. If sexuality as a particular

circumscribed area existed prior to the eighteenth century, it existed in relation to the figure 'woman'. Hilda Smith (1976) in an article entitled "Gynecology and Ideology in Seventeenth-Century England" suggests that the nascent medical profession began to sexualize women's bodies to such an extent that all physical ailments were treated as relating to their sexual make-up. She writes:

> Although there were without doubt other bases for irrational judgments about human disease, sexuality was unique to women and was used to explain their health and behavior in a way never applied to men. It is obvious that by having babies women perform a particular sexual function, but it does not follow as it did in the mind of seventeenth-century physicians, that this function must dictate the general status of their health. Nor does it follow that there is some natural connection among woman's sexual function, general morality or social status and health. But is is precisely in these areas that the seventeenth-century physician filled in the gaps of his medical knowledge with the accepted views...of woman's special weaknesses. (p. 107)

Obviously there existed in pre-eighteenth century discourse the objects 'man' and 'woman' and these were defined and described in particular ways. But sexuality emerged as an area separate from religious and everyday discourse only as it cohered around woman's body. Man and woman might have been described as unique sexual creatures but sexuality as an explanation, as an explanatory instrument was applied only to women (Smith, 1976).

For Foucault the eighteenth century marks the period in which a change in the regime of discourse on sexuality becomes increasingly apparent.

> (I)t was a new regime of discourses. Not any less was said about (sexuality): on the contrary. But things were said in a different way; it was different people who said them, from different points of view, and in order to obtain different results. (Foucault, 1978, p. 27)

One can see this change occurring along several planes. First, sexuality began to emerge as a specific area within a medical discourse. Second, it emerged as a concern of the State. And third, it emerged in the limitless language of a literature whose boundary was no longer the Divine Word. According to Bullough (1976) the two most influential forces in "bringing sexual activity to medical attention" (p. 115) were the physicians, Tissot and Boerhaave. For both these men sexual activity was fraught with danger, but more importantly the dangers were stated in terms of health and sanity.

> Tissot...taught that all sexual activity was dangerous because it caused blood to rush to the brain which in turn starved the nerves (making them more susceptible to damage) and thereby increasing the liklihood of insanity. (p. 115)

For Tissot the worst kind of sexual activity was masturbation whose referential was not yet the detailed articulation of the solitary genital act that would appear in the work of later writers but rather a whole field of statements, concepts and themes concerning non-procreative sex. 'Masturbation' and the medical discourse in which it was situated produced a division in sexuality between the procreative and non-procreative, the healthy and pathological.

> Though Tissot used the term 'masturbation' to describe (seminal emission), masturbation for him included...all non-procreative sex. Loss of semen resulted in or would lead to (a) cloudiness of ideas even to the point of madness, (b) decay of bodily powers eventually resulting in coughs, fevers and consumption, (c) acute pain in the head, rheumatic pains and an aching numbness, (d) pimples on the face, suppurating blisters upon the nose, breast and thighs a

well as painful itching, (e) eventual weakness of the power of generation as indicated by impotence, premature ejaculation, gonorrhea, pripism and tumors in the bladder and (f) disorder of the intestines, constipation, hemorroids and so forth. (Bullough, 1976, pp. 162-163)

Herman Boerhaave also attributed physical disorders to "the rash expenditure of semen" (Bullough, 1976, p. 162). Other physicians such as John Brown and Benjamin Rush saw 'masturbation' as eventuating in a variety of illnesses and even death. The use of sexuality as an explanatory instrument which Smith (1976) suggests had in the seventeenth century been applied only to women came to be applied to men also. The gradual encroachment of the medical establishment on the area of childbirth during the eighteenth century (Rich, 1977; Daly, 1978) also suggests the medicalization of the body and in turn a division and articulation of sexuality into the pathological and the healthy.

What does this medicalization of the body and the emergence of a medical discourse on sexuality suggest? And how is it different from the religious discourse I have outlined? Several suggestions appear. First, severed from Divine Truth which is limitless in that nothing exists beyond it yet limited since all stands revealed within it, medical discourse was free to continually enlarge and colonize the area of sexuality it had staked out. If masturbation or non-procreative sexuality was pathological then those areas demanded investigation and intensified articulation. Furthermore the medical establishment could annex the area and maintain that it alone could speak in detail of it, given its neutrality and status. Second, the shift from the sacred to the healthy and from the profane to the pathological allowed sexuality to emerge as an explanatory force, a force controlled by a particular group and a force, given the orientation of medicine, which expanded in the area of the pathological. In this sense sodomy which was an abomination, a sin against God, a species of buggery and an unmentionable crime against the Divine became pathologized and was subject to an intensified articulation. It could be interrogated and speak its name but only in a medical discourse. Third, and perhaps most interesting, the sexuality that became pathologized was a genital sexuality. Most of the medical tracts in which sexuality emerged in the eighteenth century focused on the dangers of seminal emission and located the seat of sexuality as explanation in the genitalia or female reproductive system. The emphasis on seminal emission suggests both a phallocentricism but also an increasing definition and articulation of a sexuality that was oriented to the male body.

According to Foucault (1978) during the eighteenth century sexuality increasingly became a concern of the State.

> In the eighteenth century, sex became a 'police' matter——in the full and strict sense given the term at the time: not the repression of disorder, but an ordered maximization of collective and individual forces. (pp. 24-25)

Eli Zaretsky (1973) seems to support this when he describes the effect of industrial capitalism on the family unit.

> Industrial capitalism required a rationalized, coordinated and synchronized labor process undisturbed by community sentiment, family responsibilities, personal relations or feelings. (pp. 47-48)

The family, that is, the heterosexual monogamous couple and their children were cut off from the mode of production and left to attend to the chores of raising children and training them in behavior consonant with the requirements of the new economic order as well as religious dictates. Those individuals who did not conform to the behavior legitimized by the new family unit received increasing attention.

> (W)hat came under scrutiny was the sexuality of children, mad men and women, and criminals; the sensuality of those who did not like the opposite sex; reveries, obsessions, petty manias; or great transports of rage. It was a time for all these figures, scarcely noticed in the past, to step forward and speak, to make the difficult confession of what they were. No doubt they were listened to; and if regular sexuality happened to be questioned once again, it was through a reflex movement, orginating in these peripheral sexualities. (Foucault, 1978, pp. 38-39)

Perhaps the most striking example of the intensified concern with 'deviant' sexuality concerns the figure of the child. During the eighteenth century the child became sexualized in a new way. Both Foucault and Bullough note the increasing surveillance of children during this period, a surveillance that is of the child's sexual behavior.

> (T)he sex of the schoolboy became in the course of the eighteenth century——and quite apart from that of adolescents in general——a public problem. Doctors counseled the directors and professors of educational establishments, but they also gave their opinions to families; educators designed projects which they submitted to the authorities; schoolmasters turned to students, made recommendations to them, and drafted for their benefit books of exhortations, full of moral and medical examples. Around the schoolboy and his sex there proliferated a whole literature of precepts, opinions, observations, medical advice, clinical cases, outlines for reform, and plans for ideal institutions. (Foucault, 1978, p. 28)

Aries (1962) notes a similar preoccupation with the behavior of children during the eighteenth century.

> General de Martange's correspondence with his wife gives us some idea of a family's private life and preoccupations... Martange was born in 1722 and married in 1754. He shows great interest in every thing concerning his children's life, from coddling to education; he watches closely over their health and even their hygiene... Not only the child's future but his presence and his very existence are of concern. (p. 133)

Much of the surveillance of children concerned their masturbatory habits and one need only think of the previously mentioned excerpt from the diary of Henry IV's physician which described the genital play between children and adults, to note a marked change in the conceptualization of children's sexuality.

What is important about the sexualization of children, the growing attention to the increasingly defined category of sexual deviancy, the growing state apparatus which sought to analyze demographic phenomena and the consolidation of a family admonished to monitor and manage sexual behavior is not so much the causes of this transformation but that in these changes one can begin to see the emergence and proliferation of discourses that reach their full force in the nineteenth century.

The third plane on which sexuality began to emerge in the eighteenth century was that constituted by the language of a literature no longer bounded by God's word. According to Octavio Praz (1967), Sade was the first to "expose the mechanism of homo sensualis" (p. x) and gave "the first systematized account of sexual perversions" (p. x).

> (He) did nothing more than give a name to an impulse which exists in every man, an impulse mysterious as the very forces of life and death with which it is inextricably connected. (pp. x-xi)

> The Marquis de Sade empties his world of all psychological content except the pleasures of destruction and transgression, and moves in an opaque atmosphere of mere matter, in which his characters are degraded to the status of instruments for provoking the so-called divine ecstasy of destruction. (p. 104)

In Sade's works we are presented with a plethora of bodies, parts of bodies, insertions, holes, appendages all working together in the pursuit of pleasure which has severed any connection to the Divine, to love, to the ineffable. The sodomy that could not be named here becomes not only named but catalogued, divided, defined, and dispersed through language. The very limits of a sexuality existing in its own space are marked out in Sade's works. Sex emerges without any norm or intrinsic rule except that of power. What is interesting about Sade's work is that if, as Praz suggests, it was the first cataloguing of "sexual perversions" that cataloguing was contemporaneous with the growing attention of both the medical establishment and the State to peripheral sexualities, that is to those sexual behaviors which deviated from the heterosexual monogamous couple's sexuality. As "sexual perversions" were being defined, articulated and increasingly attended to and condemned by the State and the medical establishment, there emerged an articulation of sexual acts that might be called "perversions" but which in their presentation were linked to pleasure and power rather than pathology and restraint.

Three planes then on which sexuality can be seen to have emerged during the eighteenth century. It emerged in medical discourse; it emerged as a concern of the State; and it emerged in a particular form in the literary language of the Marquis de Sade. These three planes overlapping and intersecting with each other constituted a change in the discursive formation of sexuality and had several consequences. First, a variety of peripheral sexualities which, treated at times as deviances and at other times as pathologies, could be hunted down, analyzed and eventually serve as a rational for the incarceration of individuals. At the same time a species of sexual behaviors were articulated in circulating print which were linked to pleasure and power and which would blossom in the pornographic literature of the ninteenth century, and become inextricably entwined with what Steven Marcus (1966) has called the "secret life of sexuality" (p. 101). Existing in the silent space of this proliferating articulation of pathological and deviant sexuality was the family unit. It was a center which became invested with a negative sexuality in the sense that sexuality for the family became a set of rules governing sexual prohibitions. Children had to be watched so that their specific sexuality would not emerge. Bedrooms would be separated from the rest of the house. A discourse on hygiene would allow sexuality to emerge in only certain forms. Non-procreative sexuality would be consigned to the space surrounding the family and procreative sexuality would be defined and taught by physicians and pedagogues. Second, as sexuality became an explanatory force, all forms and types of ailments and illnesses could be attributed to a sexuality whose origin and end point was established by a medical discourse. This allowed for an interrogation, analysis and re-articulation of the individual's sexual behavior and eventually the individual's being, itself. Third, as sexuality emerged on these three planes, it cohered around fragmented parts of the body particularly the genitalia. Fourth and finally, sexuality as it began to emerge in eighteenth century discourse with its divisions into the healthy and pathological, the contracted familial procreative space and the expanded non-procreative area, with its new explanatory power, its autonomy, with a life of its own that found its origin and endpoint in neither God nor the density of human life but in the prolixity of new discourses, became tied to a range of non-discursive practices which came to manage, control, incarcerate and ravage the lives of numerous human beings.

The nineteenth century has often been viewed as the age of sexual repression and sexual censorship. The theory generally states that as sexuality was repressed in one sphere of life——in the familial, in the society 'that showed itself in broad daylight'——it popped up with intensity in another sphere——the back street, the brothel. Sexuality went underground, banished from polite society and silence became the rule. I would like to argue that sexuality rather than being silenced, was talked about more and more, that during

the nineteenth century the changes in the discourse on sexuality that can be detected in the eighteenth century solidified and intensified, and that a variety of discourses on sexuality proliferated. During the Victorian 'silence', sexuality became an area to be colonized by medical, pedagogical, psychological and 'pornographic' discourses and by the end of the century sexuality was made to speak in more voices than ever before about both itself and all else.

As late as the mid-nineteenth century physicians were still blaming a host of ills on onanism and masturbation yet continued to define these terms loosely. In 1842 Alfred Hitchcock writing in the "Boston Medical and Surgical Journal", urged, however, physicians to be more candid about attributing much of Americans' illnesses to onanism, and by candid he meant less silent and more articulate on the subject (Bullough, 1976). The founder of pediatrics Abraham Jacobi, answered this call with his studies on the links between masturbation and infantile paralysis and rheumatism (Bullough, 1976). I need not detail the number of medical studies which found in onanism and masturbation the cause for so many ailments and ills. Suffice it to say that they were numerous and detailed. So detailed that by 1899 James Scott had classified a variety of acts of masturbation.

> (H)e classified all kinds of acts as masturbation including withdrawal, coitus in os, coitus inter-femora, pederasy, bestiality, mutual masturbation and 'self pollution'. (Bullough, p. 118)

As sodomy had been annexed and transformed by medical discourse into the disease of onanism and masturbation, these concepts came to exist in a network of statements which divided up and extended those concepts. New diseases appeared such as 'spermatorrhea' which consisted in the "involuntary discharge of semen with or without an erection during sleep or waking hours' (Kern, 1975, p. 104). Sexuality continued to emerge in a medical discourse which divided it into the healthy and pathological, but it was the pathological that received the greatest articulation. Pathological sexuality was increasingly defined and used as an explanatory force, and it was used to explain the behavior of mainly three groups of people: women, children and that amorphous group variously referred to as 'deviants' and 'perverts'.

Women had begun to be medically sexualized in the seventeenth century and that medical sexualization reached its apotheosis in the nineteenth century. In 1872 a professor at the Harvard Medical School, Edward Clark, reported his findings that excessive mental strain for women in the form of higher education would deplete the blood in the reproductive organs and lead to physical breakdown and sterility (Simmons, 1976). Menstruation itself was defined by some physicians as pathological (Burrlough, 1976). G.J. Barker-Benfield (1976) in The Horrors of the Half-Known Life: Male Attitudes Toward Women and Sexuality in Nineteenth Century America states that the medical profession was bent on reducing women to their sex organs. Mary Daly (1978) reports Dr. Charles Meig's advice to his pupils in 1848 "that their study of female organs would enable them to understand and control the very heart, mind and soul of woman" (p. 227). Female "nervous disorders" became defined through a sexuality that was medicalized.

> In the 1860's Dr. Isaac Ray and his contemporaries proclaimed that women are susceptible to hysteria, insanity and criminal impulses by reason of their sexual organs. (Daly, 1978, p. 227)

Leo Berg in 1891 advocated the study of women's breasts to understand woman's character.

> A woman's breast is the organ with which she is able to express herself most intelligently. It is her language and poetry, her history and her music, her purity and her desire.... The history of the corset and the body is almost the whole story of the female sex. The bosom is the central organ of all female ideas, wishes and moods. (quoted in Kern, 1975, p. 96.)

What is important to note in this passage is the equation of the breast with an organ, an organ which became

caught up in a discursive web that divided, analyzed and fragmented the female body, a discursive web that constituted a particular sexual grid. Given the theme of masturbation and the intensification of focus on women's 'sexual organs' the emergence of the figure of the 'hysterical female' is not surprising. Female hysteria was linked to the reproductive and sexual organs and to masturbation.

Children's sexuality also increasingly became an object for medical discourse. It was a sexuality defined by and large as pathological and again the focus was on masturbation and parents were admonished to watch for suspicious signs of masturbation, signs which in 1882 John Harvey Kellog listed as follows:

> A general debility, consumption-like symptoms, premature and defective development, sudden changes in disposition, lassitude, sleeplessness, failure of mental capacity, fickleness, untrust-worthiness, love of solitude, bashfulness, unnatural boldness, mock piety, being easily fright-ened, confusion of ideas, aversion to girls in boys but a decided liking for boys in girls, round shoulders, weak backs and stiffness of joints, paralysis of the lower extremities, unnatural gait, bad position in bed, lack of breast development in females, capricious appetite, fondness for eating unnatural and hurtful or irritating articles such as salt, pepper, spices...acne or pimples, biting of fingernails, shifty eyes, hysteria, epileptic fits, bedwetting and the use of obscene words and phrases. (quoted in Bullough, 1976, p. 166.)

The sexuality that was attributed to children was a sexuality that was defined by medical discourse. It was certainly not the wriggling, giggling, pressing and squeezing of bodies that was described by Henry IV's physician. Even though all children were described as sexual, their sexuality was not 'natural' and further-more because it was pathological it posed dangers to the individual and society. One physician stated that sexual perversions were hereditary.

> (If those who engaged in such) perversions had offspring, the child itself would be born with perverted instincts. (quoted in Bullough, p. 167)

Finally, there emerged in medical discourse that special group of individuals who had moved in various forms on the periphery of the community, but who now took on various identities which consigned them to those classifications such as perverts and deviants.

In 1882 an anonymous 'homosexual'——the term itself did not come into existence until the mid-nine-teenth century——wrote a letter to Krafft-Ebing in which he stated the following:

> I will understand that science has taken hold of this matter so recently that in the eyes of one whose mind is sound and who is unversed in the nature of this disease, it appears as a horrible and unnatural crime. Ulrichs has not overestimated the prevalence of this disease. (quoted in Katz, 1976, p. 38)

What is unique about this passage is the unselfconscious use of the term 'disease'. Although criminal law continued to use the older terms of 'sodomy' and 'crime against nature' the medicalization of these terms seems to have been widely accepted. Initially, homosexuality was submerged in the category of onanism which included all non-procreative sex, but according to Bullough (1976) homosexuality began to be separated out from onanism in the 1880's with the publication of Dr. G. Alder Blumer's work.

> Blumer advanced the concept of 'perverted sexual instinct' first proposed by C. Westphal of Berlin when reporting the case of a feminine-appearing male who abhorred women but denied sexual contacts with men. Blumer concluded that the man was probably insane in some fash-

ion, possibly epileptic, but refrained from lumping him with the 'insane masturbators'. (Bullough, p. 120)

Foucault (1978) discusses the creation of the 'homosexual' as a separate category.

> We must not forget that the psychological, psychiatric, medical category of homosexuality was constituted from the moment it was characterized——Westphal's famous article of 1870 on "contrary sexual sensations" can stand as its date of birth——less by a type of sexual relations than by a certain quality of sexual sensibility, a certain way of inverting the masculine and the feminine in oneself. Homosexuality appeared as one of the forms of sexuality when it was transposed from the practice of sodomy onto a kind of interior androgeny, a hermaphorism of the soul. The sodomite had been a temporary aberration; the homosexual was now a species. (Foucault, 1978, p. 43)

A whole variety of figures began to emerge all of whom derived their identity from their 'pathological sexualities'. There were the 'erotopaths' of Dr. Charles Hughs, the 'automonosexualists' of Rohleder and of course the exotic figures who appeared in the work of Krafft-Ebing. All of these figures were described, analyzed and named. Here is a Dr. Hamilton discussing 'sexual perverts' in an article published in the American Journal of Insanity in 1896.

> Of the sexual female examples that have come under my notice the offender was usually of a masculine type, or if she presented none of the 'characteristics' of the male, was a subject of pelvic disorders, with scanty menstruation and was more or less hysterical or insane. (quoted in Katz, 1976, p. 61)

Women, children and 'deviants' became the target of an encroaching medical discourse on sexuality and emerged as particular objects in that discourse. Furthermore that discourse was inserted into certain nondiscursive practices. Women, children and 'deviants' were subjected to a horrifying array of tortures. Daly (1978), Bullough (1976), Kern (1975) and Katz (1976) have documented the use of a variety of 'treatments' to cure the pathological sexuality of these groups, but perhaps Kern (1975) gives the most vivid description.

> The popular French medical writer, Pierre Garner suveyed a variety of treatments for female masturbation in a treatise of 1883. He argued that the 'foyer clitoriden' scarcely provoked any excitation unless it was abnormally enlarged from habitual masturbation. If cauterization of the clitoris did not work to quell excessive masturbation then, he concluded, the clitoridectomy might be used as a last resort.... In 1884 the German neurologist Paul Flechsig recommended castration (removal of the ovaries) in the treatment of female hysteria and discussed several cases in which he had employed it. The German gynecologist Alfred Hegar reproted on castration treatment of hysteria in 1885. Generalizing from his therapeutic success with castration, he argued that sexual substances affected the entire nervous system. (Kern, p. 102)

Castration, clitoridectomy, circumcision, blistering of the thighs, vulva or pupuce, corporal punisment, hysterectomy and vasectomy were all used. For children a range of paraphernalia was available for controlling masturbation. Incarceration and torture awaited those who were found to exhibit a pathological sexuality.

Aside from the inscription of medical discourse on the bodies of these groups, there were certain other consequences of the emergence of a medicalized sexuality. First, sexuality was both localized in the 'organs' or gentitalia and reproductive system and extended throughout the body. The loci of sexuality were particular areas, but the pathology inherent in those areas could be detected on all surfaces of the body.

No part of the body was exempt from scrutiny. In the 1890's Wilhelm Fliess suggested the existence of 'genital spots' on the nose and tried to establish a link between nasal and sexual processes (Kern, 1975).

The entire body could be interrogated, analyzed and described in terms of a medicalized sexuality. Second, 'sexual impulses' or 'sexual feelings' could emerge as a species of impulses and feelings within a particular context. When in 1857 Dr. William Acton stated in The Functions and Disorders of the Reproductive Organs that "the majority of women (happily for them) are not very much troubled with sexual feeling of any kind" (Quoted in Filene, 1975), he was referring to a particular kind of sexuality, one which women were told would, if awakened too soon or cultivated too much, lead to a variety of diseases. As we have seen, it was exactly that kind of sexuality that was connected with genital zones of the body and that was pathologized. Third, sexuality could be employed to manage, monitor and control those groups who were the 'other' in society. They could be interrogated, analyzed, treated, incarcerated and tortured, but perhaps most important their very identities could be created and controlled. It was as if a thread of discouse originating in the hands of the physician or pedagogue, the therapist or judge was inserted into the vaginas and penises of these individuals, pulled out through their mouths and used to drag them in every direction. Fourth and finally, a plethora of sexualities emerged which would be expanded and further enumerated by psychology and psychoanalysis.

What of the family unit though? Was the conjugal sphere simply a silent area situated in the midst of proliferating 'morbid' sexualities? Did the monogamous heterosexual couple constitute a blank space? According to Anne Gordon and Mari Jo Buhle (1976) the nineteenth century family contracted "into an increasingly private set of relations" (p. 284). However, those relations were increasingly defined by what might be termed a pedagogy of sexuality. Such a pedagogy taught what was permitted and not permitted. In many ways it intersected with and popularized the medical discourse on sexuality, but it did so in a particular way. If the medical discourse on sexuality to a large extent constituted the territory surrounding the conjugal area, then the conjugal area became what that territory was not. It was the shadow, or rather, if one thinks of the optical illusionary drawing which appears as either two faces or a vase depending on which space is emphasized, the conjugal unit was like the vase. Every gesture, every articulation pointed at one and the same time to what it was not but what it could be. A few examples will illustrate my point. Kern (1975) quotes an excerpt from O.S. Fowler's Love and Parentage Applied to the Improvement of Offspring which appeared in 1846.

> While sexual love, as such, transmits the bodily organs and animal function, it remains for this spiritual love to call forth into the most delightful and intense action possible, the entire intellectual and moral nature of parents, preparatory, and in order, to its conferring on man this boon of angels, this 'image and likeness' of God; besides purifying and sanctifying the animal by the ascendency of the moral and guiding all by reason. And it is this combined and concentrated as well as high-wrought inter-communion of every physical, every intellectual, every moral element and function of humanity in generation as it is by constitution, which renders the pleasure attendant on this double repast so indescribably exalted and beatific to those who spiritually love each other, or in proportion thereto; besides being the ONLY means of augmenting and perfecting the intellectuality and morality of its product——redoubling more and more as its handmaid love becomes more and more perfect, and thereby enhances and also united, in this holy alliance, faculty after faculty, till finally, when both love and generation have their perfect and of course, united, work, they embrace within the wide range of their sanctified enjoyment, every animal, every intellectual, every moral, organ and function, and element of man's entire constitution! (p. 123)

The family unit becomes the concentrated, solidified island in a sea of sexual deviance, and yet the statements in this passage continually point to that sea. At the same time an entire semantic process of substi-

tution was occurring. 'Limb' replaced 'leg', 'light meat' replaced 'chicken breast' and 'with child' replaced 'pregnant' (Gordon and Buhle, 1976). Thomas Bowdler in 1818 brought out The Family Shakespeare in which improper words and expressions were left out (Artnstein, 1966). All these omissions and euphemisms, however, pointed to what was omitted and covered. Furthermore 'sexuality' was not banished from the connubial couple; rather it emerged as what it was not supposed to be. In a nineteenth-century sex manual Mrs. Elizabeth Osgood Goodrich Willard described what it was not.

> We must stop this waste through the sexual organs, if we would have health and strength of body. Just as sure as that excessive abuse of the sexual organs destroy their power and use, producing inflammation, disease and corruption, just so sure is it that a less amount of abuse, in the same relative proportion, injures the parental function of the organs, and impairs the health and strength of the whole system. Abnormal action is abuse. (quoted in Bullough, 1976, p. 123)

What was normal was continence, a 'spiritual union' and a constant attention to the possible outburst of the 'abnormal'. Sexuality emerged as reproduction without the procreative act. It emerged as an absence whose presence was continually noted. The family was admonished to be continually on the watch for the eruption of a medicalized, pathologized and genital sexuality and the intensity of that watch, of that surveillance helped create a body zone that took on an autonomy and importance which would allow it to become the very basis of one's being.

Sexuality also emerged in the nineteenth century in a psychological and psychiatric discourse which together with the medical discourse on sexuality formed what Ivan Block in 1906 called Sexualwissenschaft, a science of sex. The seminal figures in the evolution of a psychological or psychiatric discourse on sexuality were of course Krafft-Ebing, Freud and Ellis. I do not wish to review the work of these men, but I do want to suggest certain consequences of their work. First, sexuality became more than ever before spatialized, temporalized and self-referential. Krafft-Ebing, utilizing the work of physicians and psychiatrists such as Charcot, Kerval and Chambard divided the body into a variety of erogeneous zones. He literally zoned the body, sexualized those zones and then proceeded to pathologize them. Each zone could be separately talked about, analyzed and observed. Freud in addition to spatializing sexuality——one only has to think of the theoretical edifice built on the mouth, anus and genitalia——temporalized sexuality. Not only did the child have a sexuality, but that sexuality haunted and re-presented itself during the course of his or her life. Freud, himself, stated the need to enlarge the definition of sexuality.

> (I)t was necessary to enlarge the unduly restricted concept of sexuality, an enlargement that was justified by reference to the extension of sexuality occurring in the so-called perversions and to the behavior of children. (quoted in Kern, 1975, p. 179)

By accepting and refining the spatializing of sexuality and by adding a temporalized sexuality, Freud was able to link the behaviors of an adult with the childhood experiences of that adult.

> Among those whom we try to help by our psychoanalytic efforts we often come across a type of person who is marked by the possession of a certain set of character-traits, while at the same time our attention is drawn to the behavior in his childhood of one of his bodily functions and the organ concerned with it. (quoted in Kern, 1975, p. 181)

Both Freud and Ellis also allowed sexuality to emerge as self-referential, and this was carried out through the symbolization of sexuality. Here is Ellis on the subject:

By 'erotic symbolism' I mean that tendency whereby the lover's attention is diverted from the central focus of sexual attraction to some object or process which is on the periphery of that focus, or is even outside of it altogether, though recalling it by association of contiguity or of similarity. It thus happens that tumescence, or even in extreme cases of detumescence, may be provoked by the contemplation of acts or objects which are away from the end of sexual conjugation.

'(S)exual symbolism' may be used to designate a great variety of ritual and social practices which have played a part in the evolution of civilization. (Ellis, 1936, p. 1)

What must be noted here is that the "central focus of sexual attraction" is heterosexual intercourse and that the symbols which have been sexualized refer back to a particular sexualized zone of the body.

Freud perhaps had the greatest impact on the symbolization of sexuality and the sexualization of symbols. One need only think of his cataloguing of the sexual symbols in dreams or more specifically his statement on why witches fly in dreams: "Their broomstick is apparently the great Lord Penis" (quoted in Kern, 1975, p. 177). A process can be seen then which worked in two separate but complementary directions. On one hand particular zones of the body emerged within a sexual grid and these zones became the referents for a variety of phenomena seen as symbols. On the other hand a wide variety of phenomena became linked to those zones and thereby sexualized. The consequence of this was that sexuality could be found everywhere; it could be ferreted out as both cause and effect, yet this sexuality existed in a medical/psychiatric discourse which now could lay claim to all aspects of human life.

Perhaps the most important consequence of the colonization of sexuality by the psychiatric and psychological discourse was the sexualization of character or personality, that is the emergence of beings in this colonized area who derived their identity from it. 'Hysterical women', 'inverts', 'homosexuals', 'psychopaths', 'neurotics' as well as 'woman' and 'man' emerged as figures formed by the intersections, juxtapositions, and interconnections of lines and planes that divided and formulated human beings into erogenous zones, symbologies and character-traits and linked these through sexuality. Unlike the medical discourse which often assigned 'sexual abnormality' to congenital hereditary and physiological causes, psychology and psychiatry related 'sexual abnormality' as well as 'sexual normality', to psychic structures and dynamics, but in doing so came to give individuals a personality based to a large extent on sexuality. A psychosexual history of the individual would have been inconceivable at the beginning of the nineteenth century.

Another consequence of the psychiatric and psychological discourse on sexuality was the hypostatizing of a sexual energy, the rendering of sexuality in something akin to a substance which could be intensified, displaced, discharged, decreased, dispersed, blocked, repressed and implicitly freed and attached to objects. Sexuality as a substance or energy emerged then, but it was a quantity that unmeasureable, pointed at one and the same time to its absence and presence. It was present in somatic symptoms, present in the disguises it assumed in dreams and language, present in a world made sexually symbolic and present in the division and re-articulation of the body and the psyche. Yet it was absent, invisible, for it could only manifest itself, manifest itself in a world woven by the very discourse which posited its centrality. Witness Freud's Dora. Her sexual energy displaced from her clitoris to her mouth, tranformed into a desire to fellate her father, symbolized into a cough and sore throat——is this sexual energy anything but the very manifestation of it as divided, analyzed and re-articulated in psychiatric discourse?

Finally, sexuality emerged as inextricably bound to a verbal network and to Truth. It is not without reason that psycho-analysis has been called the 'talking cure'. The ear of psychology and psychiatry heard the voice of sexuality and interpreted it. Truth would be found in sex, sex would be found in the Word, and the Word would be found in the discourse of psychology and psychiatry. Perhaps Foucault (1978)

sums it up best.

> It (was) no longer a question simply of saying what was done—the sexual act—and how it was done, but of reconstructing, in and around the act, the thoughts that recapitulated it, the obsessions that accompanied it, the images, desires, modulations and quality of the pleasure that animated it. For the first time no doubt, a society (took) upon itself to solicit and hear the imparting of individual pleasures. (p. 63)

During the nineteenth century sexuality also emerged in what came to be called 'pornography', perhaps the most famous example being My Secret Life (1966). What is interesting about the sexuality that appears in this book is not so much its prolixity, but the way it is divided and subdivided, indexed and catalogued. If medicine, psychiatry, psychology and pedagogy were classifying abnormal and normal, pathological and healthy sexuality, pornographic literature seemed to be classifying 'secret' sexuality. For every fetish that Krafft-Ebing named, there appeared in My Secret Life a corrolary depiction of its pleasure. If the medical/ psychiatric discourse on sexuality constituted a Sexual-wissenschaft in the nineteenth century, then pornography might be viewed as constituting the 'art of sexuality' although an art bound to the science of sex and the need to talk about sexuality.

To summarize then, several things can be said about the way sexuality emerged in the nineteenth century. First, it was divided into the healthy and pathological, the licit and illicit and continually subdivided. The body itself became zoned, fragmented and each of those zones and fragments could refer back to each other in a neverending process. Second, sexuality became not only a cause of almost all behaviors and psychic states but also the principle by which these could be united. Sexuality had an inexhaustable causal power, but was also an inexhaustable source for interpretation. Furthermore sexuality came to serve as the anchorage point for several statements—sexual fantasies, sexual dreams, sexual urges, sexual impulses— which took on very specific meanings as they emerged in the nineteenth century. The 'sexual impulse' was itself divided by Hegar into Begattungstrieb and Fortpflanzungstrieb—the urge to copulate and the urge to reproduce (Kern, 1975, p. 129)

> (I)n 1894 Max Dessoir described the "undifferentiated sexual feeling" as a component that appears just prior to puberty when sexual feelings are not concentrated in the genitals and seek only "contact with a warm body." This component of the sexual impulse may in normal individuals last for a few years beyond puberty but gradually gives way to genital, heterosexual feelings. (Kern, 1975, p. 129)

Third, a host of figures emerged in the medical/psychiatric discourse on sexuality: the 'invert', the 'hysterical woman' the 'homosexual', the 'masturbating and sexually perverse child' and other peripheral sexualities. Fourth, the heterosexual, monogamous, procreative couple emerged as the silent standard against which all other sexualities would be measured. Heterosexuality, remaining as a kind of assumed naturalness was exempted from the intense gaze of physicians, psychiatrists and pedagogues. It was the center around which swirled proliferating peripheral sexualities. Fifth, sexuality was diffused throughout the body but found its locus in the genitals and reproductive organs. The phallus was medically and psychologically legitimized as the main referent from which all else derived significance. Sixth, a variety of pleasures were redefined, sexualized, catalogued and inserted into a whole system of management and control. Seventh, sexuality emerged as a field of signs which was infinitely self-referential. Eighth, sexuality emerged as a secret which could be ferreted out, hunted down, forced to reveal itself yet paradoxically a secret which could never be exhausted by revealing itself.

Ninth and last, the various discourses in which sexuality emerged in the nineteenth century were inserted into non-discursive practices. Incarceration, torture, surveillance could be applied to the body in the name

of a sexualized Truth.

The century that followed the Victorian Era and that is coming to a close has often been characterized as one which threw off the repressive constraints of the nineteenth century, liberated sexuality and allowed it to emerge as something all of us have the right to enjoy and talk about. Gagnon and Simon (1973) suggest as much when they write:

> In the last half century sexuality has moved from the dim background of American life to a large place center stage. Few other topics occupy, either directly or indirectly as much of the waking life——and perhaps dream life—— of vast segments of our population....
>
> Only during the past seventy years in Western society has there been even vague public discussion of the sexual experience of man.... (pp. 1-2)

I have suggested that the nineteenth century, however, was marked not by a silence on sexuality but by a proliferation of discourses on sexuality, and I would like to argue that not only is the way we talk about sex today reflective of and an extension of those discourses but also that the movement to liberate sexuality, to dismantle the 'repressive' nineteenth century sexual grid has remained caught within that grid.

During the past seventy years sexuality has continued to emerge in both medical and psychiatric discourse. It is true that certain nineteenth and early twentieth century figures have disappeared. Gone are the 'mixoscopophile', the 'onanist', the 'dyspareunist women' and quickly receding are the 'nymphomaniac' and the 'hysterical woman'. In 1974 the American Psychiatric Association removed homosexuality from the category of a pathological illness although the 'homosexual' still remains in medical and psychiatric textbooks, rules for treatment and discourse as a particular figure with particular traits and a particular physiology. 'Woman' as several writers have pointed out (Tenov, 1976; Weisstein, 1971; Daly, 1978) has continued as a construct in a medico-psychiatric discourse, which anchors that construct in female 'sex organs' and the reproductive system. However, there has been a change in the medico-psychiatric discourse, a change which can be seen as the operating on two levels. First, there has been a shift from the 'sexually perverse and diseased' to the 'sexually dysfunctional'.

The study of what Bernard in the 1850's called 'internal secretions' (Kern, 1975) and their relationship to bodily processes and what he called the "manly functions" has come to occupy a larger and larger place in the medico/psychiatric discourse and intersected with the emergence of sexuality as a concern of the social sciences, particularly psychology. In The New England Journal of Medicine an article appeared in May 1979 written by Imperato-McGinley et al. The authors concluded the following:

> This paper demonstrates that in a laissez-faire environment, when the sex of rearing is contrary to the testosterone-mediated biologic sex, the biologic sex prevails if the normal testosterone-induced activation of puberty is permitted to occur. (p. 1235)

In the Psychology of Sex (1979) H. J. Eysenck writes:

> (B)oth sexual behavior and social conduct are influenced by a person's hormones, along lines which are in good accord with the stereotyped views propagated by society. (p. 46)

In the same book Eysenck cites several recent studies which find distinction in the hormonal make-up of 'homosexuals' and 'heterosexuals'. Finally at the eighty-seventh annual convention of the American Psychological Association Dr. A.A. Eberhardt stated:

The results suggest that the administration of these hormones (estrogen and progesterone) makes boys less stereotypically masculine and girls more feminine. (New York Times, Sept. 4, 1979, p. c1)

Several things can be noted about these passages. First, there emerges a chemical explanation of a sexualized duality. Behaviors are classed according to a particular sexual grid into two categories——masculine and feminine——although Imperato-McGinley et al. do add a third category——'ambivalent'——in their article. The anchor point for the categories of a whole field of described behaviors is not anatomy but hormonal make-up. If in the nineteenth and early twentieth centuries one was male or one was female or one was masculine or one was feminine, the reference point for that division was anatomy, specifically reproductive organs. Today hormonal make-up has emerged as the reference point. Second, sex as hormonal make-up appears as an explanatory force for a plethora of behaviors. Third, behaviors themselves are taxonomized according to a sexual grid which is dualistic and which derives its status from particular anatomical structures. There is for example no behavior classified as hermaphroditic. Androgeny, which has come to exist as a statement in much social science writing does not have its anchorage point in anatomical differences but rather emerges in a field of statements already cohering around the theme of sexual duality. Finally the space at which a medical discourse, in which hormonal sex emerges, intersects with a psychological or social science discourse is a space variously called gender identity and gender role. The medical discourse proceeds away from gender identity and gender role to hormonal analysis, the psychological discourse proceeds away from gender identity and gender role toward the classification and systematization of behaviors according to a sexual grid. All of this has several consequences. First, a variety of hormonal therapies and tests has evolved which have been used to 'cure' homosexuals (Katz, 1976), make women more 'feminine' (Daly, 1978), help change 'men' into 'women' and 'women' into 'men' (Raymond, 1979), and distinguish between 'male' athletes and 'female' athletes (Hagberg, 1979). Second, sexuality emerges as sex-roles, taxonomic behaviors, and hormonal make-up. Third, parts of the body which can produce both life and pleasure serve as the sole locus for a medical/psychological discourse which proceeds in two different directions yet which eventuates in the anchorage of all behavior in the initial division of 'man' and 'woman', 'male' and 'female'.

Sexuality has also emerged in medical and psychiatric discourse as divided into the functional and dysfunctional. One finds figures such as the 'multiple orgasmic women', the 'anorgasmic male' but more importantly the quantification and norming of sexuality have occurred as well as an intensification of particular zones of the body. Several consequences might be suggested. First, categorization of sexuality into the pathological and healthy, the licit and illicit becomes diminished and the functioning or dysfunctioning of parts of the body becomes a focal point, allowing for what might be called a pedagogy of sexuality. Technique becomes a major concern, technique which is applied to parts of the body to create particular bodily responses that have been quantified and normed. Second, particular zones of the body emerge as objects for investigation, reference points and measurements, and connected by a uni-directional movement toward orgasm. Genitalia, breasts——particularly nipples——and the anus become reference points, barometers and targets of a sexuality that emerges as those targets and the activity which links them. Third, homosexuality and heterosexuality emerge as the homogeneous or heterogeneous coupling of parts of the body and are analyzed in terms of differences in technique.

I have already suggested the way sexuality has emerged in the social sciences, particularly psychology. Concepts such as 'sex-role', male 'scripts', female 'scripts' have been exchanged, circulated and deployed in a discourse which categorized behaviors by anchoring them in anatomical sex but makes those categories contingent on volition or conditioning. For example, certain behaviors and attitudes are designated as 'stereotypically masculine' or constitutive of a 'male sex-role' or 'male script'. The statement 'male' here does not emerge in a discursive field which utilizes themes of heredity or repression, or a field in which are

deployed concepts such as hormonal activation and virilization or a formation which requires the particular subjective position of speaking God's Word. Rather the statement 'male' is invisibly anchored to anatomy. A 'male' sex-role is male because men——that is individuals with penises——exhibit behaviors that have been connected by and cohere around their anatomical similarity. Sanford Sherman in "The Therapist and Changing Sex Roles" (1976) describes the male sex-role as constituted by behaviors which are "more penetrative, more aggressive, more analytic, harder, firmer, the carrier of authority..." (p. 97). These behaviors are exhibited by anatomical men. They are anchored in anatomy. However, sex-roles as a statement gains its force from being linked to the theme of conditioning. Sex roles like masks can be donned or torn off, but they remain stuck together as masks, they retain their own internal stability which leads to two consequences. First, as sexuality emerges in psychological and social science discourse as 'sex-roles', it is deployed in an adversary position to a medical or psychiatric discourse. It seeks to create a "society with no sex-role differentiation" (Osofsky and Osofsky, 1972), or an "androgynous society" (Bem, 1975). Yet its stand has been within the very deployment of sexuality as a whole, and although its impact has been substantial, it is bound to concepts, themes and statements which turn it in on itself. Androgeny comes to mean a patchwork or integration of male and female sex-roles. It is already named by the very duality it seeks to replace. In such a discourse Sophocles's androgynous Tiresias does not cast his blind eyes into the future, or as T.S. Eliot puts it:

> I, Tiresias, though blind, throbbing between
> two lives
> Old man with wrinkled female breasts,
> can see
> At the violet hour....

Rather as Carolyn Heilbrun (1974) puts it in Toward a Recognition of Androgeny Tiresias has feminine and masculine powers. Here is Sandra Bem (1975) on androgeny:

> Androgynous subjects of both sexes displayed a high level of masculine independence when under pressure to conform, and they displayed a high level of feminine playfulness when given the opportunity to interact with a tiny kitten. (p. 642)

The stability and adhesiveness of 'sex roles' remains although they themselves may be interchanged between individuals divided according to specific anatomical differences.

Second, heterosexuality remains a silent space around which 'roles' and 'scripts' proliferate and circulate. Not marked as a 'role' or 'script' itself, it serves as the anchor point for the measurement of roles in individuals' relationships, since the behavior grouped within 'roles' are dependent on a dualistic sexuality.

Those discourses in which sexuality has emerged as 'sex roles' and 'sex scripts' and which have assumed an adversary position to the hormonal, biological and anatomical determinacy of the medico-psychiatric discourse have remained, for all their beneficial impact, caught within the general organization of sexuality.

The sexuality that has emerged in the late twentieth century, however much it has been organized and produced by the medical, psychiatric, psychological and social science discourses, has predominantly emerged within what might be called a 'discourse of sexual liberation'. Beginning with Reich who believed that "sexuality (was) the center around which revolves the whole social life as well as the inner life of the individual" (Reich, 1942, p. 4) and culminating in the sexual liberation movement of the nineteen-sixties and the popularization of sexual liberation in the nineteen-seventies, sexuality might be said to have emerged as 'liberated'. If, however, there has been a liberation of sexuality, the question can be asked what 'sexuality' has been liberated, or what is a 'liberated' sexuality? First, sex can be seen to have emerged as particular

words. In 1964 Mario Savo suggested that in part a liberated sexuality implied a liberation of 'sexual language', that is those words that had been considered obscene or dirty. The free speech movement released into discourse a variety of words which could circulate with impunity. Henceforth, a 'realistic' or 'liberated' discussion of sexuality would utilize specific words which would give a particular status to what was said and to the speaker. 'Fuck', 'ball', 'screw', 'cunt', 'cock', etc. emerged not simply as words, but as words with valorizing force. 'Let's fuck' was more liberated than 'let's make love', looser than 'let's have intercourse'. A 'realistic' treatment of sex became a treatment in which words once prohibited were exchanged and circulated. Sex began to emerge then as 'fucking', 'sucking', 'blow-jobs', 'hand-jobs'. What is interesting about this is that the actual terminology which had circulated in the 'pornographic' literature of the nineteenth century and which as we have seen depicted a categorized, classified, fragments, zones and genitally intensified sexuality, emerged in the late twentieth century as 'liberated' sex or 'realistic' sexuality. What I am suggesting is that a particular sexuality has been liberated which continues to be deployed within a variety of non-discursive practices.

Second, sex can be seen as having emerged as sex-as-commodity. One has sex, one buys sex, one shows sex, one uses sex. Such 'sex' appears in several ways. It emerges as intensified zones of the body, particularly the female body. Breasts, vaginas, buttocks become the origin and end point of gestures and observations linked by 'sexual excitation'. What is interesting is that the zoning, construction and sexualization of the female has today emerged as 'liberated sex'. The style in clothing form women which can be seen as intensifying the particular areas of the body has been called by the New York Times 'classy tramp', and the 'look for independent women' by Cosmopolitan. The 'harlot' and 'whore' produced by and consigned to the 'secret life' of the nineteenth century emerges today as the 'liberated look' and that look comes to contribute to a specific organization of sex.

Third, sex has emerged as quantifiable, that is in terms of numbers of orgasms, hardness of erections, size of penises and breasts, measured duration, frequency of experience and intensity of orgasm. A technology of sex has proliferated which aims at quantifying, increasing and intensifying specific sensations, behaviors and psychical responses in the pursuit of "getting off".

Fourth, sex has come to exist as an experience that is both discontinuous with any other experience and at the same time connected to all experience. It is discontinuous in that it is the experience itself that becomes emphasized and severed from anything beyond itself, an experience that emerges in terms of acts, positions and techniques. It is continuous in that it serves as the anchor point for a variety of phenomena. One has a sexual drive, sexual dreams, sexual fanasies, sexual urges, yet as statements these do not exist in the same discursive field as similar statements in for example psychiatric discourse. The statement 'sexual fantasy' is not the same statement in the work of Freud that it is in the works of Alex Comfort or Nancy Friday. Sexual fantasy has today emerged as a tool to heighten sexual pleasure, to reveal new techniques, as something to live out, to experience and as something to talk about not in therapy but as conversation. 'Sexual fantasy' exists in a discursive field which talks of sexual adventures, exotic appetites, taboos to be broken, self-realization through sex and most important, 'sexual liberation'.

Fifth, sexuality emerges as technique and skill, which has two separate but complementary consequences. On one hand behaviors that had been previously pathologized and condemned have been de-pathologized and legitimated. For example, masturbation is divided into various techniques and sensations rather than pathological sub-groups. On the other hand sexuality emerges as divided and separate behaviors, gestures which can be taught but which remain piecemeal.

Sixth, sexuality emerges in terms of an expanding limit which can forever be transgressed. As new forms of sexuality are produced they become new limits to cross. Premarital sex, group sex, homo-sex, bi-sexuality, sadomasochism and most recently incest have emerged, been organized and successively become the

'last taboo'. Again, this is not to suggest that these sexualized areas should be taboo any more than hetero-sex should be taboo. Rather, I am suggesting that all these areas have been organized, produced and divided by a discourse which derives its status and force from the theme of liberation, yet which is bound to the very deployment of sexuality it opposes and which provides continually new 'sex' to liberate and to have.

I have in this chapter attempted to survey the various discourses on sexuality that have been produced and deployed during the last few centuries. I have not speculated on why such discourses arose or why they changed. Rather, beginning with the premise that sex was not an autonomous substance or process that could be revealed or liberated, or some 'thing' which had a reality in and of itself, I attempted to describe how sexuality has emerged in various forms and the consequences of this emergence. We continue to be a society which looks for Truth in sex and at the same time produces more and more 'sex' in which to find that Truth. We have tied liberation to sex but in doing so we have remained attached to the very sexual grid we wish to dismantle. The vast array of sexual discourses that have proliferated since the beginning of the eighteenth century, that have been inserted into practices that have brutalized human beings, that have served to extend the control of various centers of power over our lives, that have made 'sex' something to desire, to have, or to see our own reflection in, that have tied our present, past and future to sexuality, that have created a silent space of male heterosexuality around which all other sexualities move, against which all else becomes the Other, that have spread a sexual net over all aspects of life which can catch and drag in a variety of 'exotic' or 'perverse' sexualities, that, finally, are synonymous with a formative power which in its very vocalization inscribes itself on the human body——can not these discourses in which sexuality emerges be called the politics of sexuality? It is not surprising then that the movement to change society which has called itself the "most public revolutionary movement to have ever existed" should be a sexual political movement. And it is to this movement that I now wish to turn.

REFERENCES

Aries, P. *Centuries of childhood: A social history of family life.* New York: Vintage Books, 1962.

Arnstein, W. *Britain yesterday and today: 1830 to the present.* Boston: D.C. Heath and Company, 1966.

Barker-Benfield, G.J. *The horrors of the half-known life: Male attitudes toward women and sexuality in nineteenth century America.* New York: Harper & Row, 1976.

Bem, S. "Sex role adaptability: One consequence of psychological androgeny." *Journal of Personality and Social Psychology,* 1975, *31* (4), 634-643.

Brownmiller, S. *Against our will: Men, women and rape.* New York: Bantam Books, 1976.

Buhle, M. and Gordon, A. "Sex and class in colonial and nineteenth century America." In B.A. Carroll (Ed.), *Liberating women's history: Theoretical and critical essays.* Chicago: University of Illinois Press, 1976.

Bullough, V. *Sex and society.* New York: Science History Publications, 1976.

Daly, M. *Gyn/ecology: The metaethics of radical feminism.* Boston: Beacon Press, 1978.

de Beauvoir, S. *The second sex.* New York: Vintage Books, 1974.

Eberhardt, A. Quoted in *New York Times,* September 4, 1979, C1.

Ellis, H. *Studies in the psychology of sex.* 3 (1), New York: Random House, 1936.

Eysenck, H.J. and Wilson, G. *The psychology of sex.* London: J. M. Dent and Sons Ltd., 1979.

Filene, P. *Him her self: Sex roles in modern America.* New York: Mentor, 1975.

Foucault, M. *The history of sexuality.* New York: Pantheon Books, 1978.

Foucault, M. *Language, counter-memory and practice: selected essays and interviews.* Ithaca, New York: Cornell University Press, 1977.

Foucault, M. "The west and the truth of sex." *Sub-stance.* 1978, *20,* 5-8.

Gagnon, J. and Simon, W. *The sexual scene.* New Jersey: Transaction Books, 1973.

Hagberg, K. "Transexualism: Is gender absolute?" *New Women's Times: Feminist Review,* 1979, *6,* 10-12.

Heilbrun, C. *Toward a recognition of androgyny.* New York: Harper Colophon Books, 1974.

Imperato-McGinley, J., Peterson, R., Gautier, T., and Sturia, E. "Androgens and the evolution of male gender identity among pseudohermaphrodites with 5   reductase deficiency." *The New England Journal of Medicine*, 1979, *300* (22), 1233-1238.

Katz, J. *Gay American history: Lesbians and gay men in the U.S.A.* New York: Thomas Y. Crowell Company, 1976.

Kern, S. *Anatomy and destiny: A cultural history of the human body.* Indianapolis: The Bobb-Merrill Company, Inc., 1975.

Lasch, C. *The culture of narcissism: American life in an age of diminishing expectations.* New York: W.W. Norton & Co., Inc., 1978.

Marcus, S. *The other victorians.* New York: Basic Books, 1966.

Masters, W. and Johnson, V. *Homosexuality in perspective.* Boston: Little Brown & Co., 1979.

My secret Life. New York: Grove Press, Inc., 1966.

Osofsky, J. and Osofsky, H. "Androgeny as a life style." *The family Coordinator*, 1972, October, 411-418.

Prax, O. *The romantic agony.* Ohio: Meridian Books, 1967.

Raymond, J. *The transsexual empire: The making of the she-male.* Boston: Beacon Press, 1979.

Reich, W. *The function of the orgasm.* New York: 1942.

Rich, A. *Of woman born: Motherhood as experience and institution.* New York: Bantam Books, 1977.

Sherman, S. "The therapist and changing sex roles." *Social Casework,* 1976, February, 93-96.

Simmons, A. "Education and ideology in nineteenth-century America: The response of educational institutions to the changing role of women." In B. Carroll (Ed.), *Liberating women's history: Theoretical and critical essays.* Chicago: University of Illinois Press, 1976.

Smith, H. "Gynecology and ideology in seventeenth-century England." In B. Carroll (Ed.), *Liberating women's history: Theoretical and critical essays.* Chicago: University of Illinois Press, 1976.

Tenov, D. *Psychotherapy: The hazardous cure.* Garden City, New York: Anchor Press, Doubleday, 1976.

Weinstein, N. "Psychology constructs the female." In V. Gornick and B. Moran (Eds.), *Woman in Sexist Society* New York: Basic Books, 1971.

Zaretsky, E. *Capitalism, the family and personal life.* New York: Harper and Row Publishers, 1976.

Chapter V
Toward a De-Gendered Society

At the bedrock level of my thinking about this is the sense that language is power. (Rich, 1979, p. 67)

In a ward on fire we must
find words
or burn. (Broumas, 1977, p. 7)

And I don't want to listen to any more of your stories; they have no logic. They scramble me up. You lie with stories. You won't tell me a story and then say, 'This is a true story', or, 'This is just a story'. I can't tell the difference. I don't even know what your real names are. I don't even know what's real and what you make up. Ha! You can't stop me from talking. You tried to cut off my tongue, but it didn't work. (Kingston, 1977, p. 235)

Be careful what you say. It comes true. It comes true. (Kingston, 1977, p. 237)

There can be no revolutionary actions...where the relations between people and groups are relations of exclusion and segregation. Groups must multiply and connect in ever new ways, freeing up territorialities for the construction of new social arrangements. (Seem, 1977, p. xxii)

We live in a society in which sexuality in its broadest and most specific senses is organized. We are divided into men and women according to our anatomy and our hormonal make-up and these categories are not only caught up in discursive networks which have profound consequences for us but also serve as anchor points in our descriptions of the world. Furthermore, we are divided according to various criteria into heterosexuals, homosexuals and lesbians, and these designations serve as nodes in various discourses which, as we have seen and is all too painfully obvious, profoundly affect our destiny. Finally, the physical pleasures and contacts between bodies have been organized not only in accordance with these divisions but also into the autonomous area of sex which itself is divided, zoned, depicted and deployed in a variety of discourses. The historical division of human kind into men and women, male and female and the historical positing of this division as the ground of our being, the basis of our world views; the totalization of various behaviors, gestures and sentiments into the categories of heterosexual, homosexual and lesbian; the zoning and intensificaiton of various parts of the body and the separation of particular bodily pleasures, appearances and states into the area of 'sex', all of these constitute an organization of sexuality which is so pervasive that we have taken it for natural law, posited it as the requirement for the survival of our species and sought in it the reflection of our being.

During the last decade there has unfolded within and in opposition to this organization and the various discourses described in the preceding chapter particular movements which I have temporarily called 'sexual politics'. On the most general level sexual politics can be seen as a reaction and challenge to the 'truths' we have historically sought and found in sexuality, as an attempt to re-divide, re-categorize and re-formulate the grid of sexuality that has shaped and continues to shape social and psychic phenomena and as a challenge to the sexuality that has emerged from that grid. On another level, however, the generally assumed unity of sexual politics or those movements which I have grouped under that term is not as evident as popular opinion might suggest. Certainly the terms 'feminism', 'women's liberation' and 'gay liberation' have become familiar to most people in the society. Newsweek Magazine can talk of 'gay liberation' and Christopher Lasch in The Culture of Narcissism (1979, p. 197) can talk about 'feminist analysis' without apparent-

ly needing to explain to what these terms refer. Indeed it would seem almost primitive today to ask "What is feminism?" or "What is gay liberation?" Undoubtedly, the fact that these questions are no longer asked suggests the extent to which both feminism and gay liberation have become familiar, the extent to which sexual political discourses have dispersed themselves in the society. It also suggests, however, a certain reduction of these discourses, a centrifugal movement in which a variety of statements, themes and concepts are reduced to 'feminism' or 'gay liberation' which then become situated in a different discursive context. Adrienne Rich (1979) puts it this way:

> (F)or many readers the feminist movement is simply whatever the mass media say it is,
> whether on the television screen or in the pages of The New York Times, Psychology Today,
> Mother Jones or Ms. (p. 4)

This passage which is perhaps a reaction to the dismissive reductionism and manipulation of 'feminism' raises several questions. First, who does have the right to say what feminism is or for that matter what gay liberation or radical homosexuality is? What criteria can be used to form such groupings? Second, if those movements which I have grouped under 'sexual politics' do not constitute coherent unities, that is entities, so to speak, which have a commonly agreed upon meaning, can we say that they have any unity and if so what? Third, if sexual political discourses do not constitute a kind of monolithic movement which has severed itself from and stands in opposition to the discourses on sexuality I have surveyed, what is their relationship to the discursive network in which 'men', 'women', and 'sex' have traditionally emerged? And what consequences of this relationship may be suggested?

In Chapter Three I suggested that there are certain notions which are frequently used to constitute the unity of diverse phenomena——notions such as ideology, theory, tradition and origin, the oeuvre——that these notions are synthesizing functions which allow connections to be established between simultaneous or successive phenomena and that they provide a common meaning, symbolic links and principles of explanation and unity. I also suggested that one consequence of the application of such notions was an unending proliferation of interpretations which in turn could be interpreted. The question this raises is perhaps similar to the questions raised in the above passage by Adrienne Rich, that is who controls these interpretations, what status do they have and do the synthesizing notions on which they are based constitute in and of themselves the exercise of power. I want to address these questions in different ways. First, however, let us see whether a unity emerges if we apply some of the above criteria to sexual politics.

To anyone familiar with the oeuvre of feminism it is apparent that there are distinct differences in theory. These differences themselves have been categorized by several writers, although their categories vary. Shulamith Firestone in The Dialectic of Sex (1972) sees feminist theory as divided into conservative and radical feminist theories. Juliet Mitchell in Woman's Estate (1971) divides feminism into radical feminist theory and socialist feminist theory. Alison Jaggar (1977) divides it into liberal feminism, classical Marxist feminism and radical feminism. Other divisions have also been made, for example, Jill Johnston's categories of reformist feminist theory and gay/feminist theory (1974). But even these categories taken together are not inclusive. Where for example would Dorothy Dinnerstein's theory of gender fall? Furthermore, such classifications themselves tend to be theoretical filters which assume the unity of the filter itself, although such a unity is, as is obvious from the different categories, far from being unanimously accepted. At the level of theory then we can note both diversity and dispersion. One need only think of the difference between Ms. magazine and Amazon Quarterly or that between Nancy Chodorow's The Reproduction of Mothering: Psychoanalysis and the Sociology of Gender (1978) wherein joint male and female caretaking of children is advocated as a necessary step in dismantling oppressive gender arrangements and Mary Daly's Gyn/Ecology: The Metaethics of Radical Feminism (1978) wherein the general absence of men from women-identified communities is a prerequisite to a more humane society.

Any kind of theoretical continuity or consistency becomes even more tenuous when we seek to base on it a sexual politics that includes radical homosexuality or gay liberation. Certainly the theoretical roots of Guy Hocquenghem's Homosexual Desire (1978), which grow in the soil of the radical psychoanalysis of Jacques Lacan, the linguistic theories of Ferdinand de Saussure and Althusser's theory of Marxism, differ from both Allen Ginsberg's theory of sexuality which derives from Hindu and Buddhist thought and from theory advanced by such men's liberationists as Joseph Farrell (1974), Joseph Pleck (1974) and Marc Fasteau (1974) which derives from theories of sex-roles and social conditioning. Susan Brownmiller's (1976) contention that pornography is the theory, rape is the practice and that "(t)there can be no 'equality' in porn, no female equivalent, no turning of the tables in the name of bawdy fun" (p. 443) runs counter to a theory of sexuality offered by Carl Wittman in The Gay Manifesto (1970) which suggests that the objectification of bodies is legitimate if it is reciprocal.

If we turn to the various disciplines such as psychology and education (assuming for the moment the unity of these disciplines), the same diversity and dispersion of theory presents itself. Dorothy Tenov's critique of the psychoanalytic model in Psycho-Therapy: The Hazardous Cure (1976) evolves into a theory which suggests a quasi-behavioral therapy and differs from both the theoretical position of Mary Daly (1978) which suggests a political/transcendental/spiritual healing process and Nancy Chodorow's (1978) reconceptualized psychoanalytic theory which relies on the construct of the unconscious, a construct Tenov "finds it more helpful to 'unpostulate' " (1976, p. 3). Janet Miller's (1980) analysis of curriculum theory and education evolves from a theoretical base that, utilizing concepts of consciousness, inner voice and subjectivity, differs markedly from Eleanor Maccoby's theoretical position in her work on sexism in the classroom which relies on concepts of roles, conditioning and observable behavior.

What I have very briefly tried to suggest is that the consistency and continuity or similarity of theory that would serve as a basis for the establishment of an area called sexual politics or more particularly feminism and radical homosexuality or gay liberation is not quite as evident as assumed. The models of human development and of social development are many, and they are dispersed throughout the oeuvre of sexual politics. It may be argued that I have made no attempt at a rigorous definition of theory, and therefore the theoretical differences I have noted are superficial and impressionistic. But any rigorous definition would have only highlighted the diversity of theory and would have necessarily based the center or core of sexual politics on particular rigorous criteria, sending a good part of the oeuvre into a vague realm of 'ideas', 'description' and 'propaganda'. On the other hand, it may be argued that I have treated the variety of theories as fixed entities, incapable of integration, that I have denied the 'organic' quality of theories, that is their ability to mix, to dissolve into each other, forming new theories. But the new totalizing theory, or let us say, meta-theory that would result, would it not be different from those theories which it saw as incomplete? Deleuze and Guattari (1977) suggest that a 'totalizing' or meta-theory must itself be seen as simply one more theory among many.

> We no longer believe in the dull gray outlines of a dreary, colorless, dialectic of evolution, aimed at forming a harmonious whole out of heterogeneous bits by rounding off their edges. We believe only in totalities that are peripheral. And if we discover such a totality alongside various separate parts, it is a whole of these particular parts but does not totalize them; it is a unity of these particular parts but does not unify them; rather, it is added to them as a new part fabricated separately. (p. 42)

Finally, it might be argued that I have noted differences between theories based on their models of human and social development, that rather than these, it is the areas to which these models are applied that constitute the theoretical unity of feminism, gay liberation, radical homosexuality or sexual politics. But is it not through these models that these areas are made to speak? The area of women's oppression or gay rights

do not in and of themselves constitute theories; nor do sentences which might be seen as the apex of a theoretical pyramid constitute in and of themselves theories. We must at least raise the possibility then that theoretical consistency or continuity cannot be used, any more than ideology, as a criterion for establishing the unity of 'sexual politics'.

Although there might be a dispersion and divergence of theories within the oeuvre of sexual politics might not the unity of sexual politics be based on notions of origin and tradition? Might not the plethora of theories derive from the same origin and exist at the top of an inverted temporal cone which recedes in a continuous shape into the past? Might not one be able to define sexual politics by establishing a tradition? Perhaps, but there are several difficulties with such an approach. At what point can one legitimately posit the origin of sexual politics or feminism or gay liberation? With the first cry of resistance uttered by a woman in the misty dawn of history? With the first written monument of that cry? Can we place the enigmatic figure of Sappho as the first spinner of a lesbian theory or those early Greek males who inscribed the names of their male lovers on the walls of Athens as the original gay liberationists? Do the writings of Katy Stanton and the Grimke sisters begin an unbroken, continuous line of thought that develops through the early twentieth century suffragettes to the present? Is there as Allen Ginsberg (1979) has suggested, a 'mystical sexual political' lineage that traces from Edward Carpenter, through Gavin Arthur to Ginsberg himself? Perhaps. But is it not more likely that the history or tradition of sexual politics is one of discontinuity, ruptures, gaps and irruptions? Ann Gordon, Mari Jo Buhle and Nancy Schron Dye (1976) suggest for example the discontinuity in the history of feminism.

> The nineteenth-century notion that women are bound together by common oppression freezes and levels their enormously diverse experience. That women have suffered oppression is not to be denied. But oppression, even as women consciously employed the concept, meant different things at different times to different groups and classes of women. (p. 86)

Is it not more likely that a history of feminism or gay liberation is not one of a tradition of gradually refined and expanded thought, but rather is one of multiplicity and difference? For example, in Personal Politics (1979) Sarah Evans places the origins of contemporary feminism not in an historical tradition that recedes into the past but in the civil rights and new left movements of the nineteen-sixties, suggesting discontinuity rather than continuity. Furthermore, to read Personal Politics is to confront a description of current feminism as originating in the variety of reactions, for a variety of reasons, among a variety of women to both the sexism in the new left and civil rights movement and in the extension by those women of the thought, values and tactics of those movements. This is in no way to suggest that women, lesbians and homosexuals have not at different times organized against, written and spoken about and sought to alter those conditions they felt as brutalizing. Rather I am suggesting the possiblity that there is neither a continuous or consistent tradition which could serve to define the unity of sexual politics. Furthermore, as was suggested in Chapter Three, the notion of tradition itself, which allows one to re-form the dispersion of history into the form of the 'same', makes sexual politics vulnerable to a kind of reductionism and defuses its power of spontaneitty. But I shall return to this issue later.

I have in talking about the notions of theory and origin and tradition used the term 'oeuvre', as in 'sexual political oeuvre', to refer to feminist, gay liberationist and radical homosexual writings. This term, itself, however, raises certain questions in that it already implies a certain unity. But on what is such a unity based, or rather what does it include? Does it include all those written documents by individuals who consider themselves or have been considered or are considered feminists, radical homosexuals, lesbians, or gay liberationists? Does it include poetry and novels, plays and anecdotes? By what criteria can the boundaries of such an oeuvre be established? Anatomy? Viewpoint? Attitude? Sexual preference? Theme? Issues? Whatever criteria are used, contradictions proliferate. What I am suggesting is that the very notion of an

oeuvre is itself divisive, exclusionary and may serve to immobilize through an arbitrary hermeneutical operation the very forces which it seeks to unify. The image comes mind of the various sections of book-stores which are labelled 'women's studies', 'feminist studies', 'gay' and 'men's liberation' and which in differing ways situate and group a plethora of books and titles into rows which lie ever so quietly separated from but next to sections labelled 'history', 'religion', 'philosophy', 'politics' and 'literature'.

The unity assumed in the terms 'sexual politics', 'feminism', 'radical homosexuality' can be seen then as suspect. Furthermore, a 'totalizing' approach to defining these areas seems questionable. And perhaps this should have been apparent from the start. Perhaps the assumption that the unity of this area could be based on a consistent theoretical perspective, on a continuous theoretical tradition or on the unity of the oeuvre was not only naive but dangerous. Naive because such a 'totalization' assumes a commonality that is far from evident. Dangerous because it denies the variety of experiences and the multiplicity of resist-ances and visions that have arisen in response to the traditional organization of sexuality, and because it creates a block which inertly stands facing and challenging that organization and on which is inscribed the slogan, "If you're not part of the solution, you're part of the problem." Furthermore, such a totalization turns the multiplicity and dispersion of the resistance and challenge to the organized grid of sexuality in on itself and works to colonize it by articulating what sexual politics is aside from this resistance and challenge. Let us suspend then the totalities of 'sexual politics', 'feminism', 'gay liberation' and 'radical homosexual-ity' while keeping them in view. Let us return to the organization of sexuality and the areas and figures that have emerged from this organization. Rather than treat 'sexual politics' as a monolithic movement which stands in opposition to this organizaiton, let us analyze the multiplicity of statements that emerge from such a suspension and what relation they have to the discourses they oppose yet perhaps remain part of.

In Chapter Four I suggested that the pervasive organization of sexuality in our culture has not only re-sulted in the emergence of particular figures and areas but has also led to the brutalization of countless human beings and has had profound consequences for all of us. Furthermore, I suggested that this organi-zation with its proliferating discourses has existed around a silent center of male heterosexuality and that it has produced and maintained through a whole series of discursive and non-discursive operations such fig-ures or objects as 'woman', 'homosexual' and 'lesbian' and particular versions of sexuality. Finally, I sug-gested that we have historically found and continue to seek in this organization truths about ourselves and the world. The reactions that during the last decade have arisen in the form of resistances and challenges to this organization can be seen as proceeding in several directions and can be analyzed in terms of both the re-articulation of these areas, figures and organization as well as the possible consequences of this re-articu-lation. It is to this analysis that I now wish to turn.

The silent center of male heterosexuality which has historically been the 'same' in relation to that which has been the 'other', which has been the invisible space around which circulated a variety of sexualities, and which has been the measure and standard for the phenomena which have emerged around it, this silent space has begun to emerge in the challenges and resistances to the organization of sexuality as both vocifer-ous and de-centered. Vociferous as it has emerged as the patriarchy, phallo-centric or androcentric culture and heterosexist culture. De-centered, since it has emerged both as content within a larger context and as, itself, the 'other'. If, as Kate Millett (1971) has stated, "(W)hen a system of power is thoroughly in com-mand, it has scarcely need to speak itself aloud" (p. 87), then the naming and interrogation of that system is an important step in its dismantling. We have seen, however, that the organization of sexuality has con-tinuously spoken aloud. What has been silent is the center of that organization, a center which has begun to be infiltrated and articulated by the movements seeking to de-center it. The figure of the male hetero-sexual emerges as the enemy, as the oppressor and the primary shaper of a culture which is re-articulated as the patriarchy and linked the 'man'. The generic term 'man' becomes particularized, thrown back on itself. For example, the statement 'man' in William James's well-known quote, "Man is simply the most formida-

ble of all the beasts of prey, and indeed, the only one that preys systematically on its own species" or in Freud's (1972) comment that "the word 'civilization' describes the whole sum of the achievements and regulations which distinguish our lives from those of our animal's ancestors and which serve two purposes——namely to protect men against nature and to adjust their mutual relations" (p. 36), exists in a different discursive field than it does in the writing, for example, of Phyllis Chesler or Adrienne Rich, although the two sentences might easily appear in either of the latter's writing. As the generic term 'man' becomes particularized and an object for investigation so too does the entire culture as it emerges as the patriarchy become particularized and the content for an investigation. For Millett (1971) patriarchy is "the institution whereby that half of the populace which is female is controlled by that half which is male" (p. 46). As Barbara Mitrano (1979) has pointed out, however, patriarchy has come to mean more than political control.

> Regardless of its origins, patriarchy soon came to mean more than political leadership or lines of descent. It came to mean a mindset, a world view, a perspective through which all reality was (and is) viewed. (pp. 33-34)

In Chapter One I summarized some of the descriptions of this "world view", and I do not intend to review all the literature on patriarchy. Suffice it so say, it is vast and that patriarchy does not emerge in the multiplicity of writings as a consistent object formed once and for all. For example the 'patriarchy' of which according to Gyn/Ecology: The Metaethics of Radical Feminism "males and males only are the originators, planners, controllers and legitimators" (Daly, 1978, p. 28) is quite different from that formed by "the male-female collaboration to keep history mad" (p. 276) that Dorothy Dinnerstein speaks of, or from what William Burroughs means when he says, "(T)he only patriarchal society that exists today is the Arab" (Leyland, 1978, p. 18). What I do want to suggest is that the concept of patriarchy as it has emerged in and been expanded on by those discourses which oppose the traditional organization of sexuality has operated discursively in several ways. First it groups a variety of traits, qualities, attitudes and values which are seen as exalted by and dominant in the culture.

> Patriarchal thought is characterized by being objective rather than subjective, rational rather than intuitive, linear rather than circular, logical rather than mystical, dissecting rather than unifying, abstract rather than concrete. Patriarchal behavior is cool and unemotional rather than warm and emotive, expedient rather than purposeless, aggressive rather than reflective. Patriarchal institutions tend to be ordered along hierarchical "chains of command" or "lines of authority" rather than being communal and anarchic; they are exclusive rather than inclusive and are goal-directed rather than maintenance oriented. (Collins, 1974, p. 51)

These characteristics, as well as others that have been grouped under patriarchy, have traditionally defined what a man is. They have also, however, as statements circulated within a discursive field that has in recent history taken an adversary position to the dominant discourses in society. and within this field they have taken on a negative valence. As was suggested in Chapters One and Two those movements which oppose the traditional organization of sexuality have frequently utilized other so-called 'radical' critiques, the difference being that the former have sexualized the latter critiques. As the society comes to be seen as technocratic, overly rational and abstract, unemotional, aggressive, competitive and fragmented, as these characteristics are grouped under and come to define patriarchy, and as patriarchy emerges as a totality to be dismantled, the very characteristics that have traditionally defined 'man' are turned back on themselves. Marcuse's "one-dimensional man" emerges as just that——one-dimensional man.

As the generic 'man' becomes particularized and rooted in anatomy and physiology, the culture itself, the world we inhabit becomes particularized, de-centered, relativized and subject to analysis. Rosaldo and Lamphere (1976) put it this way:

What once seemed necessary and natural has begun to look arbitrary and unwarranted. What once could be assumed, ignored or tacitly acknowledged now seems problematic and difficult to explain. (p. 1)

'Patriarchy' as it emerges in those discourses which oppose the traditional or dominant organization of sexuality, functions to re-totalize diverse phenomena along sexual lines by linking these phenomena to the figure of 'man'.

> (W)e have come to an edge of history when men——insofar as they are embodiments of the patriarchal idea——have become dangerous to children and other living things, themselves included.... (Rich, 1979, pp. 83-84)

> (M)asculine ideologies are the creation of masculine subjectivity; they are neither objective, nor value-free nor inclusively "human." (Rich, 1979, p. 207)

This has several consequences. First, the figure 'man' emerges as a constellation of traits, characteristics, values and attitudes that are 'masculine' and are seen as either biologically determined or socially constructed. What is important is that these characteristics are anchored in gender and often take on a negative valence. Second, as the concept 'patriarchy' comes to de-center the dominant organization of sexuality it allows what Mary Daly (1978) has described as a "new space on the boundaries of patriarchy" to emerge from which that organization can be analyzed and in which the figure of 'woman'——a re-articulated 'woman'—— can arise. Third, and perhaps most important it allows for a shift in discourse, a shift which is not quite a rupture from nor a reversed image of the dominant discursive organization of sexuality, but a shift which forms a static version of 'man' and allows for a flexible and expanding definition of 'woman'. Within the discourses that oppose the traditional organization of sexuality, whether one takes what Chodorow (1979) calls an "essentialist position" or whether one takes the position that gender is socially and psychically constructed, 'man' takes shape as either a one-dimensional negative construct or as a melange of 'masculine' and 'feminine' traits, e.g., aggressive and passive, which themselves are seen as a dualism produced by a male subjectivity or patriarchal thought (Rich, 1979; Daly, 1978; Johnston, 1973). Such a 'man' can never be "the lost brother, or twin" of whom Adrienne Rich has written. It must be said that the figure 'man' has also taken shape in the writings which start with but stand in opposition to and move away from the traditional production and organization of 'homosexuality', but I shall return to this point later. What I am suggesting is that the concept 'patriarchy' circulates in a discursive field which stands in an adversary position to the traditional organization of sexuality, that it functions to name the silent privileged center of that organization to turn it in on itself and to de-center it, that it allows for an analysis of that center and that it enables a new space to emerge from which such an analysis can be conducted and which itself can be expanded on. I am also suggesting that it gives status to and is shaped by a variety of statements and that in this discursive network 'man' emerges as a fixed entity with a negative valence, trapped and reshaped within the very space that was once the center of the world. It is this very fixity, however, which can contribute either to a total dismantling of the organization of sexuality or to a shift in that organization, a shift which drags with it the outlines of that organization and thereby perpetuates it. To understand this we must turn to that inchoate space which exists on the "boundaries of patriarchy".

Variously called 'women's community', 'women's culture', 'woman's space' or as Mary Daly (1978) puts it, "the Unfield/Ourfield/Outfield" (p. xii), the space that has emerged on the boundaries of patriarchy can be seen as being formed by two separate but complementary operations. On one hand there is the naming and re-articulation of what is perceived as oppressive or the oppressor, that is the 'other', and on the other hand there is the expansion into and of the resulting "new space", which becomes the 'same'. Kay Boals (1976) sees these operations as inherent in any revolutionary movement.

The essence of revolutionary consciousness, then, might be seen as a dual process of demys-
tification of the dominant other and a simultaneous remythologizing of one's own tradition.
(p. 199)

This process of demystification of the other and retroactive mythologizing...is central to the
creation of a new community, a new consciousness, and a new society. (p. 200)

Rather than talk of remythologizing, however, let us see how this space is discursively formed, for it is in
the naming and articulation of this area that the face of a new world emerges or the face of the old one lin-
gers and traps us.

For us, the process of naming and defining is not an intellectural game, but a grasping of our
experience and a key to action. (Rich, 1979, p. 202)

Language is such a weapon.... (W)e need...to do all we can to insure that language will not be
used...to keep others silent and powerless. (Rich, 1979, p. 68)

Certainly this space is far from being formed once and for all since it emerges in a multiplicity of state-
ments, concepts, themes, objects and figures that are diverse and proliferous. Nevertheless, a few comments
can be made. We have seen and as has become all too painfully obvious, human beings with a particular
anatomy and physiology and designated 'women' have historically emerged as the figure 'woman', a figure
that has been hypostatized, objectified, zoned and pathologized and that has been caught in a discursive
network that not only debases that figure but has served in varying degrees to brutalize these beings. With-
in the "new space on the boundaries of patriarchy", however, women have begun to emerge as a very dif-
ferent entity, as a very different 'woman'. This is not to say that this entity is fixed once and for all. On
the contrary, it emerges variously as a force, a principle, a way of being and relating, a sexual orientation
and as the 'self'.

Woman...sees herself as nature intended her to be——the primary force in human advancement.
(Davis, 1975, p. 334)

(F)emininity is synonymous with the eternal female principle, connoting strength, integrity,
wisdom, justice, dependability and a psychic power. (Davis, 1975, p. 334)

The primary intent of women who choose to be present to each other...is an invitation to
our Selves. (Daly, 1978, p. xii)

I know now that the inescapable relationship between my consciousness of my own sexuality
and my ability to create lies here: both require an absolute assertion of the self. (Lazarre,
1980)

She who has chosen her Self, who defines her Self, by choice, neither in relation to children
nor to men, who is Self-identified, is a Spinster, a whirling dervish spinning in a new time/
space. (Daly, 1978, p. 3)

To the degree that the Female Self has been possessed by the spirit of patriarchy, she has been
slowly expiring. She has become dispirited.... As she becomes dispossessed, enspirited, she...
begins to hear her own Active Voice, speaking her Self in successive acts of creation. As she
creates her Self she creates new space. (Daly, 1978, p. 340)

The lesbian is woman prime. The woman who maintains or regains her integrity as a woman. By (re)uniting with her feminine principle. (Johnston, 1973, p. 185)

'Woman' emerges then in a variety of forms which are not in and of themselves fixed entities and which have positive valences within the discursive network in which they emerge. Furthermore, 'woman' appears as an anchor point, as a status which links and can be linked to a variety of phenomena.

For example, there appear 'women's' questions.

> The questions raised thereby (At what point is a fertilized egg a person? When does the soul start to exist? Shall abortion, if legal, be federally funded?) are inevitably male questions.... It is time that we frame our own questions on this as on every other issue. (Rich, 1979, p. 16)

Fianlly, 'woman' emerges as a particular subjective position which remains adjacent to 'patriarchal culture' and which is seen as inclusive of all women. Monica Wittig (1975) in the "Author's Note" in Les Gueril-leres writes:

> The "I" (Je) who writes is alien to her own writing at every word because this "I" (Je) uses a language alien to her; this "I" (Je) experiences what is alien to her since this "I" (Je) cannot be "un" ecrivain.... M/e is the symbol of the lived, rending experience which is m/y writing, of this cutting in two which throughout literature is the exercise of a language which does not constitute m/e as subject. J/e poses the ideological and historic question of feminine subjects. (pp. 10-11)

Unquestionably then, 'woman' has emerged in this "new space" in a variety of forms and positions that are in marked contrast to the 'woman' formed and fixed historically in discourse. Furthermore, 'woman' has emerged as the anchor point in the formation of this "new space", and this has several consequences. First, because the figure 'woman' is not defined as nor does it function as a fixed entity but rather serves as an anchor point for, gives status to and allows to come into existence a re-visioned or re-articulated world, inchoate as it may be, there can emerge a territory which is not the reverse image of the 'patriarchy'. Second, a variety of statements, themes and concepts that have circulated in discourses which have tradition-ally taken an adversary position to dominant discourses, yet which have been traditionally incompatible, can be re-grouped and re-animated. Third, and this is the consequence I wish to emphasize for it is here that danger lies, by anchoring this "new space" in 'woman', the outlines of the traditional organization of sexuality that divides and traps us in gender constructs is maintained. On one level this maintenance can be seen as arising from what Nancy Chodorow (1979) has termed an "essentialist position".

> Another apprach has tended toward an essentialist position, posing male-female differences as innate. Not the de-gendering of society, but its appropriation by women, with their virtues, is seen as the solution to male dominance. These virtues are uniquely feminine, and usually thought to emerge from women's biology, which is seen as intrinsically connected to or en-tailing a particular psyche; or a particular social role, such as mothering; or a particular body image (more diffuse, holistic, non-phallocentric); or a particular sexuality (not centered on a particular organ and its goals; at times, lesbianism). In this view, women are intrinsically better than men and their virtues are not available to men. (p. 52)

Such a position can be seen as retaining the very division of human beings into 'male' and 'female', and since it roots these divisions in anatomy, as maintaining the outlines of the very organization of sexuality it seeks to dismantle. On another level, however, it is not the "essentialist position" which is rife with danger, although certainly it does drag with it a certain sexual grid; rather, it is that 'woman' emerges as the

limit, the boundary of this "new space" and as its anchor point. Whether this 'woman' is pinned to anatomy or not makes only a difference of degree in terms of the maintenance of a destructive gender system. For example, if as Adrienne Rich (1979) says, "(the) desire to grasp deep moral issues is the kind of concern we need to build a common world which will amount to more than 'life styles' " (p. 212), if it is imperative that the principles of integrity, wisdom, justice, dependability and psychic powers be re-animated, if it is important that new Selves be articulated, and if new subjective positions are to be opened up from which new questions can be asked, to link this morality, these principles, these Selves, these positions and these questions to 'woman', to anchor them in 'woman' is to replace one privileged center with another; it is to replace a destructive male/female duality, in which one side has been elevated into a silent center, with the other side which becomes the only side, yet which bases that only side on a final difference. If 'man' replaced the Divine as the measure of all things, 'woman' comes to replace 'man'. In such a discursive space men emerge as either fixed and one-dimensional or as 'woman enspirited', that is men with 'female' morals, principles, Selves and questions. Conversely those women who for example ask 'male' questions or who abide by 'male' principles emerge as "Painted Birds", "robotized women" (Daly, 1978) emerge as ultimately not 'woman'. Gender then remains the organizing principle, the anchor point, the limit in such a discursive space and in this sense the outlines of the traditional organization of sexuality are preserved.

But now several questions and apparent contradictions appear. If those movements which seek to dismantle the traditional organization of sexuality have used the historical configurations of 'man' and 'woman' as the starting point for this dismantling, if these configurations have been turned in on themselves and re-articulated, if the emergence of a different 'woman' and a different 'man' are keys to this dismantling operation, will not the abandonment of these figures work against this dismantling? If the discursive space which has served to name and from which can be analyzed the historical organization of sexuality is anchored in and gains cohesiveness and status from 'woman' then does not the severance of this anchor point cast adrift and ultimately dissolve this space back into the organization it opposes? If, for example, "women's questions" or the "Female Self" become simply different questions and different Selves, is not their power dissipated? Finally, must the movements seeking to dismantle the historical organization of sexuality become a movement for 'human liberation' if a de-gendered society is to be realized or does such an expansion itself undermine the movement?

> The urge to leap across feminism to "human liberation" is a tragic and dangerous mistake. It deflects us from our real sources of vision, recycles us back into old definitions and structures, and continues to serve the purposes of patriarchy. (Rich, 1979, p. 134)

These are important questions and they must be addressed. First, however, let us turn to the figures of 'the lesbian' and 'the homosexual' as these have emerged in the challenges and resistances to the traditional grid of sexuality.

In Chapter Four I suggested that during the nineteenth century a host of peripheral sexualities emerged which resulted in the brutal treatment of countless individuals. During the twentieth century many of the more exotic of these peripheral sexualities disappeared, but the figures of the 'homosexual' and 'lesbian' remained firmly fixed and continued to be analyzed, expanded on and identified. It is important to note, however, that the 'lesbian' was often subsumed under the category 'homosexual' and remained a vaguer figure than the male homosexual. Less medically and psychologically defined and discursively colonized, 'lesbianism' emerged as 'man-hating', and a "well of loneliness". Nevertheless, as Jonathan Katz (1976) has shown, women who were categorized as 'lesbians' were subjected to incarceration, torture and of course, social opprobrium. It is interesting to speculate on the reasons for the comparatively vague figure of the 'lesbian' and the area of 'lesbianism'. It is, for example, possible that because women have traditionally been defined as not deriving pleasure from a genital sexuality, although 'woman' has emerged as sexualized,

but rather as deriving pleasure from a more diffuse 'love', women who had 'sex' with other women were anomalies as well as threatening. Whatever the reasons, though, 'lesbianism' has historically been more loosely defined than 'homosexuality' although no less taboo. During the last decade, however, the figure of the 'lesbian' has emerged within the discursive network that opposes the traditional organization of sexuality as both vociferous and central to that opposition. Rather than a perversion, pathology or shadowy subculture, the 'lesbian' emerges as a mode of relating, a practice, a political stance, an internal state and as the true 'woman'.

> Feminism is the theory, lesbianism the practice. (Ti-Grace Atkinson, quoted in Johnston, 1973, p. 166)

> The lesbian was and is unquestionably in the avant-garde of the fight for equality of the sexes, and for the psychical liberation of women. (Wolff, 1971, p. 66)

> All women are lesbians, except those who don't know it naturally they are but don't know it ....And a woman who loves herself naturally who is other women is a lesbian. (Johnston, 1973, p. 226)

> The lesbian is woman prime. (Johnston, 1973, p. 185)

> The term 'lesbian'...describe(s) women who are woman identified. (Daly, 1978, p. 26)

> And I believe it is the lesbian in every woman who is compelled by female energy, who gravitates toward strong women, who seeks a literature that will express that energy and strength. It is the lesbian in us who drives us to feel imaginatively, render in language, grasp the full connection between woman and woman. (Rich, 1979, p. 200-201)

Obviously then 'lesbian' and 'lesbianism' emerge as very different from the 'lesbian' and 'lesbianism' which have been formed by the traditional organization of sexuality. It is also obvious that they emerge in, are formed by and give meaning to a very different discursive field than that which constitutes the dominant grid of sexuality. One can note too the difference between the 'lesbian' who emerges in Simone de Beauvoir's The Second Sex, written in 1952, a 'lesbian' who "...reticently avoid(s) men: in them as in the frigid woman, there is the feeling of resentment, timidity, pride; they do not feel truly men's peers; to their feminine resentment is added a masculine inferiority complex" (de Beauvoir, 1974, p. 472) and the one emergent in the above quotes. What are important, however, are the consequences of this re-articulation. First, and most obvious, there occurs a de-pathologization and politicization of the 'lesbian'. Given a discursive field in which 'man' emerges as one-dimensional, as a negative construct, in which 'woman'——a re-formulated 'woman' ——emerges as the anchor point for this field and for a woman's identity, 'women loving women' becomes a political practice and necessity as well as an affirmation fo that identity.

Second, a de-centering and dissolution of a genitally fixated sexuality occurs and the possibility of a more diffuse and holistic sexuality emerges, one that is formed by and gains status from the re-articulated, re-animated and emergent relations, communications and fusions between 'women'. Even those slang terms for 'lesbian'——'butch' and 'femme'——which suggested a kind of genital and power fixation, although initially re-claimed and defiantly affirmed, have begun to be rejected and replaced by what can be seen as a more holistic terminology, e.g., 'woman-identified'.

Third, compulsory heterosexuality loses its privileged center and becomes a preference with political reverberations. The de-centering of heterosexuality can be seen in part as arising from the discursive web, formed by a variety of statements, concepts, and themes, which takes an adversary position to the tradi-

tional organization of sexuality. In a discursive field where statements such as 'men and women' are equal', concepts such as 'sex-roles' and 'conditioning', and themes such as 'liberation' and 'the personal as politi- cal' are exchanged, circulate and intersect, heterosexuality, itself, must ultimately come under question. For example, if the position is taken that men and women are conditioned to play particular roles and these roles constitute men and women, if men and women are asked to treat each other as equals and to shed their roles or make them volitional, if women are seen as having stepped out of their roles before men have and have begun to liberate themselves from compulsory motherhood, and if a political stance is brought into the personal, then heterosexuality loses its privileged center. It becomes untenable. For what is there to base it on except a kind of innate 'chemistry', a 'chemistry' which would raise the possibility of biolo- gical determinism. What is important, though, is that the figure of the 'lesbian' as it has emerged serves as the mobilizing or coalescing force in this challenge to heterosexuality, for it serves as an articulation of the way 'role-less' or 'de-conditioned' or 'liberated' women can relate.

Fourth, the emergence of a re-articulated 'lesbianism' as a diffuse and holistic communion among wo- men contributes to the formation of a particular analysis of gender. Jill Johnston (1975) has said, "We're all lesbians, we all loved our mothers first" (p. 223). Such a statement helps to re-animate a whole series of psychoanalytic statements, concepts, themes and objects that, as we have seen, have traditionally served to trap individuals in a destructive gender system but which have recently emerged in different forms in the writings of various authors (e.g., Chodorow, 1978, 1979; Rubin, 1975; and Dinnerstein, 1977).

Finally, as 'lesbianism' emerges as a political practice and affirmation, as a re-articulated sexuality, and as a way of relating, it also emerges as anchored in anatomy. The 'we' in the statement, "We're all lesbians, we all loved our mothers first", has as its referential both anatomical women and the 'woman' who has e- merged in the "new space on the boundaries of patriarchy". Although it would seem obvious that a man cannot be a 'lesbian' that obviousness is contingent on the acceptance of a dual gender system. The discur- sive edifice of which 'lesbianism' is a part and in certain respects in which 'lesbianism' is a foundation, would appear to be anchored through 'lesbianism' in anatomy and difference, if either anatomical males are excluded from being 'lesbians' or if 'woman' can only be a 'lesbian'. In either case 'lesbianism' would, as it expands outward from its initial point of resistance and challenge, drag with it the form of the very gender system it opposes.

In discussing the concept 'patriarchy', I suggested that the figure 'man' had taken shape as either a one- dimensional negative construct or as a melange of 'masculine' and 'feminine' traits which themselves could be and often are seen as produced by a 'male' subjectivity or 'patriarchal' thought. I also suggested that the figure 'man' had begun to take shape in the writings which start with but stand in opposition to and move away from the traditional production and organization of 'homosexuality'. But this is only partially accur- ate. We have seen how prolix the traditional discourses in which the 'homosexual' emerged have been. Un- like 'lesbianism', 'homosexuality' has been linked to so many phenomena, has been discursively colonized to such a degree, that its very presence has seemed to haunt society. Tell-tale signs have been ferreted out and hunted down. Whatever the reasons for the almost obsessive concern during the last hundred or so years with 'homosexuality', and one can speculate endlessly on them, 'homosexuality' has in recent history been subjected to intense and extensive discursive operations and those human beings categorized as 'homo- sexuals' have been subjected to a ghoulish array of punishments, often in the form of 'therapy'. 'Homosex- uality has not only emerged as a particular area in medical, psychiatric and psychological discourses but it has also emerged in a variety of shapes outside those discourses. Here exist the 'perverts', the 'shadowy creatures who haunt men's bathrooms' and the 'limp-wristed wraithes fluttering around tea-rooms'. The list is endless. One need only note the lexicon of slang terms for 'homosexual' and compare it to that for 'les- bian', to be confronted with the extensiveness and vociferousness of the area of 'homosexuality'.

In Chapter Three I briefly described the gay liberation and radical homosexual movements that have

arisen during the last decade. Within the discursive network that has been woven by these movements, the figure of the 'homosexual' has begun to emerge in different forms. For example, the Dionysian or revolutionary 'homosexual' who figures in Guy Hocquenghem's (1978) Homosexual Desire is quite different from the 'normal homosexual just like you and me' of C.A. Tripps (1976) The Homosexual Matrix, and both differ from the 'homosexual' who emerges as a node in an economic network in Bob McCubbin's (1976) The Gay Question: A Marxist Appraisal. But, even given these diverse figures, the 'homosexual' has emerged infrequently as other than the affirmed figure that has been constituted traditionally. The figure of the 'homosexual' has come out of the closet, de-pathologized, proud but also in many ways intact. This has several consequences, but before turning to them, I want to suggest some possible reasons for the maintenance of this 'figure' in the discursive network which opposes the traditional organization of sexuality. Defined in the past as a peripheral sexuality circulating around the silent and privileged center of male heterosexuality, the 'homosexual' was both the 'same' and the 'other', both 'man' and 'not-man'. He was 'man' because of anatomy and therefore the figure emerged with a particular sexuality——genitally oriented and goal-directed. He was not 'man' because this particular sexuality was directed toward other men. Unlike the 'lesbian' whose sexuality, itself presented an anomaly, the 'homosexual's' sexuality did not constitute an anomaly, since it emerged in the same genitally oriented way as the male heterosexual's; rather the anomaly was constituted by the fact that that sexuality was directed toward other men. 'Homosexuality' did not emerge as love or communion between men but as sex between men——a particular male heterosexual 'sex' with its intensification and zoning of parts of the body. Again, it was not this 'sex' that received the weight of opprobrium and pathologization, but the fact that it occurred between men. Furthermore, as the 'homosexual' emerged as 'not-man' in a discursive network in which 'woman' and less so 'man' acted as magnets which drew a multiplicity of phenomena around them, the 'homosexual' became increasingly defined as 'woman' and derived an identity from a variety of traits, behaviors, words and attitudes associated with this figure. The 'homosexual' emerged as 'pansy', 'fairy', 'queen', vain, concerned with his physical appearance, fearful of growing old, hypersensitive, whimsical and fragile. These terms circulated as statements in a discursive field in which 'woman' itself had a negative valence but more importantly in which a man who was like a 'woman' and yet not one became a pariah. What I wish to emphasize is that it was the 'womanliness'——and it must be remembered that this was a particular 'womanliness'——of the 'homosexual' that was continually talked about and at the same time scorned. Within and opposing this organization of 'homosexuality' there has unfolded gay liberation and radical homosexuality. But the questions can be asked, what 'gayness' has been liberated and what 'homosexuality' has been radicalized? Carl Wittman (1970) has said that in part it is sex between men that has been liberated.

> Sex is precisely what we are not supposed to have with each other. And to learn how to be open and good with each other sexually is part of our liberation. (p. 23)

In many respects, however, the 'sex' that is liberated is a sex formed by and emergent in the very organization of sexuality that gay liberation and radical homosexuality oppose. In "Looking at Pornography: Erotica and the Socialist Morality" (1978), Gregg Blachford discusses homosexual pornography's presentation of homosexual sexuality and its liberating effect. By and large, however, the 'sex' that emerges here is the same as that in heterosexual pornography——the difference of course being the anatomy of the participants. It is the emergence of this particular 'sexuality' linked to and given status by the concept 'liberation' that has led Adrienne Rich, for example, to reject in part the political significance of the gay movement.

> On the other hand, there is homosexual patriarchal culture, a culture created by homosexual men, reflecting such male stereotypes as dominance and submission as modes of relationship, and the separation of sex from emotional involvement.... The male "gay" culture has offered...the role-stereotypes of "butch" and "femme", "active" and "passive", cruising, sadomasochism, and the violent self destructive world of "gay" bars. (Rich, 1979, p. 225)

What I am suggesting, however, is not that this particular 'sex' is inherently bad or wrong. Rather, I am suggesting that it is a 'sex' organized and produced by the very grid the gay movement has sought to dismantle and that its emergence as integral to liberation and its maintenance as central in the definition of 'homosexuality' freezes the figure of the 'homosexual' and works against the dismantling of the traditional organization of sexuality.

There has also emerged within this discursive network the concept of a 'gay life-style', a concept which would appear to allow for a variety of strategies. To some extent, however, and not a small one, this concept has given status to predominantly one discursive area. The 'homosexual' as non-man, as 'woman' has been affirmed and the area in which such a figure emerges has been reanimated. A 'gay sensibility' emerges here as particular kinds of sensitivity, chic and refinement, ones which have traditionally grouped around the figure of 'woman' as that figure emerged in the dominant organization of sexuality. It is perhaps this 'sensibility' which led Germain Greer (1970) to say that the feminized homosexual is the reverse image of the Cosmo-girl. Again, I am not suggesting that such a 'gay life-style' is bad or wrong. I am suggesting that as it becomes inextricably linked to the figure of the 'homosexual' and as it re-animates a particular area in which that figure emerges, it serves in part to maintain an oppressive gender system.

It is possible then, to see the 'homosexual' who has 'come out of the closet' as being a 'homosexual' already fixed and formed by the organization of sexuality which the movements that have helped open that door oppose. Whatever the reason for this curious process whereby 'homosexuality' is de-pathologized and 'liberated' and at the same time kept the same, there are several consequences. First, and most obviously, numerous individuals have been freed from a variety of barbaric practices inflicted on their bodies. Laws are changing and the social stigma attached to 'homosexuality' appears to be diminishing. Furthermore, as 'homosexuality' emerges as 'normal' it de-centers 'heterosexuality'. Second, 'homosexuality', as it emerges, challenges the traditional formation of 'woman' by annexing for itself those traits, behaviors and characteristics which have formed this figure. If a man can be just as, if not more, 'womanly' than a woman, 'womanliness' can hardly serve as the dominant definition of a woman. Third, and finally because the 'homosexual' has in part emerged as a fixed figure and because 'homosexuality' has in part emerged as a particular 'sexuality' between men, the possibility for a space to emerge in which 'man' could be re-defined, could emerge as other than the one-dimensional, fixed figure he has come to be in the resistances and challenges to the dominant organization of sexuality is closed off. For example, 'lesbianism' has had such an impact in part because of the re-articulated figure of 'woman' but also because it has emerged as so much more than 'sex between women'. One need only think of the difference it would make if 'lesbianism' emerged primarily as cunnilingus between women and traditional 'male' mannerisms.

It must be said, though, that 'homosexuality' has begun to emerge in other ways. As I suggested in Chapter Two, there has been an attempt to link gay liberation and radical homosexuality to men's liberation. Furthermore, there has been a growing critique of the primacy given to a particular kind of sexuality that has emerged as central in the affirmation of homosexuality. Alan Ginsberg (1978) in particular has addressed this issue at length.

> An element in the gay lib struggle and metaphysics that I don't think has yet been taken up is that of disillusionment with the body. I'm not trying to be provocative in that——just the age-old realization of over-forty, over-fifty, and over-sixty, and over seventy and over-eighty, finally the age-old grinning skeleton with the spiritual lesson behind it, of detachment from neurotic desire. I think there's a genuine eros between men that isn't dependent on neurotic attachment and obsession, that's free and light and holy lambent.... If there's too much of a neurotic grasping to gaiety, to gayness, even to gay lib, then it makes everything too tense, and the lightness of the love is lost. So the gay lib movement will have to come to terms sooner or later with the limitations of sex.

If you consider sex from a Hindu, Buddhist, Hare Krishna even Christian fundamentalist viewpoint...it becomes interesting. Burroughs has actually written about it at length (as) the sex "habit" ——sex as another form of junk, a commodity, the consumption of which is encouraged by the state to keep people enslaved to their bodies...

I find, as I'm growing older, no less flutterings of delightful desire in my belly and abdomen. But also I'm becoming more tolerant of other resolutions between people besides sex. (p. 101)

The idea of a buddy is just (a) thin label, (a) vulgarization.... The tradition of comradeship, spoken of in the Bible...between David and Jonathan...all the way up to the body relationships as we know them...all these probably are intense love relationships which the gay lib group, in its political phase, has not yet accepted and integrated as delightful manifestation of human communication, satisfactory to everybody. In other words, theres's a lot of political and communal development open to the gay lib movement as it includes more and more varieties of love, besides genital. (p. 102)

The emergence of 'homosexuality' as love between men and an expansion of this theme, as the re-articulation of 'man' with its consequent re-animation of certain traditional statements and as figures such as the 'gentleman', and as political critique would on one level be a great step toward de-centering the monopoly of male heterosexuality, toward dismantling the dominant organization of sexuality and toward expanding the "new space on the boundaries of patriarchy". On another level, however, if 'homosexuality' emerges as the anchor point for a re-definition of man, if indeed 'man' emerges in such a discursive space as qualitatively different than 'woman' or as the anchor point for an entire discursive edifice, the outlines of an oppressive gender system are maintained.

I have attempted to describe in this chapter and Chapter Four the vast terrain formed by both the dominant discourses on sexuality and those that have sought to change that organization. The traditional organization of sexuality has indeed come under attack, and it can now be seen that this attack proceeds in different directions and operates on different levels. Starting with the figures of the 'woman', the 'lesbian' and the 'homosexual' it has re-articulated these figures and has infiltrated, turned in on itself and decentered the silent center of the discursive organization that has traditionally constituted these figures. Furthermore, it has totalized this organization into the 'patriarchy' in which 'man' begins to emerge as a one-dimensional, negatively valenced figure and which allows for the emergence of a "new space" in the re-articulated figures of the 'woman' and 'lesbian' and less so the 'homosexual'. A whole series of concepts, statements and themes circulate here, are re-grouped around these figures and derive status from them. These figures, as they become central nodes in a new discursive field, yet remain also as formations within the organization of sexuality that is opposed, might be called 'switch-points'. They are the points of interface between the dominant organization of sexuality and those movements which seek to dismantle that organization. Constituted, organized and modified in one discursive formation, the figures of 'woman', 'lesbian' and 'homosexual' emerge in another as constituting (a transformed and re-articulated 'woman' is required for the constitution and discurive operation of the concept 'patriarchy'); as organizing (a plethora of diverse statements, objects, concepts and themes that have circulated within disparate and often opposing discourses are re-grouped around and re-animated by these figures); and as modifying (concepts for example, such as 'surplus wealth', the 'Oedipal complex' and 'matriarchy' are modified and re-circulated).

The discursive field which has unfolded within and stands in opposition to the traditional organization of sexuality and in which the figures of the 'woman', 'lesbian' and 'homosexual' have emerged constitutes not only a major shift in and challenge to that organization but also constitutes a discursive network and a field

of practices in which emerge the outlines of a de-gendered society. At the same time, however, as long as that network remains anchored in the figures of 'woman', the 'lesbian' and the 'homosexual' and derives status from these figures, even though they constitute very different figures from the traditional ones, and as long as 'man' merges as one-dimensional, then the outlines of the traditional organization of sexuality are maintained. If within the "new space on the boundaries of patriarchy", individuals continue to derive the 'truth' of their identity from sexuality, even though a re-articulated sexuality, if a plethora of phenomena continue to be anchored in gender, if ultimately this "new space" itself continues to be anchored in and derive status from these figures, then a shift might be said to have occurred, but not a transformation, not a rupture and finally not a revolution.

And now we must return to the questions posed earlier. If those movements seeking to dismantle the traditional organization of sexuality have started with the historical configurations of the 'lesbian', the 'homosexual' and 'woman' and infiltrating the silent center of that organization have turned that center back in on itself allowing the figure of 'man' to emerge as the 'other'; if the emergence of these re-articulated figures are keys to this dismantling operation; and if the discursive space which has served to name the oppressive organization of sexuality and which reveals the outlines of a de-gendered society—if this discursive space is anchored in and gains cohesiveness and status from these figures, does not the severance of these anchor points and the abandonment of these figures work against this dismantling? Must the movements seeking to dismantle the historical organization of sexuality become a movement for 'human liberation' if a de-gendered society is to be realized or does such an expansion itself undermine that movement? The answer to these questions must be both yes and no. Because we live in a world in which sexuality in its broadest and most specific senses is organized, in which human beings are divided into the categories of male, female, heterosexual, homosexual and lesbian, because the physical pleasures and contacts between bodies has been organized not only in accordance with these divisions but also into the autonomous area of sex, which itself is divided, zoned, depicted and deployed in a variety of discourses, and finally, because this discursive network is inserted into a wide range of non-discursive practices, any movement to dismantle this organization must start with the figures and areas constituted within it. In a world where 'man' is the silent center, the 'same', where 'human' is defined as that belonging to man or that which is characteristic of man and where 'humanism' emerges as a doctrine relating to man, to talk of human liberation or humanism, to begin with the figure 'human', is to maintain and to liberate a discursive network which maintains that silent center. One need only remember Schiller's description of humanism to see the danger in talking of humanism or 'human liberation'.

> To remember that Man is the measure of all things, i.e., of his whole experience world, and that if our standard measure prove false all our measurements are vitiated; to remember that Man is the maker of the sciences which subserve his human purposes; to remember that an ultimate philosophy which analyzes us away is thereby merely exhibiting its failure to achieve its purpose—that is the real root of Humanism, whence all its auxiliary doctrines spring.

Furthermore, I would suggest that to sever the anchor points from the discursive field which stands in opposition to the traditional organization of sexuality would, given the pervasiveness of that organization, centrifugalize this field. A plethora of statements, themes, objects and practices would be released and pulled back into a variety of discourses that have traditionally assumed an adversary position or critical stance within the society but which have not focused that critique on the organization of sexuality. For example, the discursive phenomena released might gravitate back to, circulate and be exchanged in a discursive field in which concepts such as 'Consciousness III', the 'establishment' or the 'counter-culture', or figures such as the 'proletariat' and the 'capitalist' operated as organizing forces.

On the other hand, and we have seen this, the maintenance of the figures of 'man', 'woman' 'homosex-

ual' and 'lesbian' as anchor points and as foundational supports and organizing operations for the discursive space which stands in opposition to the traditional organization of sexuality serve to perpetuate an oppressive gender system.

> To speak of difference as a final, irreducible concept and to focus on gender differences as central, is to reify and deny those processes that create the meaning and significance of gender. To see men and women as qualitatively different kinds of people, ...is to reify and deny relations of gender, to see gender differences as permanent rather than created.... (Chodorow, 1979, p. 67)

Even when 'man' and 'woman' are not rooted in anatomy but are treated as 'roles' or 'principles', so that, for example one could be anatomically female but emerge as a 'homosexual', even here a multiplicity of phenomena are re-grouped and totalized by a dualistic gender system. As 'man' and 'woman', 'lesbianism', 'homosexuality' and 'heterosexuality' emerge re-articulated, but no less important, as explanations for and consequences of a variety of phenomena, and as they maintain a centrality, the outlines of the gender system such an area seeks to dismantle and to which it poses an alternative become visible.

This paradox——that the re-articulated figures of the 'lesbian', 'homosexual' and 'woman' as well as the 'heterosexual' and 'man' are integral to the dismantling of the dominant organization of sexuality and yet serve to maintain the outlines of that organization——presents several strategies for bringing about a transformation of the dominant sexual grid that profoundly affects us. The first strategic possibliity: a de-totalization and de-construction of sexuality. Sexuality, no longer talked about as a particular 'sex' between 'man' and 'woman', 'woman' and 'woman', 'man' and 'man', might emerge as fluid intensities, dispersed whisperings, connections, co-minglings, communion and juxtapositions of de-gendered bodies and pleasures. Such a strategy would be carried out in the direction of what we might call the poetical. Second strategic possibility: a temporary re-claiming of the figures 'woman', 'lesbian' and 'homosexual'. Along the fronts and lines of the resistances and challenges to the dominant grid of sexuality, the totalized and re-articulated figures of 'woman', 'lesbian' and 'homosexual' must be claimed. The 'switch-points' must be embodied. Here every man must temporarily affirm himself a 'homosexual' and every woman must temporarily affirm herself a 'lesbian' whatever the forms their desire might actually take. Such a strategy would be carried out in the direction of what we might call the political. Third strategic possibility: an expansion and dispersion of the discursive space that has emerged without anchoring it in gender. Here must occur a refusal to impose totalities, a refusal to impose on the manifest an interpretation of its hidden 'truth'. Here might occur a radical nominalism. Such a strategy would be carried out in the direction of what we might call the ethical.

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I have attempted in this chapter and the previous one to perform a discursive analysis on the vast terrain of sexuality. There is no doubt that we live in a society in which sexuality is organized. We are born into bodies, but we also are born into a world woven by discourse. Our bodies are divided into male and female and emerge as 'man' and 'woman', categories caught up in a discursive web that profoundly affects us. We are divided according to various criteria into 'homosexuals', 'lesbians' and 'heterosexuals' and these designations serve as nodes in various discourses which shape our destinies. The physical pleasures and contacts between bodies have been organized not only in accordance with these divisions but also into the autonomous area of sex which itself is divided, zoned, depicted and deployed in a variety of discourses. Within and opposing this organization have unfolded those movements which I temporarily grouped under the term 'sexual politics'. Rather than treating these movements as unified and totalized entities, I sought to analyze them in terms of their discursive constitution. I suggested that the statements, concepts, themes, figures and objects that were released by such an analysis were both intimately linked to the dominant organization and also served to alter that organization. I attempted to describe how this alteration or shift did not in itself constitute a rupture or transformation but in some respects served to maintain the tradi-

tional organization of sexuality. There is no question that there have been and continue to be profound shifts taking place in the terrain of sexuality. These shifts have reverberated through all aspects of our existence, and education and schooling are not exempt. I have offered in this work one way of analyzing those shifts and in doing so have suggested certain directions in which we might move if there is to be a transformation of the organization of sexuality. If such a transformation takes place, perhaps, to paraphrase Charles Reade, we will one day be able to say: When I was a man; or a woman; I forget which—it is so long ago.

REFERENCES

Atkinson, T. *Amazonian odyssey*. New York: Music Sales Corporation, 1974.

Blachford, G. "Looking at pornography: Erotica and the socialist morality." *Radical America,* 1978, *13* (1), 7-19.

Boals, K. "The politics of cultural liberation: Male-female relations in Algeria." In B. Carroll (ed.), *Liberating women's history: Theoretical and critical essays*. Chicago: University of Illinois Press, 1976.

Broumas, O. *Beginning with o*. New Haven, Connecticut: Yale University Press, 1977.

Brownmiller, S. *Against our will: Men, women and rape*. New York: Bantam Books, 1976.

Burroughs, W. "An interview with William Burroughs." In W. Leland (Ed.), *Gay sunshine interviews*. San Francisco: Gay Sunshine Press, 1978.

Chodorow, N. *The reproduction of mothering: Psychoanalysis and the sociology of gender*. Berkeley: University of California Press, 1978.

Chodorow, N. "Feminism and difference: Gender, relation and difference in psychoanalytic perspective." *Socialist Review,* 1979, *9* (4), 51-69.

Collins, S. *A different heaven and earth*. Valley Forge, Pennsylvania: Judson Press, 1974.

Daly, M. *Gyn/ecology: The metaethics of radical feminism*. Boston: Beacon Press, 1978.

Davis, E. *The first sex*. New York: Penguin Books, 1975.

de Beauvoir, S. *The second sex*. New York: Vintage Books, 1974.

Deleuze, G. and Guattari, F. *Anti-oedipus: Capitalism and schizophrenia*. New York: Viking Press, 1977.

Dinnerstein, D. *The mermaid and the minotaur, Sexual arrangements and human malaise*. New York: Harper Colophon Books, 1977.

Evans, S. Personal politics.

Farrell, W. *The liberated man*. New York: Random House, 1974.

Fasteau, M. *The male machine*. New York: McGraw-Hill, 1974.

Firestone, S. *The dialectic of sex*. New York: Bantam, 1972.

Freud, S. *Civilization and its discontents*. New York: W.W. Norton & Co., Inc., 1962.

Ginsberg, A. "An interview with Allen Ginsberg." In W. Leyland (Ed.), *Gay sunshine interviews*. San Francisco: Gay Sunshine Press, 1978.

Gordon, D., Buhle, M. and Dye, N. "The problem of women's history." In B. Carroll (Ed.), *Liberating women's history: Theoretical and critical essays*. Chicago: University of Illinois Press, 1976.

Greer, G. *The female eunich*. London: MacGibbon & Kee, 1970.

Hocquenghem, G. *Homosexual desire*. London: Villiers Publications, 1978.

Jaggar, A. "Political philosophies of women's liberation." In M. Vetterling-Braggin, F. Elliston & J. English (Eds.), *Feminism and philosophy*. Totawa, New Jersey: Littlefield Adams & Co., 1977.

Johnston, J. *Lesbian nation: The feminist solution*. New York: Touchstone Books, Simon & Shuster, 1974.

Katz, J. *Gay American history: Lesbians and gay men in the U.S.A.* New York: Thomas Y. Crowell Co., 1976.

Kingston, M. *The woman warrior*. New York: Vintage Books, 1977.

Lasch, C. *The culture of narcissism: American life in an age of diminishing expectations*. New York: W.W. Norton & Co., Inc., 1978.

Lazarre, J. *On loving men*. New York: Dial Press, 1980.

McCubbin, B. *The gay question: A Marxist appraisal*. New York, World View Publishers, 1976.

Miller, J. "Women: The evolving educational consciousness." *Journal of Curriculum Theorizing*, 1980, 2 (2).

Millet, K. *Sexual politics*. New York: Avon Books, 1971.

Mitchell, J. *Woman's estate*. New York: Pantheon Books, 1971.

Mitrano, B. Feminism and curriculum theory: Implications for teacher education. *Journal of Curriculum Theorizing*, 1981, 3:2.

Pleck, J. & Sawyer, J. *Men and masculinity*. Englewood Cliffs, New Jersey: Prentice-Hall, 1974.

Rich, A. *On lies, secrets and silences: Selected prose 1966-1978*. New York: W.W. Norton & Co., 1979.

Rosaldo, M. & Lamphere, L. "Introduction." In M. Rosaldo & I. Lamphere *Woman, culture and society*. Stanford, California: Stanford University Press, 1976.

Rubin, G. "The traffic in women: Notes on the "political economy" of sex." In R. Reiter (Ed.), *Toward an anthropology of women*. New York: Monthly Review Press, 1975.

Seem, M. "Introduction." In G. Deleuze and F. Guattari, *Anti-oedipus: Capitalism and schizophrenia*. New York: Viking Press, 1977.

Tenov, D. *Psychotherapy: The hazardous cure*. Garden City, New York: Anchor Press, Doubleday, 1976.

Tripp, C. *The homosexual matrix*. New York: Signet, 1976.

Wittig, M. *Les Guerilleres*. New York: Viking Press, 1971.

Wittman, C. "The gay manifesto." *Liberation*, 1970, 2, 15-45.

Wolff, C. *Love between women*. New York: St. Martin's Press, 1971.

Curriculum Development and Instructional Planning Within an Epistemological-Psychological Framework: A Theoretical Synthesis.

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Introduction

Curriculum development and instructional planning assume a central role in traditional schooling. And so they should. However, much disagreement exists as to what constitutes curriculum and instruction. So much so, that since its inception, the field of curriculum has never emerged as a discipline or (subdiscipline), and its demise was announced by Schwab (1969) before ever coming into its own.

A theoretical synthesis, a model, which places curriculum and instruction (C & I)[1] within a broad epistemological-psychological framework can help to guide theoreticians and practitioners in education. Such a synthesis is attempted in this paper. The theories of Mauritz Johnson, Jr. (1967, 1977), David P. Ausubel (1968), Stephen Toulmin (1972), D. Bob Gowin (1976), and Joseph J. Schwab (1960, 1961, 1962, 1964) are synthesized.

Curriculum and Instruction

The substantive and methodological structures of all disciplined knowledge, which constitute the bulk of the traditional curriculum, reside in scientific disciplines. Therefore in dealing with curriculum development, epistemological considerations must play a central role. In contrast, to accomplish successful instruction, the psychological structure of the individual student must be taken into account. For that reason, instructional planning is highly contingent upon our understanding of the psychology of meaningful learning.

The model which I propose appears in Figure 1.

What Knowledge is of Most Worth? (The perennial Spencerian query!) What should we teach in schools? A value hurdle not addressed in this figure. It is, however, assumed that the scientific disciplines which constitute the epitome of man's attempts to explain nature are an important part of human culture. They therefore constitute curricular content to be taught and learned within the educational enterprise.

Subject-Matter (Epistemology) ←——— Curriculum - Instruction ———→ Learner (Psychology)

$$C = (GC - PK) + (MC) + E$$

The model is, to a large extent, a step further in the direction taken by the production models of C & I (Tyler 1950; Johnson 1967, 1977). The model deepens the distinction between curriculum development, on the one hand, and instructional planning, on the other, by placing each within a different domain: Epistemological and psychological, respectively. My quest is to approach education in general, and C & I in particular, in a rational way (see Johnson 1977), guided by relevant theories. Without a guiding model, I fear that C & I is indeed destined to haphazardous trial and error wanderings, and to the continuation of its maligned and moribund state; a state in which not even a clear conceptual distinction, such as the one I have made above, exists between the key concepts, "curriculum" and "instruction".

Curriculum and Instruction: General Dimensions of the Model

Figure 1 is a kind of "concept map". Like a good road map serves as a concise reference to guide the traveler, this model will serve both to summarize and guide the reader through this paper. A "concept map" is a semantic network which portrays the relationships between concepts. At the nodes of the network appear concepts, while the lines depict propositional relationships (e.g., see Quillian, 1968; Norman and Rumelhart (1974). In this map, lines also depict processes whereby one event, situation, or concept leads to another.

The "concept map" presented in Figure 1 has a general structure. Along the top is a dimension from epistemology to psychology. As one moves from the center of the map toward the left side, one enters deeper into the domain of epistemology; conversely, as one moves to the right, the content is more psychologically oriented.

The curriculum and instructional aspects of the model coincide more or less with the above-mentioned epistemological-psychological dimensions. That is, as one moves left into the epistemological domain, the content is more relevant to curriculum theory and development; whereas, when moving to the right into the psychological domain, one is dealing with instructional theory and planning. A recurrent principle emphasized throughout this paper, therefore, can be summarized as follows: Curriculum resides in disciplined knowledge, whereas instruction is always contingent upon the psychological structure of the learners.

The Politics of Curriculum Selection

I will begin my analysis of the model (see Figure 1) with the disclaimer at the top. Nobody, to my knowledge, has been able to satisfactorily answer the perennial Spencerian query: "What knowledge is of my most worth?" Therefore what is finally included in the curriculum is usually a political-power decision. Those with the influence, the power, the resources, or whatever it takes to provide one with the political decision-making status, are those who ultimately dictate what is to be included and what is to be excluded from the curriculum. What is actually taught behind the classroom door is, of course, dependent to a large extent, upon the teacher who is the final arbitrator in the day to day classroom proceedings.

This is not to say that the process of curriculum selection is, or need be, irrational or arbitrary; rather, it means that there are certain limitations (e.g., time, space, resources, etc.) that eliminate the possibility of including all that may be worthwhile in the school curriculum. Some content must always be excluded, and therefore, selections are made (see Lundgren 1972, for a discussion of frame factors). For this reason, selection, both macro-and micro-, are major issues in curriculum theory.

Macro-curriculum selections (i.e., what subject-matters to teach) are power decisions because there is no way of proving the ultimate intrinsic worth of any knowledge; and thus, there is little avail in attempting to argue that one body of knowledge is more important than another. The biologist will obviously advocate the inclusion of biological content in the school curriculum. Different biologists, with expertise in different domains of biology, may argue that each of their respective areas is more crucial. For example, although all may support the same health or sexuality-oriented curriculum, the microbiologist may claim

that microbiology is most fundamental to the understanding of health, disease, and sex; the biochemist may argue that nutrition is more important; the psychologist, that understanding how the body works is more basic; and so forth. In all probability, people wouldn't dedicate their lives to research in a field that they did not think was of ultimate importance and therefore of intense interest to them. From the confines of one's own conceptual citadel an unbiased perspective is impossible. Thus, a rationale for any domain of human endeavor would be expected or else that domain would cease to exist. The mathematician may altogether oppose a curriculum that includes health or sex education, arguing instead for more basic studies. One mathematician will consider algebra more crucial than geometry; another may argue for trigonometry versus calculus. Similar situations could arise in all subject-matter domains whether English literature, anthropology, history, or physics. In short, there is no way to prove the superiority of one discipline vis a vis another.

The point I am trying to make is that we cannot select certain areas for schooling because of the rationale of their proponents, while excluding other subject-matters whose importance is suspect by those outside that field. All disciplines have their raison d'etre, and thus all domains of human endeavor will compete for curricular inclusion. But, from a practical curriculum point of view, some selection must be made, some knowledge must be excluded from a single program of study. This does not mean that macro-curricula selection decisions need be arbitrary; but, rather, that a difficulty lies in pitting one body of knowledge against another based upon their rationales. (One alternative is, of course to devise multiple programs of study.)

No single discipline can be ultimately justified. Figure 2 is an elaborate skeleton of a Johnsonian (1967, 1977) framework for C & I which helps to illuminate this problem.
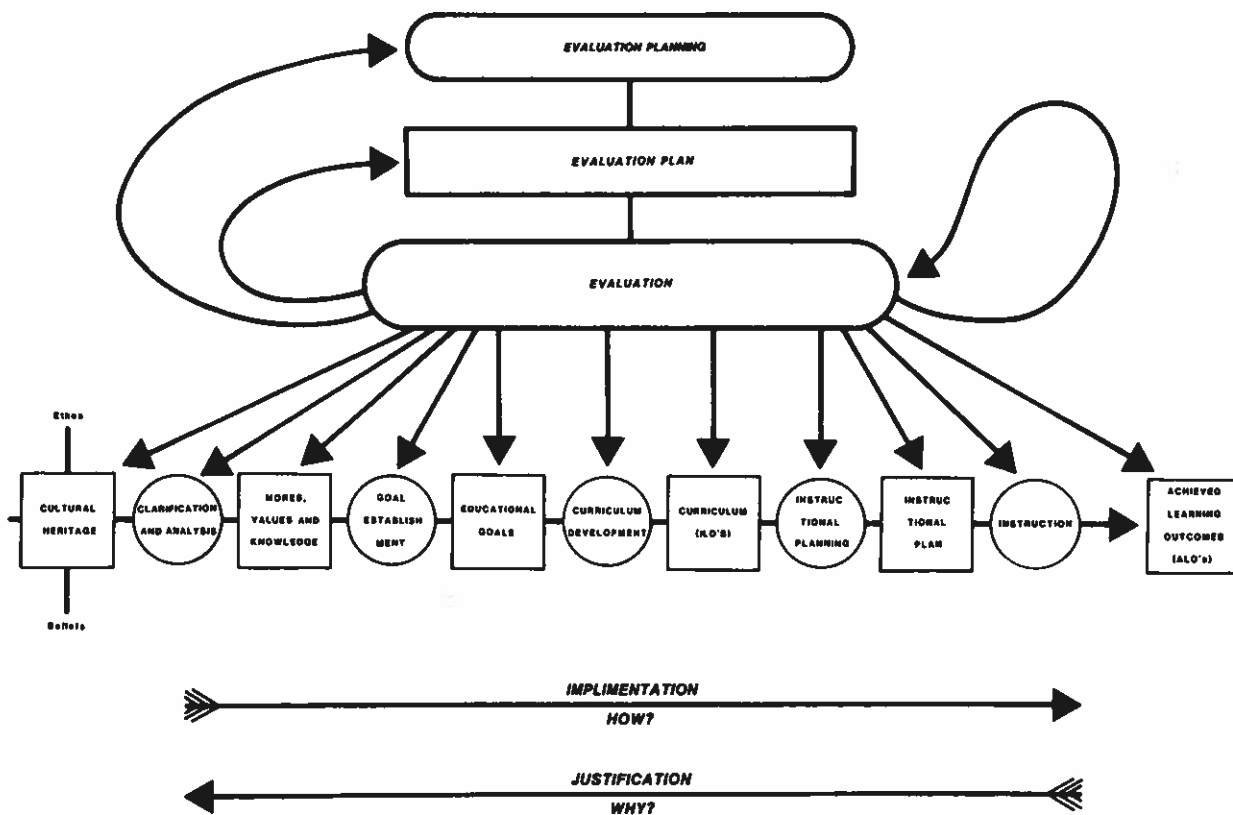
This framework has two opposing dimensions. The direction of these dimensions is specified by the arrows:

1. When moving from left to right, one asks a question of implementation: "How?" The answers are given by moving further to the right. For example: Question: How does one implement one's goals? Answer: The first step is to engage in curriculum development which will result in a curriculum (viz., a structured set of intended learning outcomes (ILO's); Question: How does one implement such a curriculum to achieve the goals, once the curriculum has been developed? Answer: By developing an instructional plan based on the curriculum; and so on.

Thus when moving from left to right, the question of "How?" is being answered and therefore specifies implementation. The boxed concepts (goals, curriculum, instructional plan) are products resulting from the circled concepts (curricculum development, instructional planning, instruction) which are processes.

2. On the other hand, when one moves from right to left, a question of justification is asked: "Why?" And the answers are provided further to the left. For example: Question: Why did you carry out your instruction in this manner? Answer: Because this was specified in my instructional plan; Question: But why is this specified in this manner in your instructional plan? Answer: Because my instructional planning, based on my curriculum, resulted in this plan; Question: Why was this curriculum selected?; and so on.

Now we come to the clincher. If one follows this line of inquiry from right to left in pursuit of the ultimate rationale, one soon discovers an infinite regress. That we can ask an additional why, seeking an explanation or justification, was discovered and exploited more than two millenia ago by Socrates. One can never find an ultimate and independent justification.

To summarize, a selection must be made regarding what to include in a school curriculum, because frame factors dictate that only a limited scope of the available pool of cultural content can be included. Furthermore, no ultimate justification for any specific body of knowledge can be made; therefore, there is no exclusive justification for learning one body of knowledge and not another. But we must make choices, and such decisions about curriculum selection and inclusion will always be politically-motivated decisions; made by those in powerful positions to enforce their views or to coerce compliance. This issue warrants further reflection and deliberation if we are to avoid abuse and to maintain our democratic ideals.

The Structure of Knowledge——An Epistemology

The "walk" through Figure 1 begins on the left side within the epistemological domain. All disciplined knowledge has a structure, and it is within the providence of epistemology to elucidate that structure of knowledge. Without structure, any field of knowledge would be no more than a mass of unrelated propositions. The word "discipline" denotes a structured field of knowledge. The learning of a discipline, in essence, means the acquisition of the "structure of knowledge" that comprises that discipline; being an expert in a field means having an extraordinary grasp of a certain "structure of knowledge."

The "structure of knowledge" or the "structure of a discipline" is always a logical structure. As such, a "structure of knowledge" affords potential logical power (LP) (see Strike and Posner 1976). That is, once acquired, the structure of a discipline can be applied to the solution of a certain class of problems. The actual solution of problems can be attributed to congitive power (CP), the power residing in a cognitive structure (CS) of a person.

The top left portion of Figure 2 begins with the concept of a "structure of knowledge" and shows it to be equivalent with logical structure (LS). As an example, we can look at the discipline of genetics (e.g. see Srb, Owen and Edgar 1965), which is a logical structure in which concepts, propositions, and facts are knitted together in a theoretical fabric that affords potential LP, which can be actualized by a person knowledgeable in that domain. Thus, knowing and understanding Mendel's Laws (i.e., a series of propositions constructed from concepts which comprise part of the structure of genetics) will enable one to make predictions concerning the distribution of certain traits within a given population. One can, in fact, predict that a cross between two individuals (P), one of whom is homozygous for a dominant trait, and the other who is homozygous for the recessive allele of that same gene will result in offspring (F_1) that all display the dominant trait in their phenotype (barring any mutations). Furthermore, we can predict that mating among those offspring will result in approximately a 3:1 (dominant-recessive) ration of the trait amongst the progeny (F_2).

"Dominant", "recessive", "gene", "allele", "mutation", "phenotype", "F_1", "F_2", and so forth, are all concepts which convey meaning. These concepts are bound together by propositions which "assert" the structure of the discipline of genetics. From the above, genetics can be at least partially viewed as a conceptual network with LP that can be articulated by a series of propositions. Each concept within the conceptual framework is meaningful by virtue of its relationships to other concepts (Pines 1981).

One purpose of education is to help learners to realize the potential LP of knowledge in their own psychological structures. What the learners know, understand, and can do is their actual cognitive power (CP), their existing psychological structure. This should never be confused with LP, which resides in a discipline. The ultimate outcome of becoming an expert, however, is a congruency between psychological-cognitive structure and the hypothetical structure of knowledge which resides in the body of ideas. Ideally then, education in science, for instance, should bring about an equivalence (or close approximation) between actual CP and potential LP.

In a discipline such as genetics, one should distinguish between two facets of structure. The first is a conceptual structure (CoS)——the current conceptual-theoretical framework of that discipline. This CoS guides the investigator in pursuit of new knowledge and is simultaneously used to explain current findings, "facts". These "facts" are in essence interpretations of either events or records of events. Such interpretations are possible only in the light of the investigator's existing conceptual goggles (shared by other experts in the discipline). When one employs a completely novel CoS——if that is possible——there is little hope that s/he will be understood by others who do not wear similar spectacles.

The second structure is a methodological structure that incorporates the accepted canons of investigation. That is, the methodological structure is a "pathway" of investigation; the route to new knowledge claims within a domain of inquiry. What will be accepted as valid knowledge will depend upon how such knowledge was produced.

The conceptual structure is what Schwab (1960, 1961, 1962, 1964) calls the "the substantive structure" of a discipline. The methodological structure he calls "the syntactic structure". Now, obviously these two facets of a discipline cannot, in reality, be separated. However, just as educators have distinguished the cognitive and affective domains which are inseparable, so too do we discriminate between the substantive and syntactic structures, primarily for analytic purposes to enable a rigorous conceptual investigation. The demarcation is artificial for the two structures are actually the two sides of one coin. Substantive and syntactic structures are always intricately intertwined and woven into a single fabric of inquiry and knowledge. To separate them in the teaching of science would be a grave mistake. This error is evident whenever children study knowledge claims as a body of dogma——a rhetoric of conclusions——without reference to how such knowledge was achieved.

One way of viewing this dual structure of knowledge is through the use of a metaphor. Figure 3 illustrates an "epistemological top". At its point the "top" spins upon events in the world. Events are the basic phenomena of interest from which all knowledge is produced. All empirical sciences and all human knowledge are interpretations of events—sometimes transformed beyond recognition—but yet originating in events in the real world.

Philosophy of Knowledge

Conceptual framework   **Methodological framework**

                                              **Transformation
                                              of records
Theories   Conclusions   (graphs, etc.)**

                                              **Selection, Ordering and
                  Interpretation   Categorization
Propositions   and data   (tables, etc.)**

                  Questions and
                  Investigation   **Records of Events
Concepts   (Measurement, etc.)**
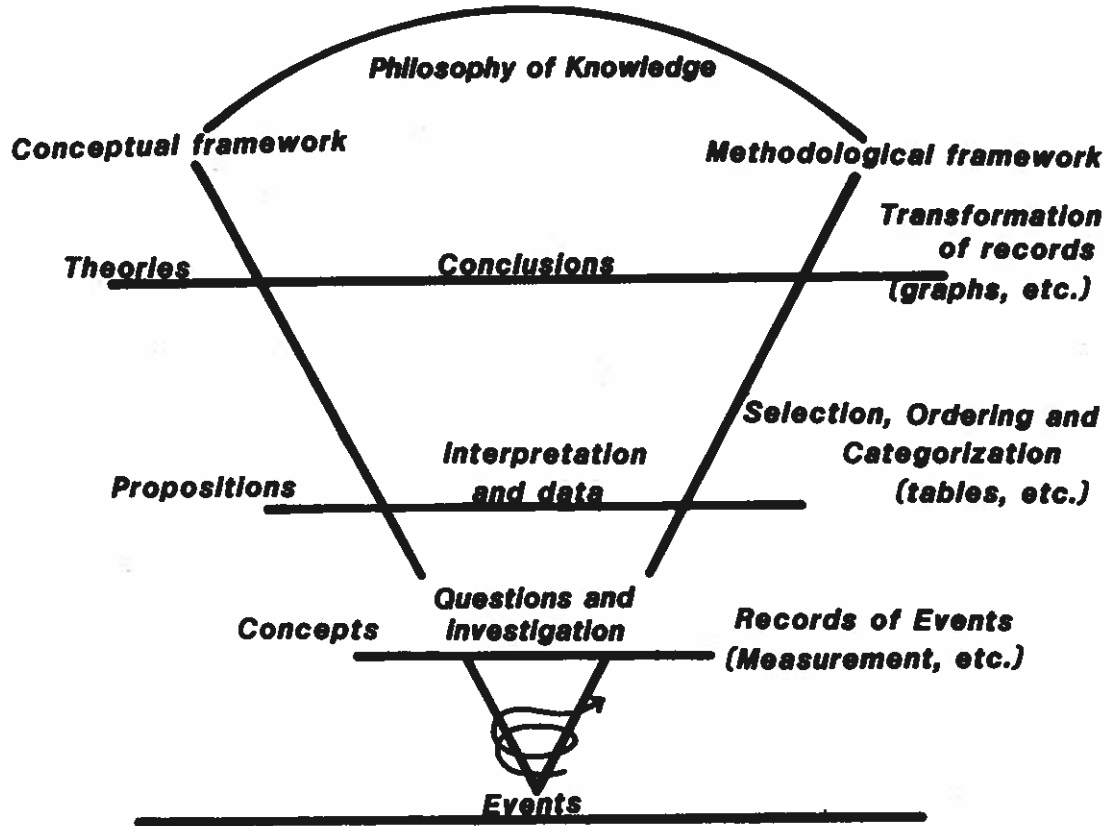
                  Events

The left arm of the top is a conceptual structure which articulates regularities in objects and events in the world, upon which the top rests. The right arm is the methodological structure used to investigate events. Often in the empirical sciences, scientists create events in their laboratories, making them happen or controlling them, and then proceeding with investigation. Other scientists try to unobtrusively observe events that occur naturally through "field studies". Always, however, the creation of knowledge involves an interplay between the two sides of the "epistemological top". These are, after all, the substantive and syntactic structures which constitute the two facets of knowledge.

The metaphor of a top helps to emphasize the inseparability of concepts and methods. Because the separation of substantive and syntactic structures is impossible——only an illusion——what happens when we set the top in motion is the blurring of these left-right distinctions into one unified whirling structure. As soon as the "top" stops, we can distinguish its two sides as static entities——but it topples over. Nevertheless, the endeavor to clarify concepts, propositions, and theories (substantive structure), on the one hand, and the invention of new ways to generate, transform, and analyze data (syntactic structures) on the other, are central to science. They enable investigators to continue their investigations with more precision and therefore more fruition. These activities of analysis are perhaps even more important to those who teach science. So we momentarily stop the spinning top and hold it for purposes of examination.

The Purpose of Schooling

The general curriclum (GC) resides in the disciplines that we wish to teach. This is the case if and only if our intention is to transmit large bodies of disciplined knowledge to students. Some educators would disagree with the assumption that we need to transmit disciplined knowledge at all. In fact, there is no consensus concerning what the appropriate function of schools ought to be. Opinions range from those who see schools almost as day care centers——places where youngsters can be looked after and kept off streets and out of job markets; to those who see schools as places where individuality can be fostered——environments for becoming self-actualized; to those who see schools as substitutes for church and family——places where youngsters become indoctrinated with social mores; and the list goes on.

Robert Ebel (1972) has analyzed the question "What are schools for?" Most science educators would hold a traditional viewpoint, closely aligned with Ebel's conclusions that schools are for transmitting conceptual content. Schools are institutions that should be designed to enable the education of youngsters; their function should be to provide students with their cultural heritage, enabling students to function independently as responsible, thinking citizens. By providing students with the conceptual frameworks that comprise scientific disciplines, we simultaneously provide students with a large portion of the cultural heritage of western civilization. The atmosphere in which all school learning occurs should encourage a love of learning.

Proponents of recent curriculum movements which are moving away from traditional education may disagree with the concepts of "curriculum" and "instruction" that I propose. The reconceptualists, for instance (see Pinar 1974), are critical of production models and thus will reject this model. But, with the current failure to produce any reasonable, coherent alternatives, I personally see no alternative, at this point, to the production models. Yet I must stress that my emphasis on subject-matter in adhering to traditionalism is not an endorsement of the traditional approaches to either curriculum development or instructional planning, which did and still do, encourage factual and rote learning. On the contrary, I feel that much of the teaching and learning carried on in schools today is wasteful human enterprise, precisely because of an inadequate conception of what knowledge is. An adequate philosophy of science, in my opinion, is a sine qua non for curriclum development and instructional planning. The approach taken in this paper, while emphasizing subject-matter, has a more appropriate epistemological underpinning that has been lacking in most doctrines associated with traditional schooling. Additional dimensions which are of tremendous importance are those associated with affect and experience. These dimensions must be further investigated and integrated into the current model.

The importance of affective outcomes notwithstanding, my basic assumption is that one of the major aims of schooling is to bring about an equivalence between conceptual structures inherent in disciplined knowledge, and the cognitive structures of students. Even the neglected affective areas such as moral education demand the acquisition of large bodies of knowledge underlying problems that need to be solved and the moral decision-making process (Pines 1979). Affective education has suffered by disassociating itself from the congitive domain. Fads such as "values clarification" and "moral development" are conceptually vague and have been most perniciously harmful in their frequent pretense of "moral education".

One upshot of education assumed in this paper, then, is a transformation of the student's cognitive (psychological) power (CP) into the logical power (LP) inherent in the discipline. This task of schooling can be summarized as CP——LP which necessitates the acquisition of a large body of conceptual, disciplined knowledge. Without accepting this assumption (illustrated to the left center of Figure 1, under the arrow between epistemology and GC), the whole epistemological analysis that follows is fatuous.

The General Curriculum: An Epistemological Perspective

In order to teach a scientific discipline, one needs first, when preparing a curriculum, to "unpack know

ledge" (Gowin 1976). Every piece of knowledge, every established claim (often called "facts"), can be analyzed to reveal how it was established. A discipline is basically a structure of knowledge claims, expressed within an intricate network of concepts. Thus, we can speak at the micro-level of "unpacking" a single knowledge claim and at the macro-level, of "unpacking" a whole discipline. "Unpacking" knowledge means going back to primary resources, research reports and other scholarly papers, and examining how the research was accomplished and how knowledge claims were established.

Gowin (1976) has proposed a method for "unpacking" knowledge. This procedure can be used in the analysis of any primary resource material. Essentially, his guidlines include an analysis of five major questions, the G-5:

1. What is the telling question (TQ)?
2. What are the key concepts (KC)?
3. What methods of investigation are employed (M)?
4. What are the knowledge claims (KnC)?
5. What are the value claims (VC)?

All of these questions, we shall see, are related to one another; yet they can be answered separately. Answering the first question highlights the phenomenon of interest (P of I). That is, a TQ demarcates and illuminates a P of I, one that the study purports to investigate. It has been said that a fool can ask seven-fold more questions than seven wise men could answer, but only a wise man can ask a telling question. Answering TQs adequately leads to the creation of new knowledge by illuminating of a P of I. All knowledge claims can be articulated as answers to telling questions.

TQs are not always discernable in research papers. Sometimes the TQs must be inferred from the KnCs. However, there can be no study, no discovery, and no new knowledge without a corresponding TQ (even if the TQ is articulated post hoc from hindsight, as is sometimes the case). Thus the first step in the analysis of a primary resource is the illumination of the P of I by clearly articulating the TQs.

The key concepts (KC) are those that hold the inquiry together. KCs not only guide inquiry, but serve to interpret the research results. TQs, for example, always include KCs. In each TQ, one can usually find at least two KCs. These KCs need to be either specifically defined by the author (if they have not been used before in a similar way) or referenced to other resources where the meaning of the concept has been clearly stated. When KCs are vague, interpretations and derived conclusions will be correspondingly opaque, and the research will be worthless.

The methods of investigation (M) comprise the syntax of inquiry. In the "unpacking" of knowledge, one must always investigate what methods were employed in establishing knowledge. Most laboratory research is empirical, utilizing a wide gamut of technologies. Nevertheless, not all research need be empirical. Philosophical investigations, literary methods, art analysis, historical analysis, mathematical derivations and so on, are all acceptable methods in the creation of knowledge. Only when one has a firm grasp of the methodology of investigation employed in a particular study, can an estimation of the validity of KnCs generated by that study be evaluated. Thus Ms play a fundamental role in estimating the worth of knowledge.

KnCs are research findings: What most people call "facts". KnCs should provide answers to the TQs. KnCs come in a variety of forms and are inextricably related to the TQs, Kcs, Ms, and value claims (VCs). In fact, KnCs can be TQs to be investigated in future studies; or new concepts invented as a consequence of the present study; or new methods that can be used in future research. KnCs are the upshot of all scientific research——they are the knowledge created. The analysis of the concept of "fact" is beyond the scope

of this paper but will be attempted elsewhere (Pines 1981a).

Finally, VCs are judgments concerning the worth of some aspect of the inquiry. The following statements concerning a piece of research are all varieties of VCs: Important TQs to be answered; powerful concepts invented; cleaner, easier and/or cheaper methods; KCs which are applicable to the solution of important contemporary problems; and so on. There is no clear cut boundary between KCs and VCs. In fact, some KCs are articulated in the form of VCs. Nevertheless, VCs differ from KCs in that they bring to surface biases that exist in all research. By virtue of the fact that a researcher chooses to ask one TQ and not another, certain values already are implied.

The Paraphernalia of the Unpacking Process

At the conclusion of "unpacking" a primary resource, several products are in hand: "Concept maps", in which the analyzer attempts to define the relationships between KCs and other subordinate (and superordinate) concepts; and "fact maps", which show the pathway of an investigation——the syntax of inquiry—— the thread from the TQs to the KnCs and VCs. These materials which slowly accumulate when a large corpus of current disciplined research in a specific field is analyzed, embody the "structure of the discipline". And, if our purpose is to teach that body of knowledge to students, then these "unpacking paraphernalia" constitute the GC; that is, what we want the students to come away with.

The "unpacking" of knowledge appears on the left side of Figure 1. An arrow, incorporating under it the stipulation that one purpose of education is the transformation CP—$\rightarrow$LP, points to the label GC. Another arrow points to the "evaluation process", simply because products such as "concept maps" can serve to guide evaluation. We will have more to say about the process of evaluation when we deal with the psychology of meaningful learning in the next section.

Grasping the "syntax of inquiry" (Schwab 1960, 1962, 1964) will provide students with the flavor of science as continuously changing bodies of knowledge. Conceptual structures, thus, change over time; they evolve (Toulmin 1972). Toulmin captures the evolutionary, changing, non-static structure of conceptual knowledge in his epigraph which is taken from Kierkegaard's The Concept of Irony: "Concepts, like individuals, have their histories, and are just as incapable of withstanding the ravages of time as are individuals" (p. x).

Curriculum developers and teachers must understand the importance of helping students grasp the process whereby new knowledge is created. This is shown on the extreme left of Figure 1, where we see a continual evolution in the structures of knowledge (and within the structure of specific disciplines). Therein lies the rationale for continuous updating of the curriculum and the rationale for indulging in the history of science as a way of showing from whence our contemporary conceptual frameworks evolved. Without an approach which focuses upon the methodology of scientific inquiry and upon the consequent imminent changes in conceptual structures, the teaching will degenerate into what Schwab (1961) calls "a rhetoric of conclusions". It follows then that it is necessary to provide a certain type of instruction when teaching science (or other subject matters). If all knowledge is constantly evolving, we need to place emphasis on understanding the process of the creation of knowledge. Teaching cannot be dogmatic, stressing immutable facts. Rather, the process must be open-ended, an inquiry process.

Although "instruction" will be part of the discussion in the next section, it is timely to stress what Schwab (1962b) calls the "teaching of science as inquiry". This is depicted at the bottom of Figure 1 with an arrow leading from the "changing nature of knowledge and evolution of conceptual structures" (see Toulmin 1972) to the "teaching of science as enquiry" (see Schwab 1962b).

Teaching science as inquiry in no way entails that students need to discover the subject-matter for themselves. This would be both inefficient and impossible. I would not need to stress this point, were it not for the generally accepted, yet unwarranted, assumptions upon which much contemporary education theory is based: That all reception learning is rote, and that only what the child discovers for himself can be meaningful (Piaget 1973). Ausubel (1963, 1968) has attempted to show that the reception-discovery and rote meaningful learning continuums are two different independent continuums that have been confounded. These two dimensions serve as a basis for Figure 4, which shows why meaningful-reception learning is most appropriate for schooling. Most learning in schools is by necessity reception learning;
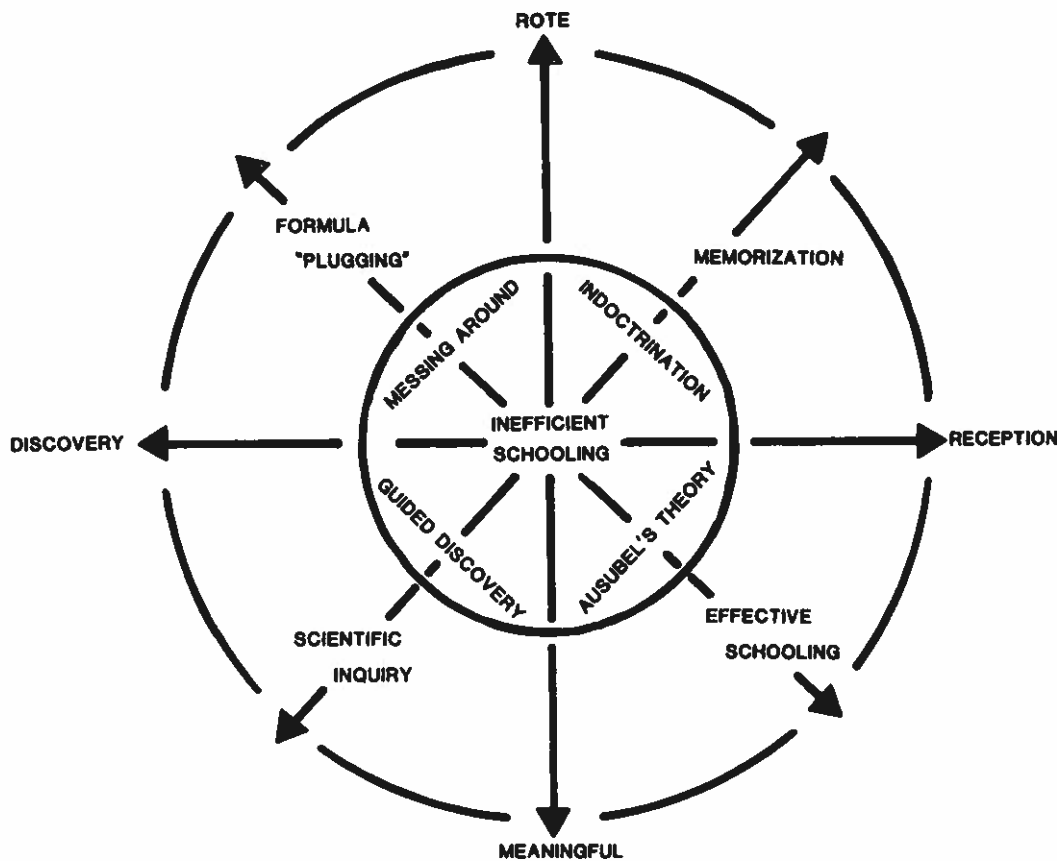
it can and should be meaningful, however, (Pines 1981b). Moreover, as I have already emphasized, such learning can best be accomplished by open-ended, non-dogmatic instruction.

An additional point that warrants mention before closing discussion on epistemology is the influence of society on the production of knowledge. Not only does the scientist (or scholar) work within certain conceptual and methodological restrictions, illuminated in an historical approach to epistemology, but peers and society at large also play a crucial role in influencing research. Some types of research are considered more prestigious than others; more valuable than others; more cost-effective than others; more trivial than others. More and more we see the influence that funding agencies have in determining research directions. Thus the politics, economics, and sociology of research are important determinants of what research gets accomplished. In short, both the history and sociology of science (Merton 1973)(and other fields) must be emphasized in the evolution of knowledge.

The Process of Meaningful Learning——A Psychological Framework

In the previous section I outlined a few epistemological issues, and claimed that the general curriculum (GC) resides in the structure of knowledge. Now I wish to turn to the psychology of the learning process to show that instruction depends upon the existing cognitive-psychological structures of the learners. Furthermore, although the GC resides in the disciplines, the actual curriculum (C) is dramatically influenced by the existing cognitive structures of these learners, by what the individual student already knows. In other words, GC is transformed into C only subsequent to taking the learners' prior knowledge (PK) into account. This is shown in the center of Figure 1. However, as in the previous section, we will begin at the top of Figure 1, and work our way down; this time on the right side. We are now dealing with the learner, whereas in the previous section, we dealt with the subject-matter.

We recognize individual cognitive differences that stem from at least two different sources: 1) the concepts in cognitive structure, "the stuff or furniture of the mind", and 2) the processes used in internalizing and applying what is known, the "glue of the mind". These two facets of idiosyncratic knowledge are what Simon (1969) refers to as "Babbage's Store" and "Babbage's Mill" (see p. 91), respectively. The psychological or cognitive structure (CS)——what a person knows——provides a potential cognitive power (CP). We say 'potential' because unless this knowledge can be applied to probelm-solving and/or utilized for future learning, then this CP remains unrealized. The information-processing skills then transform potential CP into actual CP. CP, subsequent to the meaningful internalization of a disciplined body of knowledge, should reflect the LP inherent in that discipline. Much research in cognitive psychology either focuses upon the conceptual structure while totally ignoring the information-processing, or, conversely, focuses upon information-processing while ignoring conceptual structures. In my opinion, for a research program to be sufficiently eclectic to encompass all cognition, it must concentrate simultaneously upon cognitive storage and upon the processes of information-processing.

One of the major problems today in cognitive psychology lies in the areas of evaluation[2] and measurement, specifically, the determination of prior knowledge. How does one find out what a student knows? One cannot trephine the skulls of children and look inside (Hudson 1966). I have dealt in depth with, and offered alternatives to, current associationistic methodologies (e.g. Shavelson 1974a,b) used to evaluate, assess, and determine the existing knowledge structures of individuals (Pines et al. 1978). More recently, Stewart (1979) has summarized some of these same problems inherent in associationistic techniques used to determine both cognitive and content structures.

In the evaluation of cognitive structure for purposes of curriculum development and instructional planning, one should be guided by the structure of the discipline that one wishes to teach. For example, a "concept map" (CoM) which depicts the structure of knowledge in genetics would be used in guiding the evaluation of what the learners already know relevant to genetics. This is illustrated in Figure 1 by the arrow from CoM on the left, to "evaluation process" on the right.

The evaluation process consists of both data collection and interpretation. For lack of a better way to express the outcome of the evaluation of cognitive structure, I employ the hypothetical construct labeled "cognitive map" (CM). This theoretical construct is used to specify a description of a student's existing relevant cognitive structure. Just as a CoM theoretically specifies the substantive structure of a discipline, so too, the CM theoretically depicts the structure of knowledge within a student's mind.

The process of "cognitive mapping" wich produces CMs is also, at this time, theoretical. No one, to my knowledge, has successfully constructed accurate, complete cognitive maps. Nevertheless, it serves as an ideal toward which investigators, dealing with the measurement of individual differences, should labor.

CMs should not only include relevant concepts and their relationships, but also important existing misconceptions (MCs). I have shown elsewhere (1977, 1978a) that existing MCs can inhibit appropriate learning, and thus, the rectification of MCs is an important curricular objective. One would not err in specifying the role of science education as inculcating an appropriate attitude toward science, the teaching of new concepts, the elaboration of existing ones, as well as the clarification, rectification, amelioration, and elimination of existing misconceptions.

The CM (which includes MCs) is a representation of a student's relevant prior knowledge (PK) or cognitive structure (CS). And, conversely, the student's PK or CS is described and represented in the hypothetical CM. This is shown by the double-headed arrow in the right center of Figure 1.

Subsequent to instruction, if learning has taken place, the CS changes. This should be detectable in subsequent evaluations and CMs. The ways in which learning occurs, bringing about changes in CS, are within the providence of learning theory. I have found David P. Ausubel's (1963, 1968; Ausubel, Novak, and Hanesian 1978) theory of meaningful learning to be insightful and useful. The theory deals with learning as, I believe, it should occur in schools. Thus Ausubel (and one of his major interpreters, Novak; see Novak 1977) is referenced on the right side of Figure 1. Again, as on the left side of Figure 1, where we saw a continual change in disciplined knowledge subsequent to research, we see a continual change in cognitive structure (CS) as a consequence of meaningful learning. The difference between these two processes of conceptual change, in a discipline, on the one hand, and in the CS of a novice, on the other, is that the latter is a more rapid process. The former is analogous to phylogenetic change, while the latter is ontogenetic. With the exception of the creation of knowledge at the forefront, the cutting edges of disciplines, and the consequent "explosion of knowledge", much of disciplined knowledge can remain quite stable over long periods of time between scientific revolutions (Kuhn 1962). Correspondingly the CSs of adults also remain stable. Becoming an expert has the dual effect of providing more cognitive power while establishing a certain stability that is resistant to change. A grasp of the syntax of inquiry can somewhat help avoid irrational adherence to unsubstantiated dogma. Adults who have been indoctrinated to accept upon faith, without critical reflection, will often be impervious to rational explanation.

The psychology of learning is a topic far beyond the extent of this paper. Just as on the epistemological side of the map, I could not delve too deeply into the philosophy of science, I cannot proceed here as far as necessary into theories of learning. The following exposition, therefore, is intended only to show how learning might take place and alter existing cognitive structure. The emphasis on prior knowledge is crucial to both curriculum development and instructional planning:

> The essence of the meaningful learning process is that symbolically expressed ideas are related in a non-arbitrary and substantive (non verbatim) fashion to what the learner already knows. By substantive and non-arbitrary relatedness we mean that the ideas are related to some specifically relevant existing aspect of the learner's cognitive structure...
>
> (Ausubel, Novak, and Hanesian, 1978, p. 41)

Ausubel goes on to explain this process of meaningful learning by elaborating the different modes of "subsumption" that he hypothesizes do exist. The process of meaningful learning, as opposed to rote learning, can also be succinctly summarized in the following notation:

$$A + a_1 \longrightarrow A^1 a_1{}^1 + a_2 \longrightarrow A^2 a_1{}^2 a_2{}^1 + a_3 \longrightarrow A^3 a_1{}^3 a_2{}^2 a_3{}^1 + \ldots .$$

$$\ldots + a_n \longrightarrow A^n a_1{}^n a_2{}^{n-1} a_3{}^{n-2} \ldots . . a^2{}_{n-1} a_n{}^1$$

This formula describes the differentiational concept "A" in cognitive structure. A is a "subsumer" in CS that becomes modified through the process of meaningful learning to A^1, A^2, A^3, ...A^n, while simultaneously modifying the subordinate concepts a_1, a_2, a_3,...a_n, which become subsumed under it. This type of progressive conceptual differentiation suggests certain corollaries:

1. Meaningful learning depends upon the availability of subsumers in cognitive structure. Thus the GC must be modified depending upon what the student knows. What the student already knows, we cannot teach because it is known; and what we can teach highly depends upon what is known.
2. The process of meaningful learning demands the active participation of the learner. This is not simply an accretion of information, but an active modification of what is known and what is learned.
3. Concepts are never acquired in any finalistic fashion; rather, they become progressively differentiated with experience and time. It is effective to use examples in attempting to teach a concept meaningfully, to facilitate progressive differentiation.
4. The better acquainted that students are with the examples used, the easier it will be for them to grasp the major concepts that we wish to teach.

These points are of profound significance in curriculum development and instructional planning. Although the GC resides in the discipline, the actual curriculum (C) is highly dependent upon PK: Instruction, if it is to be efficient and effective, must be to a large extent dictated by the students' PK. The continual process of meaningful learning demands that teachers perpetually re-evaluate their students' existing PK, so that they can be effective in their curriculum development and in the choice of their instructional content.

The psychological side of Figure 1 can be summarized as follows: The most important independent variable influencing the dependent variable of learning is PK. Relevant subsumers in CS facilitate meaningful learning, while MCs can inhibit or impede learning (Pines 1977, 1978a).

A Synthetic Framework for Curriculum Development and Instructional Planning

The curriculum (C) is derived from the general curriculum (GC) by taking into account the student's prior knowledge (PK). C can be summarized by the equation at the bottom of Figure 1:

$$C = (GC - PK) + (MC) + E.$$

Comparing GC, which resides in the discipline, with the students' PK, will reveal discrepancies. If no discrepancy exists, CS is congruent with the contemporary structure of the discipline, the person is an expert, and therefore, needs no instruction. If a discrepancy does exist——as it does with a novice or neophyte——than GC — PK will specify part of this discrepancy. PK is subtracted from GC because one cannot learn what one already knows.

Two additional factors need to be taken into account when formulating C. Not only do pupils need to learn what they don't know (Viz. GC — PK), but MCs also need to be clarified or eliminated. Thus the equation must be modified to: $C = (GC - Pk) + MCs$. The second factor is an error term (E) which incorporates within it errors in curriculum selection. The error may arise, as it now often does, from a lack of ability to clearly evaluate existing cognitive structure (PK), or from a poor analysis of the structure of knowledge (i.e., epistemological inadequacy). The E factor should be minimized. The larger the E factor, the less appropriate the curriculum. The quality of a curriculum then can be theoretically estimated by the magnitude of E.

The final equation, $C = (GC - PK) + (MC) + E$, is fully explained in the center bottom portion of Figure 1. C has been defined by Johnson (1967, 1977) as a structured series of intended learning outcomes

(ILOs). These ILOs are, in my model, a discrepancy between GC and PK, with additional MCs that must be rectified. GC, in the model, is the "total structure of the discipline" whereas PK signifies "portions of the structure of the discipline that the learner already knows" (i.e., "achieved learning outcomes (ALOs)"). To this portion of the body of content which is unknown to the student, we add the factor MC that signifies specific misconceptions in the learner's cognitive structure which are not congruent with the logical structure of the discipline, and thus impede or inhibit future learning and are of limited applicability. The clarification or elimination of these misconceptions constitutes a set of ILOs.

For purposes of simplification, I have dealt with the single C. This situation exists only in individualized instruction, or in a completely homogenous classroom (a non-existant situation). The rule is thus not the development of a single curriculum, but of multiple curricula. This task can be somewhat facilitated by encouraging students to speak more often, thereby revealing their existing cognitive structures. In developing curricula and in planning instruction, the teacher should always keep in mind that the single most important resource (and limitation) available is what the student brings to the classroom——what the student already knows. A constant dialogue between the students and the teacher, therefore, enables the teacher to constantly update the curriculum and to plan instruction that will meet the needs of students as individuals. Curriculum development and instructional planning, in light of learning theory, are ongoing processes (Pines, 1978b).

Instruction

The best way to distinguish the concepts of "instruction" and "instructional planning" from "curriculum" and "curriculum development" is to first speak about content.

Curricular content is content that we want the students to learn. Thus, ILOs constitute curricular content. Instrumental content, on the other hand, is content used to facilitate the acquisition of the curricular content. No attempt is made to teach instrumental content per se, nor for the students to retain purely instrumental content. An example of instrumental content is the use of a tune or melody to teach the alphabet. The curricular content is the alphabet, but we use the tune or melody to facilitate learning and retention. All examples used by the teacher in explaining or illustrating a concept or skill are instrumental content.

Often no clear distinction exists between curricular content and instrumental content. For example, certain hierarchically organized skills demand a slow accumulation of prerequisites before the terminal task can be performed (Gagné 1970). In such cases, what is curricular content at one point in time, later becomes instrumental. To take this argument to its extreme, all schooling and all learning is instrumental in preparing the individual for future learning. Before a certain body of knowledge is learned, however, it may be curricular content.

One characteristic of curricular content (any ILO), is that it emerges from the structure of knowledge to be learned. In teaching a specific ILO there are many different examples that can be employed to facilitate meaningful learning. Concepts, for instance, have extensions. Any members of an extension can be used to illustrate, demonstrate, and exemplify the concept. Some members of the extension may be better examples, more prototypical, (Rosch 1973) than others. An eagle, or a sparrow, for instance may be more prototypical of the concept of "bird" in most American schools, than an emu or a penguin. Prototypicality, however, is only one way of estimating the appropriateness of a teaching exemplar. From an instructional point of view, familiarity is of much more importance than prototypicality. Thus the best exemplars to use are those with which the students are acquainted; those that constitute part of their existing cognitive structures.

For most ILOs, there are numerous exemplars that are potential instrumental content. The most effective way, from a psychological point of view, to choose instrumental content, is by finding out what the student already knows and using familiar examples in instruction. If we choose examples based on what students know, then instruction will be targeted to their cognitive structures, and meaningful learning is more likely to result.

We can summarize then by saying that, although the curriculum resides in the discipline, the choice of instrumental content is determined by the existing cognitive structures of the learners. This principle is the basis for the distinction between curriculum and instruction. The curriculum developer is predominantly functioning within an epistemological framework: "unpacking knowledge", constructing "concept maps" and "fact maps", deciding what content is central to that domain of knowledge and inquiry. The instructional planner is functioning within a psychological framework: evaluating students' prior knowledge, constructing "cognitive maps", and determining what instrumental content will work best. Both the curriculum developer and the instructional planner need a profound knowledge of the subject-matter domain; they must be experts in the discipline from which the curriculum is being developed.

Curriculum and instructional development may be responsibilities of the same person. Because of the close interaction between teachers and their students, the most likely candidates for instructional planning are obviously teachers. The only factors currently prohibiting or limiting many of these same teachers from developing their own curricula are either political factors or educational ones: Many teachers lack expertise in their own disciplines.

Looking again at Figure 1 (lower right-hand corner), the C acts as a "guide to the pool of potential instrumental content". The actual selection of instrumental content is made on the basis of the "relevant prior knowledge (PK) or the relevant existing cognitive structure (CS)" as represented in the hypothetical "cognitive map (CM)" which "includes misconceptions (MCs)". These, along with a host of other frame factors, constitute "instructional planning", which, in turn, yields an "instructional plan".

The final step is "instruction". Instruction relates back to the epistemological side of Figure 1. "Teaching science as enquiry" (Schwab 1962b) is necessary, if we wish to portray the true nature of scientific knowledge. Instruction is also related to the psychological side of Figure 1, in that it should produce modifications in the existing CS's, consequent to meaningful learning.

A Note on Teaching

In this paper the concepts of "teaching" and "instruction" have been used. It is common in the literature to find these two concepts used interchangeably. However, it might be useful to distinguish "teaching" from "instruction", in order to afford greater conceptual precision. The concept of "instruction" is broader than the concept of "teaching". "Teaching" is but one kind of "instruction". The implementation of a curriculum is achieved through instruction. Instruction can, however, be accomplished in many ways: With an instructor, a machine, through self-study, and so forth.

"Teaching" implies a sharing of meaning between a teacher who is an expert in some domain and a student who is less of an expert or is a novice. Thus "teaching" can only be accomplished by a teacher. The teacher intends to share meaning, and, if successful, the learners share that meaning, or portions of it, and they learn. Therefore, the term "teaching machine" is a misnomer; machines can instruct—but they cannot teach. The relationships between "education", "instruction", and "teaching" are shown in the Venn diagram below:
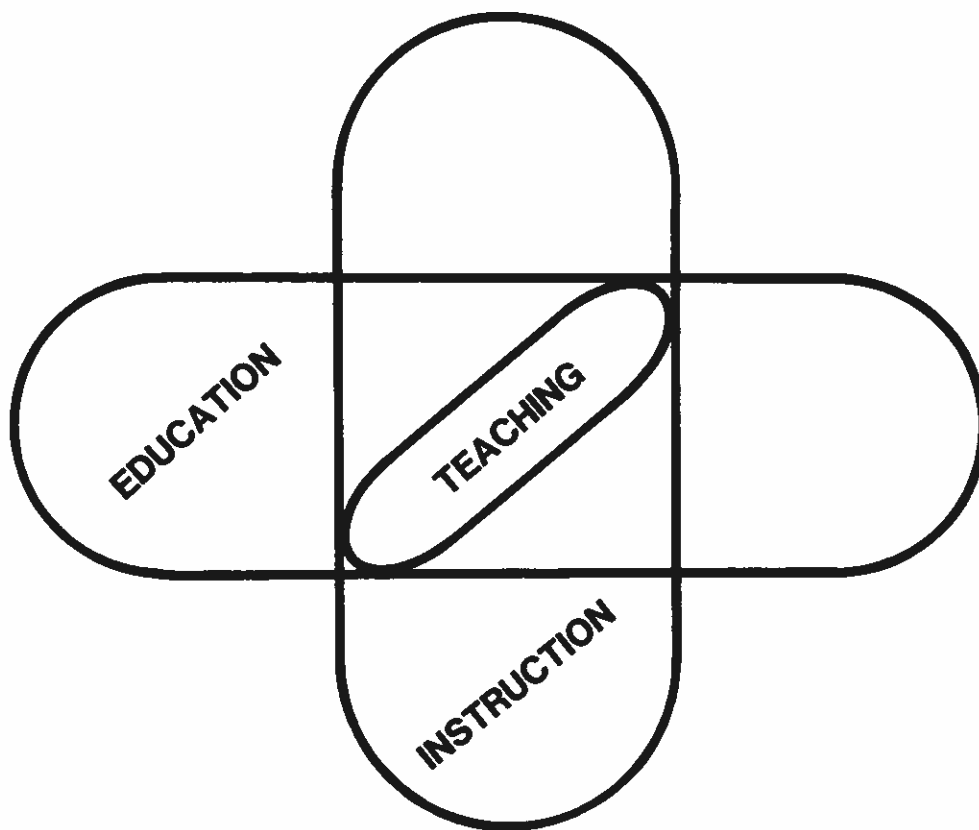
All teaching is both educational and a form of instruction. Not all instruction, however, can be considered either teaching or education. Much instruction in the army, for instance, is targetted at training to act proficiently without thinking; I would not consider this either as "teaching" or "educational". A further analysis of these concepts, although warranted, is beyond the scope of this paper.

Conclusion

In this paper I have put forth a model of curriculum and instruction (C & I) that synthesizes several theories. The model is outlined in Figure 1 of this paper: On the left is an epistemological framework; while on the right is a psychological framework. I have argued that the general curriculum (GC) resides in the "structure of knowledge". An attempt was made to illustrate how GC can be excavated from a discipline by "unpacking knowledge". "The most important single factor influencing learning is what the learner already knows" (see Ausubel, 1963, 1968, p. vi) Thus it is of fundmental importance to estimate prior knowledge and to elucidate existing misconceptions.

The curriculum is the discrepancy between GC (that is, what the student should know subsequent to successful instruction) and what the student already knows (PK). An equation for curriculum was developed:

$$C = (GC - PK) + (MC) + (E).$$

The necessity to minimize error (E) was emphasized. Stress was placed upon the importance of rectifying misconceptions (MCs) which can otherwise inhibit and impede future learning.

Finally, an attempt was made to clarify several concepts which then afford a more precise use of C & I terminology. These concepts include "curricula" and "instrumental content", "education", "instruction", and "teaching". Curricular content is derived from the structure of disciplined knowledge and is, therefore, an epistemological issue. Instrumental content, used in instruction, is derived from considerations of what the learner already knows, and is, therefore, a psychological issue.

FOOTNOTES

1. Abbreviations Used

ALO —— Achieved Learning Outcome
C   —— Curriculum
CM   —— Cognitive Map
CoM   —— Concept Map
CoS   —— Conceptual Structure
CP   —— Cognitive Power
CS   —— Cognitive Structure
E   —— Error
F_1, F_2 —— Terms in genetics used to designate generation of offspring
GC   —— General Curriculum
I   —— Instruction
ILO   —— Intended Learning Outcome
KC   —— Key Concept
KnC   —— Knowledge Claim
LP   —— Logical Power
LS   —— Logical Structure
M   —— Methods or Methodology
MC   —— Misconception
P   —— Term in genetics used to designate the first parental generation
PK   —— Prior Knowledge
P of I —— Phenomenon of Interest
TQ   —— Telling Question

2. The concept of "evaluation" is very broad (Pines 1980). The reader is referred to Figure 2, p. 90, for a more comprehensive conception of evaluation. Here we will deal with only one aspect of evaluation.

REFERENCES

Ausubel, D.P. *The Psychology of Meaningful Verbal Learning: An Introduction to School Learning.* New York: Grune and Stratton, 1963.

Ausubel, D.P. *Educational Psychology: A Cognitive View.* New York: Holt, Rinehart, and Winston, 1968.

Ausubel, D.P., Novak, J.D. and Hanesian, H. *Educational Psychology: A Cognitive View (2nd Ed.).* New York: Holt, Rinehart, and Winston, 1978.

Ebel, R.L. "What Are Schools For?" *Phi Delta Kappan,* 1972, 54 (1).

Gagne, R.N. *The Conditions of Learning.* New York: Holt, Rinehart, and Winston, 1970.

Gowin, D.B. "The Domain of Education." Unpublished draft manuscript, Cornell University, 1976.

Hudson, L. *Contrary Imaginations.* London: Mathuen, 1966.

Johnson, M., Jr. "Definitions and Models in Curriculum Theory." *Educational Theory,* 1967, 17, 127-169.

Johnson, M., Jr. *Intentionality in Education.* Albany, New York: Center for Curriculum Research and Services, 1979.

Kuhn, T.S. *Structure of Scientific Revolutions.* Chicago: University of Chicago Press, 1962.

Lundgren, U. *Frame Factors and the Teaching Process.* Stockholm: Almgvist and Wiksell, 1972.

Merton, R.K. *The Sociology of Science: Theoretical and Empirical Investigations.* Chicago: University of Chicago Press, 1973.

Norman, D.A., Rumelhart, D.E., and the LNR Research Group. *Explorations in Cognition.* San Francisco: Freeman, 1975.

Novak, J.D. *A Theory of Education.* Ithaca, New York: Cornell University Press, 1977.

Piaget, J. *To Understand is to Invent; The Future of Education.* New York: Viking, 1973.

Pinar, W.F. (Ed.) *Curriculum Theorizing: The Reconceptualists.* Berkeley, California: McCutchan, 1974.

Pines, A.L. "Scientific Concept Learning in Children: The Effect of Prior Knowledge on Resulting Cognitive Structure Subsequent to A-T Instruction." Unpublished Ph.D. dissertation, Cornell University, 1977.

Pines, A.L. "Scientific Concept Learning in Children Subsequent to A-T Instruction: The Effect of Prior Knowledge on Resulting Cognitive Structure." ERIC Reports No. ED 161770, 1978a.

Pines A.L. "Teaching, Interviewing, and Learning Theory." ERIC Reports No. ED 16177, 1978b.

Pines, A.L. *A Conceptual Approach to Moral Education.* Farmington, Maine: UMF/Greenville Teacher Corps Project, 1979.

Pines, A.L. " Model for Program Development and Evaluation: The Formative Role of Summative Evaluation and Research in Science Education." Submitted to ERIC, 1980.

Pines, A.L. "A Taxonomy of Conceptual Relationships: A Proposal for Research in Curriculum Development and the Evaluation of Cognitive Structure." Paper presented at the AERA Annual Convention held in Los Angeles, April 13-17, 1981.

Pines, A.L. "The Anatomy of a Fact." Paper proposed for the Curriculum Theorizing Conference sponsored by the *Journal of Curriculum Theorizing,* to be held in Airlie, Virginia, October 7-10, 1981a.

Pines, A.L. "Learning That Happens in the Classroom: Some Types Do But Shouldn't; Some Types Should But Don't." *Learning: The Magazine for Creative Teaching,* In Press, 1981b.

Pines, A.L., Novak, J.D., Posner, G.J., and Van Kirk, J. "The Use of Clinical Interviews to Assess Cognitive Structure." Monograph No. 6, Curriculum and Instruction Series, Department of Education, Cornell University, 1978.

Quilian, M.R. "Semantic Memory." In M. Minsky (Ed.) *Semantic Information Processing.* Cambridge, Massachusetts: MIT Press, 1968.

Rosch, E. "Natural Categories." *Cognitive Psychology,* 1973, 4, 328-350.

Schwab, J.J. "What Do Scientists Do?" *Behavioral Science,* 1960, 1-27.

Schwab, J.J. "The Concept of Structure in the Subject Fields." Paper presented at the 20th Annual Meeting, Council on Cooperation in Teacher Education, Washington, D.C., 1961.

Schwab, J.J. "The Concept of the Structure of a Discipline." *The Educational Record,* 1962a, 43, 197-205.

Schwab, J.J. *The Teaching of Science as Enquiry.* Cambridge, Massachusetts: Harvard University Press, 1962b.

Schwab, J.J. (Supervisor) *Biology Teacher's Handbook.* New York: John Wiley and Sons, 1963.

Schwab, J.J. "The Structure of the Disciplines: Meanings and Significances." in G.W. Ford and L. Pugno (Eds.) *The Structure of Knowledge and the Curriculum.* Chicago: Rand McNally, 1964, 6-30.

Schwab, J.J. "The Practical: A Language for Curriculum." *School Review,* 1969, 78:1-23.

Shavelson, R.J. "Some Methods for Examining Content Structure and Cognitive Structure in Instruction." *Educational Psychologist,* 1974a, 11 (2): 110-122.

Shavelson, R.J. "Methods for Examining Representations of a Subject-Matter Structure in a Student's Memory." *Journal of Research in Science Teaching,* 1974b, 11 (3): 231-249.

Simon, H.A. *The Sciences of the Artificial.* Cambridge, Massachusetts: MIT Press, 1969.

Srb, A.M., Owen, R.D. and Edgar, R.S. *General Genetics.* San Francisco: W.H. Freedman and Co., 1965.

Stewart, J. "Content and Cognitive Structure: Critique of Assessment and Representation Techniques Used by Science Education Researchers." *Science Education,* 1979, 63 (3): 395-405.

Strike, K.A. and Posner, G.J. "Epistemological Perspectives on Basic Orientations Toward Learning." In L.S. Shulman (Ed) *Review of Research in Education.* Itasca, Illinois: F.E. Peacock Publ., 1976.

Toulmin, S. *Human Understanding, Vol. I: The Collective Use and Evolution of Concepts.* Princeton, New Jersey: Princeton University Press, 1972.

Tyler, R. *Basic Principles of Curriculum and Instruction.* Chicago: University of Chicago Press, 1950.

Cognitive Science and a Conceptual Change Epistemology: A New Approach to Curricular Research[1]

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This paper reflects the current shifting in my curricular views. Before writing this paper I had essentially compartmentalized my work in two domains. One was my model of curriculum-instruction—basically a means-end production model. The other was my view of learning and knowing, based on a cognitive psychology and a Kuhnian (or, more precisely, Lakatosian) epistemology. I began to worry about the consistency between the two "worlds." My recent trip to Mexico and, more immediately, the review of research I am enclosing, forced me to confront the inconsistencies. As would be expected, the paper reflects a bit of ambivalence. A conceptual change, I am finding out, is not a linear process, nor is it abrupt. For me, it is a gradual and piecemeal affair. My own conceptual change seems to be a a process of taking an initial step toward a new conception by accepting some of its claims and then gradually modifying other ideas, as I more fully realize the meaning and implication of these new commitments. It is a gradual adjustment in my conception, each new adjustment laying the groundwork for further adjustments, but where the end result is a substantial reorganization. I would expect that this process will also be marked by occasional retreats to older conceptions.

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This is a review of some recent curricular research. But it is not a typical review in any sense of the term. Reviewers of research have used many different approaches. Some attempt comprehensive reviews of general curriculum studies, taking the term "curriculum" in the title of the study to be sufficient evidence that the study is indeed curricular (Walker, 1976). Others have done general reviews but have been indifferent to the question of what will qualify a study as being curricular (Posner, 1979). This review is different, however. First, it is not comprehensive, but instead, is highly focused. Second, it reviews studies not generally considered curricular, studies without "curriculum" in their titles. Much of the research reviewed here has not been published in curriculum journals or authored by researchers typically associated with the "curriculum field." The research reviewed here is often classified as research on teaching, on learning, or in science education. Therefore, part of my task will be to justify them as curricular research. My purpose behind this approach is to describe what I believe to be promising new developments in research that will have a substantial impact on the curriculum, regardless of whether we define "curriculum" as intended learning outcomes, content of instruction, or planned learning opportunities.[2]

I. Psychological and Epistemological Foundations

What these new developments have in common is a general cognitive psychological and, in particular, a cognitive science perspective that emphasizes the information processing characteristics of people and how their existing knowledge (built up from a whole life of experiences) interacts with situational demands and personal goals to affect learning, thinking, and decision making.[3] This perspective is consistent with an epistemological framework that rejects the still dominant empiricist doctrine derived from Francis Bacon and John Locke. The classical empiricist doctrine could be summarized as follows:

1. One learns from sensory experience without the aid of prior conceptions (the "blank slate" proposition).
2. Knowledge is built up from combinations (associations) of sense data, the view being, thus, associationist and inductivist.
3. Rationality consists in identifying means (always connections among experiences) that will lead to the achievement of some end (always either the maximization of pleasure or the minimization of pain).

The empiricist doctrine has found expression in two curriculum-related assumptions about education:

1. There are subject-matter neutral ways of learning from experience.
2. Rationality has a strong means-end orientation.

In contrast, much of the current cognitive science literature is more consistent with an epistemological framework derived from recent development in philosophy of science, often labeled the "conceptual change" viewpoint (Kuhn, 1970; Toumin, 1972; Lakatos and Musgrave, 1970). The conceptual change doctrine can be summarized as follows:

1. Individuals approach any inquiry with a set of prior conceptions.
2. The nature of these conceptions significantly determines the nature and the products of inquiry.
3. Inquiry, rather than being an accumulation of facts, is the transformation of current knowledge.
4. Rationality consists in viewing new problems, ideas, and practices against a background of accepted conceptions and beliefs (i.e., against a tradition or heritage).

Therefore, rationality has to do with how we move from one set of conceptions and beliefs to another. This doctrine gets translated into educational terms by assuming that learning, thought, problem solving, and decision making are closely akin to rational inquiry and that the nature of these processes is, thus, specific to the set of concepts about which the inquiry centers. Therefore, rather than search for subject-matter neutral methods of thought, learning, problem solving and decision making, we should study these processes as they occur in content-specific settings. Second, rational thought, both in planning and in learning, consists in adjusting current practices or beliefs based on perceived difficulties, rather than in beginning each situation anew with a set of objectives (in planning) or new knowledge (in learning).

The growth of cognitive science-oriented research, consistent with new epistemological assumptions has been manifested in three developments in curricular research. I will describe these three developments and then detail three research programs that seem to be exemplifying these new developments.

II. New Developments

Three developments have occurred recently. Each is a response to a perceived current need. Each has been foreshadowed by previous research, culminating in a proposal for re-direction. Two of the three are new research concerns, whereas one is a concern that has experienced much ebb and flow over the years. Since all three are consistent with the conceptual change epistemology, they are highly interrelated and complementary, as will be demonstrated in the next section by a description of three exemplary research programs that each embody the new developments.

The three new developments are as follows:

1. A renewed interest in the content of instruction.
2. A research interest in the way people think, understand, make decisions, and solve problems, i.e., cognitive processing.
3. A broadening of acceptable research methodology to include the methods borrowed from anthropology, cognitive psychology, and computer science.

A. Content of Instruction

Content, it seems, has always been a curriculum concern, at least as far back as the days when Spencer (1860) asked, "What knowledge is of most worth?"; William Torrey Harris (1896) established the content of the textbook as the greatest expression of "the wisdom of the race" (p. 60); and John Dewey (1915) urged the schools to select the most important "experience of the race" (p. 219) for purposes of transmission.

This concern for content has not been without its critics. As a matter of fact, the question of the role of content in curriculum thought has been one of the dominant curriculum issues since the origins of the field. Educational theory, and to a lesser degree, educational practice, has seen the spotlight of both public and professional concern shift from content, to societal needs, to the needs of the student. While the late '50's through the '60's were dominated by curriculum development efforts focused on content reforms, the curriculum research during this period was dominated by many non-content related topics: the organization of teachers (e.g., team teaching, departmentalization) and of pupils (e.g., grouping practices and non-graded appraches) "new" teaching methods (e.g., discovery, advance organizers, open education), and, of course, objectives ("behavioral" and "expressive" ones), with curriculum content largely ignored, except for some comparative evaluation studies. But in the past few years there has been a renewed interest in curriculum content as a focus for research and theory.

In the early 1960's, Bruner (1960) and Schwab (1964), among others, proposed a re-direction of efforts in education toward curricula, based on content and its epistemological structure. Thirteen years ago Johnson (1967) argued that the available cultural content is the only logical "source" of the curriculum. Nine years later, Huebner (1976) asked the field to "accept, as the core of our work, the root meaning of 'curriculum'——that we attend to the course of study." "Our problem," he said, "is to explore the nature of the course of study——the content——and to eliminate the interests which do not bear directly upon this content" (p. 156).

Concurrently, research findings were supporting these theoretical calls for a return to the study of content. The studies of the International Association for the Evaluation of Educational Achievement (EIA) found that the variable termed "opportunity to learn" (or content) was one of the most, if not the most important variable affecting school achievement. Walker and Schaffarzick (1964) added a great deal of empirical support to this growing realization in their review of research. This increased attention on content intensified with the Harnishfeger and Wiley (1976) model of schooling that focuses on the time pupils spend actively learning a particular piece of content (as the single most important predictor of pupil achievement). These two works brought the study of content from the periphery to the focus of attention, particularly among those researchers struggling to find something (anything!) that predicts school achievement. This increased interest appeared particularly appropriate in light of the repeated finding that content, rather than objectives or activities, consumes the largest proportion of teachers' planning time, a finding consistent with those of other researchers (Zahorik, 1975; Goodlad, Klein, and Associates, 1974; Peterson, Marx, and Clark, 1977).

Meanwhile, another group of researchers has riveted their attention on the content of instruction. Young (1971), Keddie (1971), Bernstein (1971), and some other sociologists of knowledge, have argued that content, how it is categorized and how it is distributed among the social classes, is the most pressing problem for researchers. Presumably, it is through this sort of research that educators will understand how the curriculum preserves the dominant social order.

Thus, a focus on content may well serve the needs of researchers and school reformers (be they Neo-Marxist, liberal, or conservative). The same conclusion can be reached with reference to some of the epistemological and psychological comments made earlier. If background conceptions affect the nature and products of inquiry and are at the heart of a concept of rationality, then inquiry and rationality must be described in content specific terms. Similarly, "people's cognition and comprehension seem to operate in terms of specific domains and in specific situations" (Iran-Nejad, 1980, p. 2). Experimental schema-oriented research in cognitive science has shown that what a reader comprehends from a particular piece of textual material depends greatly on the specific domain of knowledge to which the reader relates the passage. Furthermore, the notion of expertise is inherently content specific. People become experts in particular domains, rather than in general. "In short, if common denominators concerning cognitive functioning

n general are to be discovered, they ought to be sought where thay are actually operative, i.e., in terms of specialized domains of knowing" (Iran-Nejad, 1980, p. 3).

3. Cognitive Processes

A second major recent development in curriculum research has been a new emphasis on the individual's thought, understanding, decision making, and problem solving. The assumption is that if we can explain these processes we will better understand the educational enterprise. The shift is from studies of teaching and learning effectiveness to studies of the cognitive processes leading to effectiveness. This shift is based on a view of teaching and learning as rational processes accessible to researchers and fundamental for explaining human behavior. This new emphasis on cognitive processes has found expression in two directions: teacher planning and student cognitive processing.

Teacher planning. Up until 1970 curriculum planning as a process received little attention from researchers. Ten years ago curriculum researchers became interested in the planning process at the national project level.[4] Unfortunately, this interest in large-scale curriculum planning has not been sustained recently. However, perhaps beginning with Jackson's (1965) differentiation of "pre-active" from "inter-active" teaching, the importance of teacher planning has grown. But it was not until 1970, when the first empirical studies of teacher planning were conducted (Taylor, 1970; Zahorik, 1970), that serious questions about the validity of the dominant means-end curriculum development models were raised. It has been only in the past 4 years that researchers have begun to research teacher planning by studying teachers as they plan.[5] Recently, this approach has grown.[6]

Student cognitive processing. The interest in cognitive research has also found expression in the study of student understanding and problem solving. This research represents a shift in interest from the study of learning outcomes (as measured by achievement tests) as the dependent variables, to studies of the processes by which students interpret content and problems, in light of their own, often idiosyncratic preconceptions. The studies have been based on the assumption that knowledge is not simply transferred from the teachers or the textbook to the student (a traditional assumption pre-dating empiricism but consistent with the "blank slate" notion), nor is knowledge derived from raw sensory experience (the class' -1 empiricist assumption), but that the quality and quantity of what students derive from instruction is determined to a great extent by the ideas, beliefs, and skills that the students bring to the situation and that learning and problem solving have few, if any, content-neutral principles. In this view, students actively construct their knowledge and solve problems based on what they already know, on their interpretation of the task demands, and on their ability to access and to manipulate their knowledge. Although Herbart, Piaget, and Bartlett in the 19th and the first half of the 20th centuries all expressed portions or variations of this view, this active, constructivist view of the individual and of learning was out of fashion for most of the 20th century in North America. It was not until the mid-centruy that re-discovery of Piaget (Ripple and Rockcastle, 1964), publication of the first information processing theory of problem solving (Newell, Shaw, and Simon, 1958), and Ausubel's (1963) first book explicating his theory of meaningful verbal learning that this view slowly began to displace the long dominant associatistic and behavioristic views of Thorndike and Skinner. Inspired by the more recent work of Piaget (1963, 1967, 1970, 1971). Newell and Simon (1972) and Ausubel et. al. (1978), some recent research has been attempting to describe in detail the cognitive structures and processes of students.

C. Methodological Re-direction

A third, recent development I want to mention is a methodological complement to the previously mentioned ones. Along with a shifting from an interest in the products of learning, thought, and decision making (e.g., achievement test scores) to an understanding of the processes themselves, there has been methodological shifting from statistical analysis of test scores to analyses of the cognitive processes as they occur.

Various methodological approaches are being used to study education that were generally not acceptable (and in some cases not available) to educational research 10 or 15 years ago. These approaches range from analysis of thinking-aloud protocols (Newell and Simon, 1972) and stimulated recall (Kagan, Krathwohl, Goldberg and Campbell, 1967), to participant observation methods (McCall and Simmons, 1969), and clinical interviews (Piaget, 1929, 1930).[7] These methods have in common that they are highly detailed in their analyses, and, therefore, of necessity, they choose a small number of cases (sometimes, one) to study intensively. Methods for analyzing verbal protocols derived from thinking aloud, recall of thought stimulated by viewing a videotape, and clinical interviews has long been problematic. Although admittedly a rich source of data, the analysis of the data has been accused of being too informal, subjective, and unreliable. Recently, this problem has received some attention, though more work is needed.[8]

III. Three Exemplary Research Programs

Three research programs exemplify these new developments: 1) research on teacher planning; 2) research on the role of prior conceptions in learning; and 3) research on problem solving. I now turn to each of these programs.

A. Research on Teacher Planning

Since Zahorik's (1970) and Taylor's (1970) initial studies of teacher planning, a growing number of researchers have become interested in the "pre-active" phases of teaching. Guided by a growing information processing conception of teaching these researchers have found that the planning aspects of teaching are both accessible to researchers and crucial for explaining interactive teaching behaviors.

What appears to be the most productive line of research on teacher planning is the research program of Yinger, Clark, and Peterson (hereafter labeled "Yinger et. al."). They began with the finding, uncovered by Zahorik (1975) and Goodlad, Klein, and Associates (1974), that teachers spend most of their planning time on content to be taught, and that the smallest proportion of planning time is spent on objectives. Further, Morine (1976) found that teachers pay little attention to alternative courses of action. Yinger et al. considered these findings anomalous because they are inconsistent with what they termed "The Rational Choice Model" and the corresponding curriculum planning model which has dominated curriculum thought since first proposed by Tyler in 1950. These models are depicted in Figure 1.

General Rational Choice Model

1. Set goals ⟶
2. Formulate alternatives
3. Predict outcomes for each alternative
4. Evaluate each alternative in relation ⟶
   to the goals and outcomes.

Tyler (1950)
Curriculum Planning Model

1. Specifying Objectives
2. Select learning activities
3. Organize learning activities
4. Specify evaluation procedures
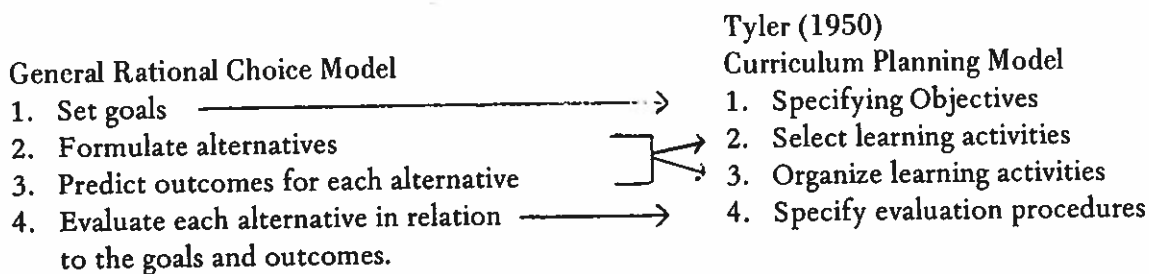
Figure 1: Planning models (after Yinger, 1978)

Based on perceived discrepancies between these models and the behavior of teachers, the Yinger et. al. research program has sought answers to the following research questions:

1. How do teachers plan and what model most accurately represents the process that teachers use in planning?
2. At what levels do teachers plan and how do these levels articulate?
3. How much attention do teachers give to content, instructional processes, materials, pupils, and objectives in their planning?
4. How is teacher planning related to personal characteristics of the teacher?

5. How is teacher planning related to pupil achievement?
6. How is teacher planning related to teacher practice?

Although these questions are diverse, there appears to be a common conceptual foundation for this research program and a common methodological commitment. Since the program is committed to the study of teachers as they actually plan, the methodology tends to favor techniques that allow for this type of study. Although teacher surveys and pupil achievement tests are occasionally employed, these two techniques are clearly subservient to the much preferred technique of 1) thinking-aloud protocols; 2) stimulated recall; 3) journals; 4) interviews, and 5) participant and non-participant observation. Thinking-aloud protocols are transcriptions of a person attempting to verbalize thoughts while thinking. Stimulated recall occurs when a person views a videotape (or some other record of behavior) and attempts to remember what was going on in his or her mind at the time. Journals are diary-like records kept by people about their daily activities. Participant observation differs from non-participant observation in that in the former the observer attempts to become a part of the social phenomenon under study, whereas in the latter the observer tries to be as unobtrusive and as objective as possible.

Turning from the methodological to the substantive, the Yinger et. al. research program seems to be guided by the so-called "Yinger process model" of planning.[8] The Yinger model was developed on three bases: 1) a field study of one elementary school teacher; 2) previous research on teacher planning; and 3) psychological studies of problem solving and planning in "deliberative situations," such as chess playing, musical composition, and architectural design. (Yinger, 1978, p. 24).

As a consequence of this field study and his review of previous teaching research and psychological studies, Yinger developed a "process model of teacher planning:"

> Three stages of planning were represented in the planning model. The first stage, problem finding, was portrayed as a discovery cycle where the teacher's goal conceptions, her knowledge and experience, her notion of the planning dilemma, and the materials available for planning interact to produce an initial problem conception worthy of further exploration. The second stage in the planning process was problem formulation and solution. The mechanism proposed for carrying out this process was the "design cycle." In this cycle, problem solving was characterized as a design process involving progressive elaboration of plans over time. Elaboration, investigation, and adaptation were proposed as phases through which plans were formulated. The third stage of the planning model involved implementation of the plan, its evaluation, and its eventual routinization. This stage emphasized the contribution of evaluation and routinization to the teacher's repertoire of knowledge and experience which in turn play a major role in future planning deliberations. (Clark and Yinger, 1977, p. 285)

Since Yinger's dissertation, the Yinger et. al. program has carried out other studies (Clark and Yinger, 1979; Peterson, Mark and Clark, 1978; Peterson and Clark, 1978).

The research reviewed here does not, of course, exhaust the research on teaching planning. But let us examine this research now as a whole, asking what it has to do with curriculum study, and suggest some future directions research in teacher planning might take to increase our understanding of curriculum development.

First, we might ask, "What does teacher planning have to do with curriculum development?" The answer, of course, depends on one's perspective. If a curriculum is defined as a set of intentions (for people to learn things, for teachers to teach things, or for pupils to do things), then when teachers are planning what to do with pupils, or what pupils should be learning, they are doing curriculum development. The

problem here is how much of the teachers' planning effort is curricular and how much is instructional, if we wish to distinguish between these two objects of planning? Using a curriculum-as-objectives definition, the current research or teacher planning finds little attention given to curriculum so conceived.

With a curriculum-as-contact definition, however, the research reviewed here suggests that some teachers are constant curriculum workers. Although the activities they plan are highly routinized, the content aspect of the activities is not. This finding indicates that some teachers must spend a great deal of their planning time on content decisions, which is just what Zahorik (1975) found. Even researchers using the curriculum-as-experience definition might be interested in the relation of teacher planning emphasis to teacher practice and the experiential consequences of that practice suggested by Peterson and Clark (1978) and by Zahorik (1970).

The predominant finding that teachers do not generally consider objectives first, and rarely spend much planning time at all on objectives, motivated the Yinger et. al. program because it conflicted with current beliefs about planning. Are the Tyler (1950) rationale and the Johnson (1977) model, then, ready to be abandoned? Should we replace both these models with the Yinger process model? Perhaps. But first, let me distinguish among three different kinds of curriculum development models. I will call them prescriptive, conceptual, and descriptive.

Prescriptive models do not attempt to reflect current practice but are normative in nature proposed in the hope of improving practice. The Tyler (1950), Taba (1962), and Popham and Baker (1970) models can be categorized as prescriptive models. Whether the use of them does, in fact, improve practice remains, for the most part, an unaddressed empirical question, although studies on the use of behavioral objectives are not encouraging.

Conceptual models attempt to analyze conceptual relationships. For example, the Johnson (1977) model is based on a model of rational behavior and an assumption that if education were a rational undertaking, with rationality defined in means-ends terms (not a claim that it is, a descriptive claim, nor that it should be, a prescriptive claim), then it could be described by the Johnson model.

A descriptive model attempts to describe and explain actual practice. There is no implicit claim that practitioners are doing things correctly, but only that if changes are proposed they should take into account "where the teachers are." The Yinger model is a good example of a descriptive model. This set of distinctions suggests a whole set of theoretical and empirical questions:

1. How does the Yinger model translate into procedural prescriptions? That is, given that teachers plan as described by Yinger, how can their planning be improved?[10]

2. Does the relevance of the Tyler rationale for planning depend on level of planning?

3. To what extent does teaching planning, as described by Yinger, generalize to planning at the national project or school district level? How does Walker's (1971) naturalistic model correspond to Yinger's process model?

4. How fruitful is it to reconstruct or reinterpret the descriptive and prescriptive models of planning using the concepts derived from conceptual models?

5. To what extent can and should practice (and, thus, descriptive accounts of practice) be affected by training based on prescriptive models? For instance, can we increase the degree to which teachers use objectives (but not necessarily behavioral ones) in their planning, and does this lead to improved practice?

6. To what extent is teaching and teacher planning a rational activity, and what do we mean by rational? According to a conceptual change epistemology, rational thought in planning is a matter of adjusting current practices based on perceived difficulties, rather than by wiping the slate clean with a set of objectives and then deducing practice from

those objectives. To what extent, then, is rational planning a trouble-shooting process, rather than a linear means-end process with goals functioning to prevent activities from going too far wrong, rather than as a target at which to aim? What are the relative virtues of general and specific goals in this model of planning?

7. How "malleable" are teachers on content decisions (Floden, 1978)? Does malleability depend on educational level, subject matter, or perceived pupil characteristics? And why? That is, what is the reason for this malleability? By what mechanisms do external pressures influence teachers' content decisions in relation to their own beliefs and the demands placed on the teacher by the teaching situation?[11]

8. To go a step further, how do teachers use textbooks and other materials in their planning and how does this use depend on the teachers' expertise in and beliefs about the subject matter, educational level, pupil characteristics (including homogeneity), program objectives, importance of the subject matter, and availability of planning time? We know precious little of the process by which content gets into textbooks (Fitz-Gerald, 1979), how textbooks get into schools, and how teachers use them.

B. Research on the Role of Pupil's Prior Conceptions in Learning

There are, of course, good theoretical reasons to believe that the content taught is not necessarily the content learned. There is a large group of researchers who are concerned with the surprising persistence of old ideas, in spite of intensive instruction intent on replacing the old ideas with new, more adequate ones. This line of research seeks to identify the kinds of prior conceptions pupils have, and to explain why they are so resistant to change. I will try to justify this line of research as curricular after discussing some of the current studies.

The research on prior conceptions (the term I will use to label the old ideas students have) [12] shares two sets of major commitments (one set substantive and the other methodological). First, as I mentioned earlier, they hold a constructivist view of learning and an active view of the learner. New Knowledge is always built out of old (often informal, intuitive) knowledge. Second, they are methodologically committed to the clinical interview, a method borrowed from Piaget:

> It is, in fact, that method of observation, which consists in letting the child talk and in noticing the manner in which his thought unfolds itself. The novelty consists in not being content simply to record the answers given by the child to the questions which have been put to him, but letting him talk of his own accord. "If we follow up each of the child's answers, and then, allowing him to take the lead, induce him to talk more and more freely, we shall gradually establish...a method of clinical analysis analogous to that which has been adopted by psychiatrists as a means of diagnosis." (Claparede, in Preface of The Language and Thought of the Child, Jean Piaget, 1955).

All the researchers (with one notable exception) adopt this method in their work. They all focus on pupils' responses to problems (especially mistakes) as the primary source of information about pupil thought and knowledge. The one exception to the clinical interview method is Brown and VanLehn's (1980) use of computer simulation for a similar purpose.

In reviewing the research on prior conceptions, I will organize the studies according to the complexity and pervasiveness which the researchers attribute to the prior conceptions. At one extreme researchers simply attempt to list misconceptions that pupils appear to have. At the other extreme, researchers view these prior conceptions as but one integral part of the individual's complex of interrelated beliefs about the cosmos and about knowledge of the cosmos.

Beginning perhaps with Piaget (1929, 1930), the identification of misconceptions has been a long-standing interest of science educators. It is clear from these studies that pupils bring to school a whole array of misconceptions and that many of these misconceptions are as prevalent among those who have studied as among those who have not. Hawkins (undated), for example, found that only fifteen percent of his students had "correct" views about reflection of light and location of images, whether his students were at the upper elementary level, elementary school teachers, or graduate students in his philosophy of science classes. Some of these studies simply list common misconceptions.[14] Others try to show the range of misconceptions pupils have in regard to a particular phenomenon.[15] A set of impressive, but large-ly ignored, studies from the Soviet Union in the mid-1940's on "the interaction between new and formerly acquired knowledge" (Fleshner, 1963, p. 201) contributed greatly to an understanding of scientific and mathematical misconceptions and their role in learning.

A second group of studies attempts to integrate pupils' misconceptions, or more generally speaking, prior conceptions into a system of thought. For example, Brown and VanLehn (1980) analyzed several thousand student tests of place-value subtraction and collected several hundred systematic student errors (or "bugs"). Errors were considered systematic if the researchers could find a procedure that produces the erroneous answers. From this catalogue Brown and VanLehn (1980) developed a "generative theory of bugs," i.e., a set of formal principles that generates all known or expected bugs from an analysis of the procedural skill.

Because systems of thought are often based on ideas formed by everyday experience (i.e., by observing the way the world seems to work), they are sometimes termed spontaneous, intuitive, or informal theories, in contrast to the discipline-based, formal theories that experts currently believe. Clement (1977), for example, after cataloguing students' "conceptual models in physics" developed a summary of "the most common characteristics of the 'motion implies force' conceptual system" (p. 7), claiming that it is "pervasive," "deep-seated," and that it constitutes a source of difficulty for students trying to understand Newtonian principles. Viennot (1979), also working in elementary dynamics, took this line of thought one step further. She not only described in detail the conceptual system that students seem to be using, but also showed why this "intuitive scheme" is so "highly robust" and why "it outlives teaching which contradicts it" (p. 205). She showed that it is highly self-consistent and functional which, in part, explains why "it reappears even in the expert when he or she lacks time to reflect" (p. 213). Additionally, she pointed out (as did Hawkins, undated) that "the intuitive scheme is very close to a rather evolved scheme of historical thought. It is much closer to the impetus theory than to Aristotle; also, it is not primitve in that it goes far beyond the thought of young children. It represents a worked-out and effective system of thought, despite being in conflict with the yet more worked-out and effective Newtonian scheme. It deals without contradiction with most situations encountered in daily life" (p. 312).

This parallel between the development of students' conceptions and historical thought is currently gaining support. For example, Piaget (1972) developed a weak form of the recapitulism thesis. Later, Keller (1979) argued that human development of thought processes provides clues to problems of conceptual change in disciplines.

In order to analyze the difficulties college students have in learning the calculus, Confrey (1980) developed a conceptual change theory of learning based primarily on the epistemology of Stephen Toulmin. Rather than argue for a recapitulism thesis, she used the history of the concept of number as an heuristic for identifying and analzing potential conceptual difficulties in mathematics learning. Using clinical interviews she showed how problems in mathematics learning stem from students' concepts of number as discrete, rather than continuous. Her study, thus focused on a particular prior conception that students have (i.e., a discrete number concept), she showed how it interferes with mathematics learning, and traced a parallel situation in the history of mathematics. In her discussion of the history of number concepts she

discussed the significance of extant metaphysical beliefs in shaping the conceptual change process in mathematics.

Posner et. al. (1979) provide a similar analysis of college physics learning, focusing on Einstein's special theory of relativity. They also found parallels between difficulties faced by students in learning the theory and difficulties faced by scientists during a period of rapid conceptual change in their discipline. In particular, these researchers were struck with the significance of epistemological commitments and metaphysical beliefs (which they collectively termed "fundamental assumptions") in shaping the conceptual change of both students and scientists. They borrowed a phrase from Toulmin (1972), "conceptual ecology," including within it not only the person's fundamental assumptions but also available metaphors, analogies, examples, anomalies, models, and knowledge in other fields. It is the conceptual ecology, they claimed, that determines what new conceptions both students and scientists will or will not accept. Notice that Posner et. al. were not claiming that the conceptual ecologies of students and scientists are similar (a recapitulism thesis), but only that various features of a person's conceptual ecology account for the character of his or her particular conceptual change.

They concluded their analysis by outlining curricular implications of their conceptual change theory. Some of their implications suggest why I believe the study of students' prior conceptions is curricular research. For example, conceptual change theory raises serious questions regarding the feasibility of bringing about major conceptual changes in students. Further, the theory stresses 1) the importance of making students aware of their own fundamental assumptions and those of scientists; 2) the importance of the teachers' ability and willingness to use student "mistakes" as a key to understanding prior conceptions; 3) the importance of providing content and opportunities (e.g., in laboratory or homework assignments) for students to experience anomalies (i.e., events they cannot make sense of using thier prior conceptions); and 4) the importance of providing analogies, good examples, and models to lend plausibility to alternative conceptions. Thus, curricular research on prior conceptions and their role in new learning asks the question, "What content and objectives are necessary if we want the student to assimilate new learning into old cognitive structures, or to accommodate new structures?"

What these lines of research suggest is that significant progess on the study of prior conceptions may require further empirical investigations and theory development. Theories could be developed that explain how some of the students' various prior conceptions fit together into a coherent intuitive conceptual system and how these systems differ from formal structures of knowledge in disciplines. Empirical studies of students' conceptual ecologies (particularly their fundamental assumptions about the world and about knowledge) could lead to the development of theory describing how these intuitive conceptual systems fit into the students' conceptual ecologies. Such theories would greatly increase our understanding of conceptual change in students and the role curriculum content may play in this process. This theoretical development could be taken a step further by attempting to relate students' changing conceptual ecologies to theories of human development and personality theories. For example, Perry's (1968) theory of intellectual and ethical development of college students appears consistent with Posner et. al. (1979) and Confrey's (1980) theory of conceptual change. But currently no attempt has been made to integrate the two lines of research.

Figure 2 summarizes this section as a series of research studies on prior conceptions, ascribing increasing degrees of complexity and pervasiveness to the phenomenon.

Figure 2: A taxonomy of research programs on prior conceptions

	What the investigator does		The result of Investigation
1.	Generalizes mistakes responses to questions	into	a set of misconceptions
2.	Systematically interrelates misconceptions	into	an intuitive conceptual system
3.	Relates intuitive conceptual systems to fundamental assumptions and accessible models, analogies, metaphors, and anomalies	into	a conceptual ecology
4.	Relates conceptual ecology to psychological characteristics (e.g., personality traits)	into	a general profile
5.	Relates general profile to human development	into	an etiology

increasing complexity and pervasiveness of the prior conceptions as a phenomenon

C. Research on Problem Solving

Until the late 1950's problem solving research was dominated by a content-neutral conception of the process. The belief existed that there was a general method of problem solving and that the method could be taught to pupils. However, more recently, science educators with a cognitive psychological perspective and computer scientists interested in artificial intelligence, have become interested in problem solving. These researchers base their research on the assumption that few, if any, general principles of problem solving exist, that therefore, problem solving methods are task specific, and that the character of the problem solving process depends on the knowledge and experience of the problem solver. Because they base their study of problem solving on an information processing metaphor, they assume that the difficulties in accessing the knowledge base, retrieving relevant information, manipulating that information in constructing solutions, and judging the adequacy of those solutions need to be studied in detail. As would be expected, the preferred methodology includes not only clinical interviews using thinking-aloud protocols, but also computer simulations.

The two methodologies complement each other in an interesting way. By asking a few persons to think aloud while solving a problem, recording his or her verbalizations, and analying those recordings, detailed observations are made of the process of problem solving. Based on this data, a model of the cognitive processes involved in problem solving is developed in the form of a computer program. The program is implemented in a computer which, then actually solves some problems. The computer outputs (especially its mistakes) are compared with the work of human beings solving the same problems. If the model's performance is compared with human problem solvers, the model remains only a plausible candidate for a theory.

I will organize my review of research on problem solving around three themes: 1) What stages in the problem-solving process is the focus of research?; 2) What kind of problem is it that is to be solved?; and 3) Who are the problem solvers?

Stage in the Process

The process of solving problems has been characterized by cognitive psychologists in many different ways, depending upon the particular subject matter domain and the expertise of the problem solver (issues we will examine in subsequent sections). But a generalized outline of the process would likely receive a modest amount of support from most researchers in this area, although the more specific we get the more debates we would encounter. Such a generalized outline might be as follows:

1. The problem solver must comprehend the problem statement or question. Comprehension of problem statements, or more generally speaking, of "task environments" (Newell and Simon, 1972), is not typically considered problem solving, but it is certainly an important part of some problem solving in schools, e.g., word problems in mathematics (Greeno, 1977). Further, comprehension itself may be conceived of as a problem solving process. The process of sentence comprehension, thus, can become the focus of problem-solving research. The various theoretical accounts of this process have resulted in a number of formalisms describing how the reader represents a sentence internally.[16,17]

2. Comprehension of the problem statement is only one aspect of what Greeno (1978) terms the "semantics of problem solving." The other aspect is the construction of a problem space (Newell and Simon, 1972). That is, the problem solver decides what the problem is and represents the problem internally. As an example, is the school drop-out problem a law enforcement, educational, guidance, or architectural design problem?

And if educational, is it curricular, instructional, administrative, or what? Note that none of these categories are mutually exclusive. But the way we interpret the problem affects the kinds of solutions we attempt. In a similar way, is finding the height of an oak tree a trigonometry, geometry, algebra, physics, or biology problem? A plausible argument can be made for each, and others could be suggested.

Simon and Simon (1979), for example, compared the problem solutions of two experts, one a physicist, the other a chemical engineer, on a problem of how to survive after being shipwrecked. The physicist behaved "like an ideal student solving an abstract physics problem dressed up in a fanciful cover story" (Simon and Simon, 1979, p. 122). The chemical engineer, on the other hand, analyzed "the functional requirements of the situation." He behaved more like a real shipwrecked person would, if he were faced with actual survival. He used a more qualitative analysis drawing on information in his memory not mentioned at all in the problem statement. Not surprisingly, the two problem solutions differed dramatically. The problem space people construct appears to depend on a combination of psychological set and availability of appropriate problem spaces stored in memory.

3. In many problems, setting up the problem space leads to the establishement of one or more goals to be achieved. Once a person decides on a goal, he or she searches for ways of achieving it. One way to do this is to perform a means-end analysis, in which the problem solver compares the current situation with the goal, identifies differences between them (which then become the focus of work), and then sets up sub-goals and a priority system for deciding which sub-goal to work on first (Greeno, 1978, p. 16). The problem solver then plans work on a sub-goal, drawing on previous experience with similar problems and on general knowledge in the problem domain.

4. Once the problem solver has set goals and done some planning, he or she assesses his or her knowledge and manipulates that knowledge while working on a sub-goal.

For Larkin (1979) problem solving is made possible by accessing not only general problem solving strategies, but also highly specific "condition-action units" or "productions." Each condition-action unit specifies a particular action to be taken when the current situation satisfies one of the conditions stored in memory. Socratic tutoring, for example, can be thought of as asking a particular kind of question (the action), when the student appears to be manifesting a particular kind of error in thinking (the condition, e.g., over-generalizing from an example) (Collins, 1977). Chase and Simon (1973) developed this idea in their analysis of master chess players. Larkin (1979) pointed out an important curricular implication of this idea. When we teach physics we often fail to teach the conditions under which actions are useful, resulting in students not knowing how to get started or being unable to decide what to do.[18] Perhaps this should be a major consideration when we design curricula aimed at developing problem solving in specific content domains.

5. After achieving one or more sub-goals, then the problem solver evaluates his or her work on the sub-goal and either continues on that sub-goal or moves on to the next sub-goal. When all sub-goals are achieved there is a general evaluation of the problem solution, the consequence of which is a decision of whether or not to continue work.

Of course, not all of these stages are relevant to the solving of all problems. Problems differ in their basic structure and consequently in the stages needed for solving them.

Kinds of Problems

Researchers differ not only in the stages of problem solving on which they emphasize but also on the kinds of problems in which they are interested. There are distinctions made between subject matter problems which depend on substantial background and knowledge in the problem domain, and relatively subject-matter free problems, in which practically all background knowledge is given in the problem statement (Atkin, 1977). Simon and Simon (1979) distinguish between "textbook problems" and "real-world problems." The former are usually "highly structured"––all or almost all irrelevancies are stripped from them and their solutions usually involve two or three equations or concepts just studied by the class. Real-world problems, on the other hand come to the problem solver poorly defined––surrounded by a vast mass of information that is possibly relevant but often irrelevant. That is, they contain a great deal of complexity and ambiguity. Thus, setting up the problem space is often the most challenging aspect of solving such a problem. What seems clearly to be the case is that textbook problem solving does not seem to transfer very directly to solving real world problems. Similar, but not identical to these two distinctions is Greeno's (1978) distinction between "well-structured" and "ill-structured" problems. In the former "there is a definite initial situation that is given, and there is a definite goal situation that is to be achieved...and the initial problem situation contains all the components that will be needed to produce the goal" (Greeno, 1978, p. 65). Although some research has been done on ill-structured problems (e.g., in chess, in composing music, and in teacher planning) much less is known than with well-structured problems.

The Problem Solver

A final difference among research studies on problem-solving concerns the problem solver. Is the problem solver a child or an adult, an expert or a novice, a science-oriented or a non-science-oriented student, etc.? The major interest among current researchers on this question appears to be on the expert-novice distinction. Larkin et. al. (1980) ask the question of what is involved in expertness in solving problems (p. 208). The differences they found include the 1) time required to solve the problem and the number of errors; 2) the amount and nature of planning required; 3) the number of steps required; 4) the variety of representations of the problem used by the problem solver. The last two differences mentioned derive rather directly from the experts' use of "large-scale functional units," sometimes termed schemata, which enable the expert to access and use bits of information coherently (Larkin, 1979, p. 114). For example, in physics many problems can be solved by applying either an "energy method" or a "force method," each of which involves many principles. In most physics texts, however, it is difficult to recognize that such methods exist (Larkin, 1979, p. 115). Perhaps explicitly encouraging the use of such large-scale functional units would improve the problem solving of novices. Another aspect of problem solving related to the differences between experts and novices is the extent of qualitative analysis by experts (what Larkin, 1979, terms "low-detail reasoning"). Experts apparently begin by making sketches, reasoning qualitatively and only turning to quantitative work at the very end of the process. Novices, on the other hand, begin immediately with equations, selected by a series of trial-and-error procedures, each time plugging in numbers. The relative efficiency of the two methods should be obvious.

Let us consider what this problem solving research has to say to the field of curriculum. In order to explore this relationship we can attempt to answer two closely connected questions: 1) Can we teach problem solving?; and 2) What kinds of problem solving (if any) should we be teaching?

The problem solving research reviewed here suggests that it is not very useful to think of problem solving as a "single, uniform capability" and direct training in a general problem solving skill "is practically hopeless at this stage of our understanding" (Greeno, 1977, p. 17). There are different kinds of problems and different stages in problem solving, each with its own requisite knowledge and skills. Further, the problem solving process appears to be highly content specific. A conceptual change epistemology does not hold much hope for teaching content-neutral methods of problem solving. Nevertheless, it remains an open question. Perhaps we can teach some general strategies, such as means-end analysis. Making someone a

better problem solver will likely require the teaching of some specific problem solving skills in some specific knowledge domains. Whether that content-specific training will transfer to other situations has been and remains the central question. Assuming that there are some content-neutral skills, then, it is in the identification of these specific skills that this research can contribute most directly to the curriculum field.

Larkin (1979) explains part of the value of her research for curriculum:

> As Michael Polanyi (1967) points out, much of human knowledge is "tacit" in that, under ordinary conditions, it can not be explicated in words. We can recognize the face of a friend without being able to describe how we do it. Similarly, much of an expert's skills, (e.g., in solving physics problems) is tacit, in that the processes he uses are not obvious either to himself or to a casual observer. If these tacit processes remain unexplicated, then, to help a beginner learn, there is little one can do beyond providing examples and practice, and hoping that the beginner will somehow "pick up" these unspecified skills. But if one can begin to build explicit models for formerly tacit processes, then it becomes possible to teach these processes, either directly or through appropriately selected practice and example. In addition, explicit models for tacit processes can aid in identifying and remedying errors in the developing skills of learners.

"Expliciting tacit knowledge,"(as Collins, 1978, calls it) is, thus, one major contribution to curriculum work. In a sense, we demystify the experts' intuition so that it can be taught to the novice. We have not made learning effortless, nor quick and painless, only, perhaps, more efficient (Larkin et. al., 1980). If anything, current research demonstrates the large amount of specific knowledge required for solving complex problems, thus challenging any optimism we might have for short cuts in turning novices into experts.

If we want to improve problem solving ability in schools we might begin by analyzing the kinds of problems school children typically have to solve. What cognitive structures and processes are required for solving mathematical word problems, for understanding science, for solving science problems, for reading stories, for writing book reports, for writing compositions, etc. How can we make more explicit and teach the knowledge required for these tasks? (See Greeno, 1977, for a beginning on this kind of analysis). Next, we might identify some general strategies useful for classes of problems, for example, means-end analysis, working forward, working backward, and qualitative reasoning. Further, we might try to expand the range of problems on which pupils work, making sure to include some real-world problems (both ill-structured and well-structured), requiring use of both general strategies and specific school knowledge. At the same time, we could analyze with pupils some fairly easy real-world problems which pupils routinely solve successfully, pointing out the importance of sub-goals, means-end analysis, etc. This procedure would develop a greater awareness by pupils of their problem-solving skills (Greeno, 1977, p. 26).

The more we understand how people solve everyday, real-world problems, the more likely it will be that we can teach people how to do it better. The relation between school knowledge and everyday, common experience has long been a concern of both teachers and students. When the relationship is unclear, pupils often compartmentalize their knowledge and experience into two unconnected categories. Any research that makes explicit the connection between school knowledge and real-world problems can have enormous consequences for improving education.

IV. Conclusions

What I have tried to do in this review is to alter the conceptions of curricular research in several ways. First, methodologically, I have argued for techniques that have the capability to track cognitive processes as they are occurring. Such techniques include thinking aloud and stimulated recall techniques, Piagetian clinical interviews, and participant observation. I have also mentioned the value of computer simulation as an important theoretical tool, when used in conjunction with some of these techniques.

Second, I believe that research in subject matter specific domains can potentially make enormous contributions to the curriculum field. For too long, and with only a few exceptions, research in science, math, foreign language, language arts, social studies, occupational art, and physical education has remained untouched by the curriculum field, and, in turn, has not touched the curriculum field. These specializations have their own journals and their own theoretical and methodological frameworks, and only occasionally has their work been explicitly related to general curriculum theory and research. Much of our progress in understanding both problem solving and the role of prior conceptions in learning new ideas has been from detailed work in very specific subject-matter domains. So long as we continue to think of such research as only science education or only math education we will not attempt to test the generalizability of the findings. The general field of curriculum can profit from some of these new insights, as I have tried to show in this review, and the science and mathematics education researchers can profit from considering their work from some of the diverse perspectives offered by the general field of curriculum. The fact that the curriculum field is populated by phenomenologists, neo-Marxists, neo-Freudians, and Piagetians, as well as hard-nosed school administrators is one of the field's strengths, though it is often viewed as a divisive force. This notion of exploiting and enhancing the diversity, rather than dwelling on the divisiveness within the field is, I think, an important conclusion to draw from this review.

Third, to the extent that our conception is based on an empiricist version of rationality in curriculum development, teaching and learning, this review suggests a major change may be necessary. There appear to be empirical and epistemological grounds for claiming that individuals in educational enterprises may behave rationally, even when they appear not to. It may be that teachers plan rationally and that students learn and solve problems rationally most of the time, and that when we find teachers and students apparently behaving irrationally, the problem may be with our model of rationality (and, therefore, our models of planning, learning, and problem solving). When teachers resist the use of objectives in planning, when students refuse to adopt a scientific conception well-accepted by the scientific community, when students fail to interpret a problem as we intend, or to solve it by the method we have taught them, they may be behaving quite rationally from the perspective of a conceptual change epistemology.

We are only beginning to realize how pervasive is the commitment to an empiricist model of rationality in education and, at the same time, how invalid it may be from both an empirical and from an epistemological point of view. For example, administrative theory has long recognized that "disjointed incrementalism" may characterize rational organizational change (Lindblom and Braybrooke, 1963). Also, Lauren Resnick (personal communication) has suggested that the claims by school people about the uses of tests for the guidance, grouping, and other "rational" purposes may be more a response guided by what school people believe they should be doing than a reflection of fact of actual practice. That is, their claims may reflect a belief in the model of rationality, even when they do not employ it. The same might be said of career decision making.

I originally had decided to subtitle this paper "It's the Thought That Counts," borrowing from the informal slogan of the Institute for Research on Teaching at Michigan State University. But a recent article by Donald Norman (1980) helps to maintain some perspective on this approach to research.

> In recent years I have become more and more dissatisfied with the conventional view of information processing. The source of the dissatisfaction was not obvious; each of the components of (the model) seemed reasonable, and although one might (and did) argue about the details, the powerful arguments for physical symbol systems seemed persuasive. The problem seemed to be in the lack of consideration of other aspects of human behavior, of interaction with other people and with the environment, of the influence of the history of the person, or even the culture, and of the lack of consideration of the special problems and issues confronting an animate organism that must survive as both an individual and as a species, so that intel-

lectual functioning might perhaps be placed in a proper perspective. These considerations have accumulated until they finally have forced themselves upon me. The human is a physical symbol system, yes, with a component of pure cognition describable by mechanisms... But the human is more: the human is an animate organism, with a biological basis and an evolutionary and cultural history. Moreover, the human is a social animal, interacting with others, with the environment, and with itself. The core disciplines of cognitive science have tended to ignore these aspects of behavior. The results have been considerable progress on some fronts, but sterility overall, for the organism we are analyzing is conceived as pure intellect, communicating with one another in logical dialogue, perceiving, remembering, thinking where appropriate, reasoning its way through the well-formed problems that are encountered in the day. Alas, that description does not fit actual behavior.

Norman, in his article, shows that thought (and, of course, language, perception, memory, learning, and skill) do count, but so do beliefs, consciousness, development, emotions, interactions, performance, and culture. The research reviewed in this paper can, thus, be viewed as important curriculum-related studies showing how an understanding of human thought can lead to improved curriculum. That they represent only a beginning is revealed by their neglect of the interrelationship of human thought to the other significant features of human enterprises.

FOOTNOTES

1. This paper is a modified version of a longer paper presented at the annual conference of the Northeast Educational Research Association at Ellenville, New York, 23 October, 1980, originally titled, "New Developments in Curricular Research: It's the Thought That Counts." I gratefully acknowledge the conbutions of my colleague, Kenneth Strike, whose comments on an earlier draft resulted in substantial improvements in the paper's focus.
2. However, a person who defined curriculum as "experie ce of children" (or some similar definition) might have difficulty finding my review relevant to his or her concerns. I do believe that portions of this review could be related to such a conception of curriculum, but I shall not attempt to do this.
3. See Posner (1978) for an earlier version of an attempt to relate cognitive science to curricular research.
4. See, for example, Walker (1975), Grobman (1970), and Schaffarzick and Hampson (1975).
5. See, for example, Peterson, Marx, and Clark (1977) and Morine (1976).
6. See, for example Clark and Yinger (1977) and Yinger (1978, 1979).
7. Cf. the autobiographical (Pinar, 1975), and biographical methods (Berk, 1980) of the reconceptualists in curriculum.
8. Easley (1974), Clement (1979), and Simon and Simon (1979) provide some useful methodological approaches to this problem.
9. Originally described by Yinger (1977), subsequently summarized either in total or partially in Yinger (1978, 1979).
10. See Floden and Feinman (1980) for an initial attempt at making teachers more "rational."
11. See Doyle and Ponder (1977) for one analysis of this problem based on the teachers' notion of "practicality."
12. Others use the terms "preconceptions," "misconceptions," "alternative conceptions," "critical barriers," "intuitive" or "spontaneous ideas," "procedural bugs." Different terms often signify differences in the epistemological status attributed to pupils' ideas (driver and Easely, 1978).
13. See, for example, Kuethe, 1963; Boyd, 1966; Doran, 1972; Za'rour, 1975; Lebouter-Barrell, 1976; Nussbaum and Novak, 1976; Duncan and Johnstone, 1973; and Hawkins, undated.

14. For Example, Kuethe (1963).

15. For example, Nussbaum and Novak (1976) and Nussbaum (1979) analyze a variety of children's conceptions of the earth.

16 Greeno (1977), for example, used the system developed by Norman and Rumelhart (1975), termed an "active structural network."

17. Research on problem solving focused on the representation of knowledge includes Davis (1978) in mathematics, and Atkin (1977) in chemistry.

18.   See also Landa (1974, 1976).

REFERENCES

Atkin, Julia. "An information processing model of learning and problem solving." Doctoral dissertation, Cornell University, 1977.

Ausubel, David P. *The psychology of meaningful verbal learning.* New York: Grune and Stratton, 1963.

Ausubel, David P., and Novak, Joseph D., and Henesian, Helen. *Educational psychology: A cognitive view.*, 2nd edition. New York: Holt, Rinehart, and Winston, 1978.

Berk, Leonard. "Education in lives: Biographic narrative in the study of educational outcomes." *Journal of Curriculum Theorizing, 2,* 2, 1980, pp. 88-154.

Bernstein, Basil, "On the classification and framing of educational knowledge." In *Knowedge and control,* M.F.D. Young (Ed.). London: Collier-Macmillan, 1971.

Boyd, C.A. "A study of unfounded beliefs." *Science Education, 50,* 1966, pp. 396-398.

Brown, John Seely and VanLehn, Kurt, "Repair theory: A generative theory of bugs in procedural skills." *Cognitive science, 4,* 4, 1980, (in press).

Bruner, Jerome S. *The process of education.* Cambridge, Massachusetts: Harvard University Press, 1960.

Chase, W.G., and Simon, Herbert. "Perception in chess." *Cognitive Psychology, 4,* 1973, pp. 55-81.

Claparede, E. Preface to Jean Piaget's *The language and thought of the Child.* World Publishing Company, 1955. New American Library, 1974.

Clark, Christopher M., and Yinger, Robert J. "Research on teacher thinking." *Curriculum Inquiry, 7,* 4, (Winter) 1977, pp. 279-304.

Clark, Christopher M., and Yinger, Robert J. "Research on teacher planning: A progress report." *Journal of Curriculum Studies, 11,* 2, (April-June) 1979, pp. 175-178.

Clement, John J. Catalogue of students' conceptual models in physics, section 1: Motion and force. Amherst, Mass.: Dept. of Physics and Astronomy, University of Massachusetts, November 1977.

Clement, John J. "Mapping a students' causal conceptions from a problem-solving protocol." In *Cognitive process instruction: Research on teaching thinking skills,* Jack Lochhead and John Clement (Eds.). Philadelphia: Franklin Press, 1979.

Collins, Allan M. "Processes in acquiring knowledge." In *Schooling and the acquisition of knowledge.* Richard C. Anderson, Rand J. Spiro, and William E. Montague (Eds.). Hillsdale, N.J.: Lawrence Erlbaum Associates, 1977, pp. 339-364.

Confrey, Jere. "Conceptual change, number concepts and the introduction to calculus." Doctoral dissertation, Cornell University, 1980.

Davis, Robert B. Conceptualizing the structures underlying cognitive behavior - The usefulness of "frames." A paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, 1979.

Dewey, John. "Theory of course of study." In *Cyclopedia of education, 2,* Paul Monroe (Ed.). New York: Macmillan, 1915, pp. 212-222.

Doran, R.L. "Misconceptions of selected science concepts held by elementary school students." *Journal of Research in Science Teaching, 9,* 1972, pp. 127-137.

Doyle, Walter, and Ponder, Gerald. "The practicality ethic ι teacher decision making." *Interchange, 8,* 3, 1977, pp. 1-12.

Driver, Rosalind, and Easley, Jack. "Pupils and paradigms: A review of literature related concept development in adolescent science students." *Studies in Science Education, 5,* 1978, pp. 61-84.

Duncan, I.M., and Johnstone, A.H. "The mole concept." *Education in Chemistry, 10,* 6, 1973, pp. 213-214.

Easley, Jack A., Jr. "The structural paradigm in protocol analysis." *Journal of Research in Science Teaching, 11,* 3, 1974, pp. 281-290.

FitzGerald, Frances. *America revised.* Boston: Atlantic-Little Brown Books, 1979.

Fleshner, E.A. "Psychology of the mastery and application by schoolchildren of some concepts in physics." In *Educational psychology in the U.S.S.R.,* Brian and Joan Simon (Eds.). London: Routledge and Kegan Paul, 1963, pp. 198-213.

Floden, Robert E. "A policy capturing study of teacher decisions about content." A paper presented at the Annual Meeting of the American Education Research Association, Toronto, 1978.

Floden, Robert E., and Feinman, Sharon. "Can teachers be taught to be rational?" A paper presented at the Annual Meeting of the American Educational Research Association, Boston, 1980.

Goodlad, John I., Klein, M. Frances and Associates. *Behind the classroom door.* Worthington, Ohio: Charles A. Jones, 1974.

Greeno, James G. "Solving problems." ELS Report No. 12C, Agency for Instructional Television, 1977.

Grobman, Hulda. *Developmental curriculum projects: Decision points and processes.* Ithaca, Illinois: F.E. Peacock, 1970.

Harnishfeger, A. and Wiley, D.C. "Teaching-learning processes in elementary school: A Synoptic view." *Curriculum Inquiry, 6,* 1, (Fall) 1976, pp. 5-43.

Harris, William Torrey, Horace Mann. In *Journal of Proceedings and Addresses of the Thirty-fifth Annual Meeting.* National educational Association. Chicago: University of Chicago Press, 1986, pp. 52-63.

Hawkins, David. "Critical barriers to science learning." Boulder, Colorado: Mountain View Center for Environmental Education, University of Colorado, mimeographed, undated.

Huebner, Dwayne. "The moribund curriculum field: Its wake and our work." *Curriculum Inquiry, 6,* 2, 1976, pp. 153-167.

Iran-Nejad, Asghar. *The schema: A structural or a functional pattern.* Technical report No. 159, Center for the Study of Reading, University of Illinois at Urbana-Champaign, February 1980.

Jackson, Philip W. *The way teaching is.* Washington: National Education Association, 1965.

Johnson, Mauritz. "Definitions and models in curriculum theory." *Educational Theory, 17,* 2, (Spring) 1967, pp. 127-139.

Johnson, Mauritz. *Intentionality in education: A conceptual model of curricular and instructional planning and evaluation.* Albany, N.Y.: Center for Curriculum Research and Services, 1977.

Kagan, Norman, Krathwohl, David R., Goldberg, Alan D., and Campbell, Robert J. *Studies in human interaction: Interpersonal process recall stimulated by videotape.* East Lansing: Michigan State University, 1967.

Keddie, Nel. "Classroom knowledge. In *Knowledge and control,* M.F.D. Young (Ed). London: Collier-Macmillan, 1971.

Keller, Evelyn Fox. "Cognitive repression in contemporary physics." *American Journal of Physics, 47,* 8, (August) 1979, pp. 718-721.

Kuethe, L.J. "Science concepts: A study of sophisticated errors." *Science Education, 47,* 1963, pp. 361-364.

Kuhn, Thomas S. *The structure of scientific revolutions,* 2nd edition. Chicago: University of Chicago Press, 1970.

Lakatos, Imre, and Musgrave, Allan (Eds.). *Criticism and the growth of knowledge.* Cambridge: Cambridge University Press, 1970.

Landa, L.N. *Algorithmization in learning and instruction.* Englewood Cliffs, N.J.: Educational Technology Publications, 1974.

Landa, L.N. *Instructional regulation and control: cybernetics, algorithmization and heuristics in education.* Englewood Cliffs, N.J.: Educational Technology Publications, 1976.

Larkin, Jill H. "Information processing models and science instruction." In *Cognitive process instruction: Research on teaching thinking skills.* John Lochhead and John Clement (Eds.). Philadelphia: Franklin Press, 1979.

Larkin, Jill H., McDermott, John, Simon, Dorothea P., and Simon, Herbert A. "Expert and novice performance in solving physics problems." *Science, 208,* 20, (June) 1980, pp. 1335-42.

Lebouter-Barrell, I. "Concepts of mechanics in young people." *Physics Education, 11,* 7, 1976, pp. 462-466.

Lindblom, C., and Braybrooke, D. *A strategy of decision.* New York: Free Press, 1963.

McCall, G.J., and Simmons, J.L. *Issues in participant observation.* Reading, Mass.: Addison-Wesley, 1969.

Morine, Greta. "A study of teacher planning." BTES technical report 76-3-1-. San Francisco: Far West Laboratory for Educational Research and Development, 1976.

Newell, Alan, Shaw, J.C., and Simon, H.A. "Elements of a theory of human problem solving." *Psychological Review, 65,* 1958, pp. 151-166.

Newell, Alan, and Simon, Herbert A. *Human porblem solving*. Englewood Cliffs, N.J.: Prentice-Hall, 1972.

Norman, Donald A. "Twelve issues for cognitive science." *Cognitive Science, 4*, 1, (January-March) 1980, pp. 1-32.

Norman, Donald A., and Rumelhart, David E. *Explorations in cognition*. San Francisco: Freeman, 1975.

Nussbaum, Joseph. "Children's conceptions of the earth as a cosmic body: A cross age study." *Science Education, 63*, 1, 1979, pp. 83-93.

Nussbaum, Joseph, and Novak, Joseph. "An assessment of children's concepts of the earth utilizing structured interviews." *Science Education, 60*, 4, 1976, pp. 535-550.

Perry, William G., Jr. *Forms of intellectual and ethical development in the college years: A scheme*. New York: Holt, Rinehart and Winston, 1968.

Peterson, Penelope L., and Clark, Christopher M. "Teachers' reports of their cognitive processes during teaching." *American Educational Research Journal, 15*, 4 (Fall), 1978, pp. 555-566.

Peterson Penelope L., Marx, Ronald W., and Clark, Christopher M. "Teacher planning, teacher behavior, and student achievement." *American Educational Research Journal, 15*, 3 (Summer), 1978, pp. 417-432.

Piaget, Jean. *The child's conception of the world*. New York: Harcourt Brace, 1929.

Piaget, Jean. *The child's conception of physical causality*. New York: Harcourt Brace, 1930.

Piaget, Jean. *Psychology of intelligence*. Paterson, N.J. Littlefield, Adams, 1963.

Piaget, Jean. *Six psychological studies*. New York: Vintage, 1967.

Piaget, Jean. *Genetic epistemology*. New York: Columbia University Press, 1970.

Piaget, Jean. *Biology and knowledge*. Chicago: University of Chicago Press, 1971.

Piaget, Jean. *The principles of genetic epistemology*. New York: Basic Books, 1972.

Pinar, William. "The analysis of educational experience." In *Curriculum Theorizing: The Reconceptualists*, William Pinar (Ed.). California: McCuthchan, 1975, pp. 384-395.

Polanyi, Michael. *The tacit dimension*. Garden City, N.J.: Anchor Books, 1967.

Popham, W. James, and Baker, Eva L. *Systematic instruction*. Englewood Cliffs, N.J.: Prentice Hall, 1970.

Posner, George J. "Tools for curriculum devlelopment and research: Potential contributions from cognitive science." *Curriculum Inquiry, 8*, 4, (Winter) 1978, pp. 311-340.

Posner, George J. "Curriculum research: Domains of the field." *Journal of Curriculum Theorizing, 1*, 1, (Winter) 1979, pp. 80-92.

Posner, George J., Strike, Kenneth A., Hewson, Peter W., and Gertzog, William A. "Learning special relativity: A study of intellectual problems faced by college students." A paper presented at the International Conference Celebrating the 100th Anniversary of the Birth of Albert Einstein, Hofstra University, November, 1979.

Ripple, Richard, and Rockcastle, Verne (Eds.). *Piaget rediscovered*. Ithaca, New York: Cornell University Press, 1964.

Schaffarzick, Jon, and Hampson, David H. *Strategies for curriculum development*. Berkeley, California: McCutchan, 1975.

Schwab, Joseph J. "Structure of the disciplines: Meanings and significances." In *The structure of knowledge and the curriculum*, G.W. Ford and L. Pugno (Eds.). Chicago: Rand McNally, 1964.

Simon, Dorothea, P., and Simon, Herbert A. "A tale of two protocols." In *Cognitive process instruction: Research on teaching thinking skills*, Jack Lochhead and John Clement (Eds.). Philadelphia: Franklin Press, 1979.

Snow, Richard E. *A model teacher training system: An overview*. Research and Development Memorandum 92. Stanford, California: Stanford Center for Research and Development in Teaching, 1972. ED 066437.

Spencer, Herbert. *Education: Intellectual, moral, and physical*. New York: Appleton, 1860, pp. 32-70.

Taba, Hilda. *Curriculum development: Theory and practice*. New York: Harcourt, Brace and World, 1962.

Taylor, Philip H. *How teachers plan their courses: Studies in curriculum planning*. London: NFER, 1970.

Toumin, Stephen. *Human understanding*. Princeton, N.J.: Princeton University Press, 1972.

Tyler, Ralph W. *Basic principles of curriculum and instruction*. Chicago: University of Chicago Press, 1950.

Viennot, L. "Spontaneous reasoning in elementary dynamics." *European Journal of Science Education, 1*, 2, 1979, pp. 205-221.

Walker, Decker F. "A naturalistic model for curriculum development." *School Review, 80*, October, 1971, pp. 51-65.

Walker, Decker F. "Curriculum development in an art project." In *Case studies in curriculum change: Great Britain and the United States*, William A. Reid and Decker F. Walker (Eds.). London: Routledge and Kegan Paul, 1975, pp. 91-135.

Walker Decker F. "Toward comprehension of curricular realities." In *Review of Research in Education, 4.* Itasca, Illinois: F.E. Peacock, 1976.

Walker, Decker F., and Schaffarzick, Jon. "Comparing curricula." *Review of Educational Research, 44,* 1974, p. 83-111.

Yinger, Robert J. "A study of teacher planning: Description and theory development using ethnographic and information processing methods." Doctoral dissertation, Michigan State University, 1977.

Yinger, Robert J. "A study of teaching planning: Description and a model of preactive decision making." Research Series, No. 18. East Lansing, Michigan: Institute for Research on Teaching, July, 1978.

Yinger, Robert J. "Routines in teacher planning." *Theory Into Practice, 18,* 3, 1979, pp. 163-169.

Young, Michael F.D. "An approach to the study of curricula as socially organized knowledge." In *Knowledge and control,* M.F.D. Young (Ed.). London: Collier-Macmillan, 1971.

Zahorik, John A. "The effect of planning on teaching." *Elementary School Journal, 71,* 1970, pp. 143-151.

Zahorik, John A. "Teachers' planning models." A paper presented at the Annual Meeting of the American Educational Research Association, Washington, D.C., 1975.

Za'rour, G.I. "Science misconceptions among certain groups of students in Lebanon." *Journal of Research in Science Teaching, 12,* 1975, pp. 385-392.

A Substantiation of Macdonald's Models
In Science Curriculum Development

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The selection and organization of content is the special function of curriculum development. During this activity the problem of translating the aims of the curriculum into content requires the developers to make judgments about content priorities. Unfortunately, the kind of value perspectives of the developers involved in curriculum development have seldom been clearly delineated and, as different models are used in developmental procedures, this omission has created problems for those educators involved in curriculum implementation. Such problems existed during the past two decades when many science teachers became disenchanted with curricula they had initially welcomed.

Criticism of science curricula developed during this period alleged that excessive pressure on students studying science had resulted from stringent secondary school curricula.[1] Such curricula, it was claimed, lacked interdisciplinarity, reference to practical applications, or relevancy for the adolescents concerned with the influences of science and technology.[2] Declining enrollments and increasing failures among the most able students were attributed to the excessive pressures associated with physical-science curricula such as chemistry.[3] However, it is possible that such problems and criticism arose from a lack of knowledge of the different kinds of value perspectives that were involved in the curriculum development models used. The resolution of the problem regarding the effect of different curriculum development models on content selection awaits further information, and it is in this area of concern that this article aspires to make a contribution.

The purpose of this investigation was to obtain information concerning the selection and organization of content for science curricula when different development models are involved. The framework upon which the investigation was based is Macdonald's three curriculum development models.[4] Support for the use of these models can be found in the different proposals for curriculum development made by various curriculum conceptualists and the fact that each model describes developmental procedures observed in the field. The evidence obtained from both the theoretical and practical areas of education substantiated and thereby gave credibility to the development models identified by Macdonald.

This article is divided into six sections. Section one presents the three curriculum development models which have been identified by Macdonald. These models are given support by a number of propositions found in section two that were made by various curriculum conceptualists. Inherent in each of the propositions are values which are readily associated with one of the models. Section three presents the background to the problem and illustrates how a number of factors influenced the changes made in science curricula during the past century. Section four examines a number of studies which show how a number of different methods were utilized in the selection of content for science curricula. The fifth section presents the methods of validation and criteria used in the selection of content for a science curriculum. The final section is a brief description of an empirical study undertaken by the author to determine whether the outcome of the three models was different when related to the development of junior high school physical science curricula.

1. Macdonald's Curriculum Development Models

Macdonald believed that it was not possible for curriculum developers to deal with the curriculum as a purely objective phenomenon. He claimed that from the outset the developer maintains a stance or an orientation to curriculum phenomena. Such orientations affect the decisions made in curriculum development

and are reflected in the designs that result from such judgments:

> Thus, subject matter curricula are sets of value judgments that prize knowledge (cultural heritage) over social uses or personal interests. Problems of living designs prize society first and emerging needs proposals have individual welfare primarily in mind.[5]

In effect, the resulting curriculum designs are patterns of value judgments and such patterns have also been recognized by Hyman[6] and, Eisner and Vallance.[7]

The three "ideal types" of curriculum development model identified by Macdonald are known as: 1) Linear-Expert, 2) Circular-Consensus, and 3) Dialogical. He considered that inherent in each one of the three models are basic human intentions grounded in what Polanyi refers to as "tacit dimensions."[8] It is the application of these values during developmental procedures which leads to varying results in content selection.

The three curriculum development models identified by Macdonald are related to "the cognitive human interests of control, consensus, and emancipation."[9] These human interests are reflected in the following outlines of his models:

1. The Linear-Expert model is based upon the basic human interest of control. The developmental procedures in this model are dominated by experts who attempt to maximize control by the discipline. The whole process therefore "is controlled and monitored with specific goals in mind, and it is the experts who make the initial and final decisions about the validity of the content and process."[10] The nationally-developed science curricula produced in the United States during the 1960's are examples of discipline-controlled curriculum developments. Most of these curriculum projects were initiated by discipline scholars at the university level who prepared the materials and tried them out in the schools. The experts then obtained feedback regarding the results in the classroom; then rewrote, piloted, and finally revised the curriculum materials for broad distribution.[11] In this manner, the discipline scholars controlled the development of the curriculum and thereby maintained the integrity of the discipline.

2. The Circular-Consensus model is based upon the basic human interest of consensus. This model is commonly referred to as the "grass roots" approach to curriculum development since it involves teachers, administrators, and community in the developmental process, with experts on call if needed.[12] All members of this group are regarded as being of equal rank in the deliberation process. In this model, there is a conviction that unless teachers are present and participate in the process of curriculum development, the curriculum materials which emanate from this process will be misused in the classroom.[13] It is recognized that there is some rhetoric of control in the developmental process of this model but that consensus and communication are the more important outcomes.

3. The Dialogical model is based upon the emerging needs of the student and is supported by two propositions found in the next section. The development process in this model involves the educator entering into a dialogue with students and it is from an assessment of the results of this discourse that the curriculum emerges. Initially, the teachers identify student leaders with whom the educators engage in dialogue from which they attempt to establish their needs. The adults then attempt to provide a match between the cultural resources known to the adults and the expressed needs and interests of the students.[14] In this manner, the model actively involves the student in curriculum development.[15] During the developmental process used in this model the needs of the student are given priority over the social and discipline content of the curriculum.

Inherent in each of these models are the values and perspectives of the curriculum developers which have

an influence on their decisions for content selection. A number of different propositions that were made by curriculum conceptualists and which have the same important attributes as Macdonald's models will be presented in the next section.

2. Propositions for Curriculum Development

This section is devoted to presenting those areas of the curriculum literature which are related to this investigation since they deal with the selection and organization of content for a curriculum. In particular, it will present the different value perspectives found in the propositions made by various curriculum conceptualists which can be associated with Macdonald's development models.

The first two propositions to be examined will be representative of those which emphasize the importance of the discipline's control over content selected for a curriculum. These propositions will be followed by two others which value the needs of society and see the role of consensus in curriculum development as an essential. Finally, two proposals which are concerned with the growth needs of the students and place emphasis on these needs will be examined. The section will close with a summary of those aspects of the various propositions for curriculum development considered pertinent to this presentation.

Discipline-Oriented Conceptions of Curriculum

The following two propositions for curriculum development are concerned with one of the three sources recommended by Tyler,[16] subject matter specialists. The first proposal is by Phenix,[17] and the second by King and Brownell.[18] Both of these propositions stress the importance of the disciplines in curriculum development. The proponents consider that only knowledge found in the disciplines is suitable for a curriculum. Their argument is that since discipline scholars have an intimate knowledge of the disciplines which allows them to make intelligent decisions, they should control the process of curriculum development.

The proposition made by Phenix[19] for curriculum development will now be examined. He viewed the discipline as "a conceptual system whose office is to gather a large number of cognitive elements into a common framework of ideas"[20] He considered that the goal of a discipline is the simplification of understanding by the use of significant patterns and relationships. The systematic categorization found in the discipline "renders the profusion of cognitive experiences intelligible"[21] and thereby serves as a valuable resource of materials for curriculum development. An understanding of the categorization of knowledge found in the disciplines should allow the curriculum developer to make intelligent decisions in the selection and organization of content for a curriculum.

Evidence as to the usefulness of content for a curriculum is provided by the scholars who are intimately associated with the discipline. These scholars are referred to as specialized men of knowledge "who have identified and followed the ways of maximum learning of their discipline."[22] Furthermore, Phenix claimed that the "systematic learning experiences of the men of knowledge would provide useful standards for anyone who sought understanding in their disciplines."[23] Thus, those scholars who have an expertise associated with a discipline are extremely useful in the selection and organization of content for a curriculum.

The expertise possessed by the discipline scholars allows them to apply the principles of content selection outlined by Phenix. It is this knowledge which enables them to select:

1. Content of instruction which is drawn entirely from the fields of disciplined knowledge,
2. items of knowledge that are particularly representative of the field as a whole,
3. content that exemplifies the methods of inquiry and modes of understanding in the discipline, and,
4. materials that should arouse imagination.[24]

These principles reveal Phenix's concern that only authenticated knowledge should be in a curriculum, and that key concepts economize learning.[25] The intimate knolwedge of the discipline possessed by the discipline scholar allows him to satisfactorily apply these principles in the selection and organization of content for a curriculum.

The second discipline-oriented proposition is by King and Brownell.[26] These curriculum conceptualists are in agreement with Phenix regarding the academic competence of an educator required to select content for a curriculum. They stated that the curriculum specialist should "function as the conscience of the discipline in the schools and as a conscience to the full body of the discipline about its responsiblity to the young.[27] In their opinion the curriculum specialist should function as a discipline scholar by making contributions at the university level and must also maintain the integrity of the discipline in the school's curriculum. As a person with expertise in the structure of the discipline, the scholar is expected to exert influence and play a dominant role in contemporary curriculum development. King and Brownell insisted that the curriculum specialist be academically able in the discipline for which the curriculum is being developed and serve as a resource person to the curriculum generalist whom they regarded as an administrator in the field of education.

In this distinction between curriculum specialist and generalist, King and Brownell maintaned that the scholar's responsibility was to the discipline in curriculum development. They considered that the content selected should be the fundamental ideas of the discipline and "the fundamental can only be established by thinkers in the discipline"[28] As the thinker in the discipline, the curriculum specialist occupies an important role in content selection if the true nature of the discipline is to be reflected in the curriculum.

To maintain the true nature of the discipline the curriculum specialist must ensure that the curriculum be an epitome of the discipline in every respect.[29] It is thus essential that priority be given to the judgments of the specialists in the analysis, criticism and appraisal of content in curriculum development.[30] As the representative of the intellectual commuity, the specialist acts as the custodian of the fundamentals of the discipline. Therefore, the curricular decisions pertaining to the selection and organization of content for a curriculum belong to the specialist.

These discipline-oriented curriculum conceptualists are examples of that perspective of the curriculum which considers that only the knowledge found in the discipline is suitable for a curriculum. For that reason, the process of curriculum development should be dominated by experts who are capable of making intelligent decisions pertaining to the selection and organization of content for a curriculum.

The human interests reflected in both of these conceptions of a curriculum are discipline-oriented. This orientation considers that the most powerful products of man's intelligence are to be found in the academic disciplines and that the curriculum is the medium through which the student can acquire this knowledge. Also, it is only possible to build such a curriculum when the developmental procedures are dominated by discipline scholars. Other propositions for curriculum development have a different viewpoint and value societal needs above those of the disciplines. Such values can be seen in the two following propositions which consider social values and representatives of the community employing a group process for curriculum development.

Societal Conceptions of Curriculum

The first proposition examined is that by Schwab[31] which strongly supports social values and the role of consensus in curriculum development. He considered that although the knowledge of the disciplines possessed by the scholars made them indispensable for the task of curriculum development, their lack of knowledge in four other areas prevented their being the sole arbiters. These areas are concerned with knowledge of the learner, the milieu, the teachers, and the curriculum. Schwab considered that all of these areas

must be represented and the curriculum work involved must be done in collaboration.[32] Each member of the group involved in this model should recognize the concerns, values, and operations of the others and seek agreement among themselves in the judgmental factors in curriculum development.

Schwab recognized that such a group process in curriculum development will ultimately arrive at a body of educational alternatives from which choices must be made. The choices will not entirely satisfy the consensus and values of any one participant but will "satisfy the collective more than does any other constellation of educational means."[33]

Each person involved in the translation of the discipline into a curriculum must recognize that the scholarly materials are the resource and that the integrity of the discipline must be maintained. Schwab[34] considered the role of the scholar as one that ensures that all materials in the curriculum are authentic to the particular discipline and in no way distorted. Those persons with knowledge of the learner will be concerned with the problem of matching curriculum with the learner's needs and interests. The representatives of the milieu will use their knowledge to develop a curriculum which is relevant to the students' needs in the community. Those persons who have knowledge of the teachers are able to judge the various aspects of the curriculum with respect to what teachers can and are willing to do. Finally, the educator with expertise in curricular development will instigate and administer the translation of scholarly materials into a defensible curriculum.

This proposition for curriculum development saw representatives of the four commonplaces of equal rank which "must be included in the deliberating group from the start."[35] They are: the learner, the teacher, the milieu, and the subject matter. Basically this proposition involved the bringing together of the values inherent in each of the four commonplaces to ensure that they will be weighed against each other throughout the entire developmental process.

The second proposition for curriculum development which is also supportive of the use of a group process and consensus is one made by Walker.[36] His naturalistic model for curriculum development has three elements: "the curriculum platform, its design, and the deliberations associated with it."[37] He believed the curriculum platform to be the developer's ideas of what is, and a vision of what ought to be. Such ideas represent the values and beliefs that guide the development of the curriculum. However, the process of deliberation is seen as the important element of curriculum development since it is the process by which discussion among members of the group occurs and consensus is achieved.

The importance that Walker attached to the developmental process is seen in his perception of the main operations in deliberation. They are:

> formulating decision points, devising alternative choices at these decision points, considering arguments for and against decision points and decision alternatives, and finally, choosing the most defensible alternative subject to acknowledged constraints.[38]

He considered that the decisions which result from such deliberation are more readily defended or justified. And, although such deliberation may take many forms, the most common practice today is argumentation and debate by a group of people. During such debate the beliefs and values of the individuals are communicated to the other participants; thus an understanding which may result in consensus is achieved.

These perceptions of curriculum development exemplify those propositions which view the role of education and curriculum content within the larger social context. Such a curriculum requires the use of a group process in which representatives of the various aspects of the community attempt to reach a consensus throughout the developmental processes. However, propositions for curriculum development made by

other conceptualists regard the curriculum as the medium which aids the student in personal growth. Such propositions consider that the needs of the students should be a major influence in curriculum development. These will be examined next.

Humanistic Conceptions of Curriculum

The following propositions for curriculum development stress the need for the curriculum to accommodate the needs of the students. The main focus of this perception is concerned with the selection of content which encourages man's personal and interpersonal development. Such a concern for the student's development is shown by Sergiovanni and Starratt[39] when they claimed that: "the purpose of general education is to lead the human person to a discovery and appreciation for its own sake, of himself and others and the world about him."[40] They considered that curriculuar programs should be developed so that the students can grapple with contemporary problems in a personally meaningful way. This activity should enable students to "continually seek for the human significance of what he learns in the realms of knowledge."[41] It is therefore necessary to develop a curriculum which incorporates the pressing problems of the day and which is committed to the individual's personal development.

An important basic assumption that was made by Sergiovanni and Starratt is that "the educator's primary function is to become obsolete."[42] They assumed that the mental growth of the students should allow them to pursue their own learning by using the knowledge and skills the educator has helped them acquire. This assumption is illustrative of their concern that the growth needs of the student take precedence over all other curriculum considerations, thus:

> Curriculum-instructional programs should be designed in conformity to the growth patterns of students. The human growth needs of the students should never be subordinated to objectives dictated by the needs of society and the demands of the disciplines.[43]

They envisaged the continual growth of the individual in which he moves beyond independence to interdependence, to increased self-activity in the process of becoming a mature human person. The growth of the individual is thereby seen as a major curriculum concern. The selection and organization of content for such a curriculum should reflect this influence.

Sergiovanni and Starratt saw the student's concern as growth needs; for, "as the social needs become relatively satisfied, the student begins now to seek recognition for his own achievements."[44] They based their perception of curriculum development on Maslow's description of human growth[45] in which an individual transcends those activities involved in "becoming" to that state in which he enjoys "being" who he is. The authors believed that by providing more experiences of achievement in the curricular-instructional program:

> The student could feel more enthusiastic about learning, (...) accept more autonomous responsibility for his learning, (...) and to seek fulfillment and self-actualization through learning activities.[46]

The concerns of the student were seen to be a vital element in the school's curriculum if an emotionally healthy maturation of the individual is to occur.

Weinstein and Fantini[47] argued along similar lines and constructed a model for developing a curriculum of affect. They considered that education in a democracy should "have a broad human focus which is best served by educational objectives resting on a personal and interpersonal base and dealing with students' concerns."[48] To achieve this end the content of the curriculum should be personally meaningful and relate cognition to the learner's concerns for himself and for others. Such a curriculum would enable the student to

live harmoniously within the biosphere.

Three major patterns of the learners' concerns were identified by Weinstein and Fantini.[49] The first major concern of the learners was about their self-image, how they were perceived by themselves and by others. The second was disconnectedness, a wish to establish links with others, with society, and to know where one fits into things. Control over one's life was the students' third concern. Weinstein and Fantini stated that these needs of the students must be "recognized and understood if the teacher is to develop a curriculum that meets the pupils' concerns."[50] In this respect, curriculum developers must recognize that the student body is an essential resource for the development of a curriculum.

These two perceptions of curriculum development are illustrative examples of those propositions which consider that the needs and interests of the students are a controlling influence in the selection and organization of content for a curriculum. In effect, the curriculum developers should match the cultural knowledge and resources known to adults with the growth needs and interests of the students for whom the curriculum is intended.

In summation, inherent in the three "ideal types" of curriculum development model identified by Macdonald are values and perspectives peculiar to a particular model and, therefore, different to those in his other two models. Furthermore, Macdonald considers that these different values and perspectives influence the decisions made in the selection and organization of content for a curriculum.

The various propositions for curriculum development examined in this section illustrated the particular values and perspectives of the conceptualist involved. Since these propositions reflect the same values and perspectives found in Macdonald's three development models this agreement is readily identified with and gives credence to the validity of the models.

Initially, the propositions made by Phenix, and King and Brownell, could easily be associated with the discipline-oriented approach to curriculum development in Macdonald's Linear-Expert model. Both the model and the propositions stressed the importance of the discipline's content and reflected values that prize knowledge over all other curriculum considerations. In this respect, knowledge of the discipline was seen as a controlling factor in which discipline scholars maintained the integrity of the discipline during content selection. Thus, agreement could be seen in both the model and the propositions for the primacy of knowledge to which all other curriculum considerations are subordinate. The level of agreement between the values and important attributes for both the propositions and the model indicates support for the credibility of Macdonald's Linear-Expert model.

Agreement could also be seen between Macdonald's Circular-Consensus model and the propostions made by Schwab and by Walker. Both the propositions and the model stressed the importance of social values and viewed the consensus of the participants as necessary for the selection of content in curriculum development. The values held by each participant should be clearly stated and carefully weighed in a deliberate attempt to reach a consensus during the developmental process. The emphasis on societal values and the role of consensus in the propositions provide credence for the above curriculum development model identified by Macdonald.

The humanistic propositions of Sergiovanni and Starratt, and Weinstein and Fantini, prized the emerging growth needs of the students as being the most important concern in curriculum development. These two propositions stressed the necessity to match the knowledge of the culture with the need and interests of the students. Both the values and attributes inherent in these propositions are in very close agreement with Macdonald's description of his Dialogical model. In this respect, the propostions give support to this curriculum development model identified by Macdonald.

In general then, the propositions give considerable weight to the notion that there are distinct models for curriculum development and that each model represents beliefs and values peculiar to that model.[51,52, 53] Macdonald has claimed that it is these different value positions and perspectives in curriculum development which affect curriculum thinking and thereby make for differences in curriculum decisions, in particular, those pertaining to the selection of content for a curriculum. Such differences in curriculum decisions result in different curriculum designs. From these considerations it should be possible to identify and categorize science curriculua according to the paradigm provided by Macdonald for each of his three curriculum development models.

The next section presents an historical perspective of curriculum development and change in the sciences. It illustrates how many factors influenced the changes made in science curricula during the past century. It also shows how professional organizations recognized the changing socio-economic conditions of the time and established special committees to make recommendations to accomodate the changes for a relevant curriculum. In this respect, it is possible to discern the change in values and perspectives that are inherent in the committees' recommendations for the selection of content. The values and the perspectives in the recommendations can be associated with the propositions and models for curriculum development which were presented in the first two sections.

3. Background to the Problem

Over the years many factors have influenced the selection and organization of content for a school's science curriculum. According to Underhill,[54] the changing socio-economic condition was the major influence among many which affected these developmental activities.

Two definite influences on content selection and its organization can be identified during the 1850's. During the early years of this decade didactic literature was introduced into North America from Britain. Most of the material used with the didactic method was directed to children's observation and to the study of natural phenomena.[55] A second influential factor was the adoption of the "Pestalozzian object-teaching" method in the late 1850's. In this movement the object-study lessons were specially designed to cultivate the student's perceptive faculty by emphasizing the observation and description of animate and inanimate objects. Unfortunately, the object-teaching method proved to be ill-suited to the purpose and needs of teachers and pupils in a rapidly developing industrial society,[56] and changes were made to accomodate the social and economic conditions of the time.

Developments in the fields of science and technology in the latter half of the nineteenth century were reflected in the steady growth of the number of natural science curricula offered by the schools.[57] These new curricula attempted to meet the social needs of a growing technological society and emphasis was placed on content selection that was conducive to the utility of the content for the market place. However, the preparation of scholars and informed citizens was not overlooked for:

> (...) there is considerable evidence that, although the sciences did not neglect the immediately practical, there was primary concern for the critical thought processes, attitudes, and fundamental understandings.[58]

Even thought the science curriculum was intended to be practical in terms of the environment the curriculum developers were also concerned with knowledge which might serve the student at a later date in higher education.

During the latter half of the nineteenth century, the colleges became a major influence over the selection and organization of content for high school science curricula:

In 1872 Harvard College announced that physics and other high school sciences would be accepted for credit if the courses followed a prescribed outline of content. Other colleges quickly followed suit and until the beginning of the twentieth century, high school curricula, including science, were little but college preparatory.[59]

To meet this end, college professors wrote the high school textbooks and developed science curricula in accordance with the standards and requirements set by the colleges. In this manner, high school science curricula were patterned after the college science courses,[60] and gave emphasis to factual information.

Concern was expressed at the turn of the century that the curriculum did not meet the divergent needs of the students, consequently, most of the students were unable to profit from a high school education.[61] In response to this expressed concern, a general science curriculum was developed that would: appeal to students' interests, needs and environmental experiences, and stimulate interest in some of the specific sciences.[62] In this manner, the general science curriculum had an important function in terms of a general education. Not only did it point out the laws, generalizations, and principles of science, but it served as a period of exploration and orientation to science for students committed to study science at a higher level.

A rapid growth occurred in the school population between 1910 and 1930. This period saw a continuing emphasis toward general education and changes occurred in the control over the selection of content for science curricula. With the growth of the student population "college professors became preoccupied with their own burgeoning fields of endeavor and paid less and less attention to what was going on in the schools."[63] As the influence of the colleges over science curriculum content decreased, teachers assumed responsibility for the development of high school science curricula, and the writing of textbooks. This controlling influence over the science curriculum by professional educators was maintained until the late 1950's.[64]

Several important developments occurred during the 1930 to 1960 period of time when professional organizations undertook evaluations of the role of science in education. During the early 1930's considerable emphasis was placed on the implementation of those principles of science which were of significance to general education.[65] The literature of the professional organizations reflected this concern and in 1932, Part I of The Thirty-First Yearbook of the National Society for the Study of Education (N.S.S.E.) was devoted to A Program for Science Teaching.[66] The Committee which produced this report was composed of scientists and educators who advocated basing the selection of science content on personal and social criteria.

The report noted that attempts to determine the content for a science curricula had been made by:

1. Studies of interests of children and adults as revealed in the questions they ask in response to questions, and,
2. Studies of scientific principles that have recognition in newspapers, magazines, and other printed materials.[67]

It was recognized that such studies have inherent weaknesses; in particular, one cannot ask the students questions about phenomena of which they are not aware; consequently, important areas of science may be omitted from a curriculum. Nevertheless, the studies were of a useful nature inasmuch as they "served an important function in keeping alive the feeling that courses do need revision and that the sources of these revisions must be sought through research."[68] In effect, the N.S.S.E. felt the need for curriculum studies that would delve more deeply into the development of science curricula.

The Committee also considered that the experience and training of college and university teachers were

too far removed from the practical classroom experience for which their school science curriculum text-books were written. Much of the content found in the textbooks at this time was inappropriate and inef-fective in the schools' science curriculum. The attempts by classroom teachers and administrators to im-prove content "very often resulted in the selection of subject-matter materials that are more appropriate to the interests and needs of the pupils;"[69] however, the Committee felt that some valuable and proven mater-ials had also been omitted. To overcome the weaknesses in selecting content the Committee recommended the involvement of the following persons:

1.   Subject-matter specialists who insure that the materials are accurate and up-to-date.
2.   Classroom teachers and supervisors who refine the materials in the light of their appro-priateness of content, and,
3.   Specialists in the teaching of science who contribute a knowledge of developments in the field with respect to educational research.[70]

The Committee considered that these persons were the best qualified to determine the content which was most likely to serve the need of the students.

A lack of guidance in the selection and organization of content for a science curriculum was also recog-nized by the increasing voluminousness of textbooks and syllabi produced.[71] To avoid such excesses in content the report stressed the necessity to concentrate on the "big ideas" of science and outlined fourteen guiding principles for the selection of general science content. Five of the principles focused on content and learning activities which should be useful to the student during his daily interaction with the environ-ment; they were:

1.   The course shall consist of a variety of physical and mental activities that shall lead to those knowledges, skills, interests, and attitudes essential to desirable mental and practical adjustments to the environment.
2.   The content of the course shall bear direct significance to life's problems and activities.
3.   The learning activities shall call for experience with materials and forces of everyday life.
4.   The activities shall be such that they lead to the comprehension of the elementary gen-eralizations of science that have important social implications.
5.   The activities shall include abundant opportunities to apply the acquired knowledges, skills, and attitudes in life situations.[72]

These selected principles also illustrate the Committee's concern that the selection of content be based on personal and social criteria which were in line with the educational thinking of the time.

The N.S.S.E. devoted Part I of its Forty-sixth Yearbook, 1947, to Science Education in American Schools.[73] The Committee for the Society's Yearbook recognized a need for some reorientation in science curricula to accomodate the developments in science and the prevailing social-economic conditions. The Society simply stated:

It is imperative that the science curriculum be reviewed in the light of the advancement in scientific knowledge in areas directly related to impending problems of readjustment entailed by the social and economic dislocations of modernized warfare.[74]

Furthermore, the report was concerned that any reorientation which may occur in the science curricula should take cognizance of the associated research and experimentation.

After conducting an analysis of contemporary research in science education it was suggested that the

criteria to be used for the selection of content for junior high school science should:

1.   Be in harmony with the accepted objectives set up for the pupils.
2.   Lead to the inculcation of appropriate scientific attitudes and the understanding of the methods of science.
3.   Encourage the belief in, and practice of, desirable social ideals involving science.
4.   Be of direct use to pupils in their daily living.
5.   Be appropriate for the ability level of the pupil.
6.   Aid pupils in the interpretation of the local and world environment.
7.   Be in harmony with the needs and interests of the pupils.[75]

These criteria were condensed from related research activities by the Society's Committee which was concerned that the teaching of general science should deal with the personal-social needs of the individuals and the problems of everyday living. Also, the content of a general science curriculum should be conducive to the "growth of skills in the use of the elements of scientific method"[76] in problem solving.

It was pointed out tht it was not possible to use all of the methods of science on every occasion when new content was introduced, but that educators should assume responsibility for matching content with problem-solving techniques. Furthermore, if "skills in problem-solving, like other skills, are developed only by repeated use day after day in the classroom,[77] then scientific methodology should be practised and encouraged in the daily life of the student. To achieve this end, the Committee outlined the specific skills in problem solving under the following titles:

1.   Sensing a Significant Problem.
2.   Defining Problem Situations.
3.   Studying the Situation for All Possible Clues and Facts Bearing upon the Problem.
4.   Making the Best Tentative Explanation or Hypothesis.
5.   Selecting the Most Likely Hypothesis.
6.   Testing the Hypothesis by Experimental or Other Means.
7.   Accept Tentatively or Reject Hypothesis and Test Others.
8.   Drawing Conclusions.
9.   Applying Principles.[78]

This emphasis on the methods of science and their usefulness in the solution of problems encountered in daily life is a theme to be seen more frequently in the more recent evolution of science education in which importance is attached to the functional aspects associated with content.[79]

In 1960, Part I of the Fifty-ninth Yearbook of the National Society for the Study of Education was devoted to Rethinking Science Education.[80] Its purpose was to evaluate the increasing significance of science in our culture and to redefine the role of science education.

The Committee was concerned that:

> Through the practical applications of scientific discovery our civilization is undergoing constant change. In turn, these changes bring about situations which threaten the well-being of future generations. The welfare of our civilization is now almost wholly dependent upon scientific progress. Society must respond with adequate and intelligent control.[81]

The selection and organization of content for the school's science curriculum should accomodate the needs of the students for the changing conditions of a society increasingly dependent upon science.

The report was general in nature and suggestive rather than prescriptive as in the two earlier reports on science education. No attempt was made to identify specific objectives or the associated content for a particular grade level. The report suggested that the general science curriculum should draw upon all of the various disciplines of science for its content. The organization of the curriculum should "relate to the broad areas of human activity in which the selected content and methods of science play important roles.[82] this reflected the concern of the Committee that the process element of science, the attitudes and investigative procedures, are as important as its product element, the content.

Another change occurred in the Committee's concern for improving secondary school science. In the selection of content and the organization of science curricula, the report noted that:

> For the past twenty-five or thirty years science curriculum materials, such as courses of study, textbooks, and the like, have generally been written by secondary-school science teachers and science educators in the colleges and universities. However, within the past few years scientists in greater numbers than ever before have become concerned about the secondary-school science curriculum.[83]

The report recognized the criticism of the past, that scientists who had developed high school science curricula had been too far removed from the realities of the classroom for the content to be relevant to the needs, interests, and abilities of the students. Nevertheless, the Committee pointed out: "it is now quite evident that, to bring about the needed reorganization and revitalization of science courses in secondary schools, cooperation of the scientist will continue to be necessary.[84] The degree of cooperation was never clearly defined and, in the main, the science curricula produced during this time were dominated by university scholars.

The roots of the curriculum-reform movement of the sixties were actually formed during the latter half of the 1950's. The modern science curricula that were developed revealed the various influences that were acting upon content selection, and the report noted that:

> Although high-school science teachers and educators have assisted with the development of these courses, the scientists have played a major role in defining the purpose of the course and the organization within which they will be developed.[85]

This trend, along with the change of emphasis in content to be selected, continued throughout the sixties. To understand science it was considered necessary to think like a scientist by undertaking an investigation which utilized the materials, concepts, and methods unique to science. The content of the science curriculum, the product element of science, was to be acquired by the student using the process element of science in the form of the inquiry method. The identification of such content therefore became a prime aim for the science curriculum developer.[86]

The Physical Science Study Committee (PSSC) physics project emphasized the inquiry method and was the first of the major science curriculum reforms to get under way on a large scale.[87] Initiated by scientists at The Massachusetts Institute of Technology, the PSSC received its initial support from the National Science Foundation in 1956. The curriculum development was undertaken by a group of scientists, science educators, science teachers, and psychologists.

> In the early stages (though not at the very beginning) physicists found that the change they wished to effect in high school physics were of such a fundamental nature that a fresh start was the only sensible strategy. A prime aim was to present physics as a system of inquiry.[88]

The decisions regarding the content and its organization for this course were dominated by the scientists who had initiated the project. Their knowledge of the structure of the discipline allowed them to identify the content for a physics course, and to organize it in such a way that students were to acquire their knowledge of the content through investigative procedures.[89]

In summation, the literature reviewed so far illustrates how changing environmental factors influenced the selection and organization of content for a science curriculum. The changing socio-economic conditions in the 1850's resulted in a change in curriculum content. The didactic literature brought to North America from Euope was no longer suitable for the needs of a developing technological society and it was replaced by content that was utilitarian in nature. It was also recognized that high school science curricula patterned after college science courses failed to meet the needs of those students who were not college bound, or interested in science. Teachers were considered to have an understanding of the personal and social needs of the students but unfortunately the curricula they developed omitted many important science topics. One key issue became apparent, there was a growing recognition of the importance of content selection and a need for studies that would provide guidance in this important area. Studies that were undertaken in content selection are reviewed in the next section.

4. Methods and Sources Used in Studies on Content Selection

One fairly common method used in studies on content selection was the construction of an initial list of science concepts from an analysis of textbooks used in general science. Studies which used the analysis of content in a textbook method were undertaken by Pettit[90] in 1940, and others. The general format of such an analysis was to determine the extent to which agreement existed among the textbook authors as to what content should be included, the topics used to develop common units, and the degree of emphasis given to the various concepts found in the textbooks.[91] A study was then made by the researcher of the data collected from the analysis to determine the existence of commonalities that would aid in the development of a general science curriculum.

Another method used in studies on content selection for a science curriculum was the analysis of content present in a combination of science textbooks and successful science courses. Such studies were undertaken by Cureton, 1927[92], Robertson, 1935[93], Martin, 1945[94], and others. The analyses conducted were similar to those for general science textbooks, only this time a number of courses of study would also be analyzed. The data collected were then carefully examined to determine commonalities which became the new general science curriculum.

Other ways to determine the content for a general science curriculum were also employed. Novak, 1942[96], conducted an analysis of newspapers. The major criterion of importance in this study was the relative amount of space given to a specific topic in the newspaper. Ruffner[97,] found that the science interests of the students allowed her to determine the areas to be included in a general science curriculum. Matteson and Kambly, 1940[98], used the results of test items which revealed the knowledge, of science possessed by students entering grade seven to determine the content. The topics not known by the students were to form part of the content for a junior high school science curriculum.

Janke in 1969[99], Roth, 1979[100], and Thompson in 1970[101], went directly to the scientists themselves to produce a list of concepts as the content which would form the base for a science curriculum.

These studies usually resulted in the formation of a list of hundreds of topics, as in the Curtis[102] study, which listed eighteen hundred fifty topics. Such lists reflected the desire of educators to identify the "big ideas" and "functional principles" suggested in The Thirty-First and Forty-Sixth Yearbooks of the N.S.S.E. Once the list had been derived, there was a need to evaluate the concepts regarding their suitability for a specific course. In the case of the science textbook, or the combined textbook-syllabi studies, the judg-

and space devoted to the topic in newspapers, or journals, likewise determined the suitability of the topic for inclusion in a science curriculum. Other studies have utilized the experience of juries composed of university professors, (Martin, 1945,[103] Roth,1969, [104] elementary and high school teachers or laymen, (Smith, 1951,[105] Trainor, 1964[106]), and Science educators (Blanchet, 1949[107], Blanchet[108], Bryant, 1959[109]).

These studies were inadequate in their methodology which seriously affected their outcome. They lacked a broad perspective representative of different viewpoints considered necessary in curriculum development. For example, those studies which made use of materials found in textbooks or syllabi failed to recognize the importance of the representatives of the discipline and their expertise in selecting contemporary content for the curriculum. In those studies concerned with newspaper and journal articles there was the omission of tried and proven classroom materials that are usually found in textbooks. Collectively, these studies reflect the researcher's beliefs in the significance of published materials and show little regard for the needs, interests, or viewpoints of others.

Craig's study, 1927,[110] used many sources and was undertaken in order to design a course of study in science for the Horace Mann Elementary School in New York City. The following three criteria were utilized in the selection of science content. The content should:

1. Greatly influence the thought reaction in many fields,
2. Conform to those goals that are important in establishing economy,
3. Conform to those facts, principles, generalizations, and hypotheses of science which are essential to the interpretation of common natural phenomena.[111]

The principles of science which were selected as content in this study were derived from many sources such as the Nature Study Review, journals, textbooks, and courses of study. An initial list of two hundred principles was constructed from these resource materials. Each principle on the list was then evaluated by one hundred eighty-eight laymen who judged the importance of the principle according to the role it had played in their own lives. The degree of importance attached to a principle was recorded on a one-to-five point scale.

Another important phase in the study involved the questions students ask about science. Students in ten schools were requested to list the questions about science that they would like answered. The resulting list included questions involving the phenomena studied in astronomy, biology, chemistry, geology, and physics. A visual comparison was then made between the principles on the initial list and the frequency of the questions asked by the students regarding those principles.

An analysis of a random sampling of authoritative treatises of science (in the main, these were textbooks), was then undertaken to determine whether the two hundred principles could be distinguished into constituent elements or meanings for teaching. The science textbooks used in the study were then examined to determine the frequency with which each listed principle appeared in them to establish their relative importance.

From the results of his study, Craig recommended the use of many criteria including the three he had employed; also, that many sources should be used to derive the content for a science curriculum. He concluded that definite items or objectives of interpretations of natural phenomena should be utilized as the constructional units for building the curriculum. He found that the studies on the children's questions, and the educated laymen's judgments, indicated the greater value of the interpretation of the natural phenomena.

The purpose of Bingham's study, 1961,[112] was to determine what science should be taught in the junior high schools of Hillborough County, Florida. He conducted his study along similar lines to Craig's by following the recommendaitons relating to sources for selection of content, many criteria, and student needs. The laymen's judgments were replaced by those of teachers.

A group of twenty-one science teachers, mostly at the junior high school level, worked with the investigator in the study. As a group they surveyed contemporary textbooks in general science, biology, and physcial science, then checked contemporary developments in leading scientific journals. From their analysis they prepared a list of one hundred twenty-one questions which included the content they had selected as being of possible significance, the content that appealed to students, and content which teachers felt should be taught in the junior high school.

Criteria were formulated from relevant literature and used for judging the worth of content for inclusion in a junior high school science curriculum. These criteria dealt with the development of basic intellectual understandings, interests, attitudes, and skills needed in solving health, safety, and economic problems of the individual in society. Four hundred eighty-one students responded to the questionnaire of which three hundred sixty-eight were junior high school students, and one hundred thirteen were accelerated senior high school students. Ninety junior and senior high school science teachers responded to the questionnaire. The results of the questionnaire showed areas of agreement between teachers and students as to what should be taught, and some disagreement in other areas. For example, students showed a high level of interest in the reproduction of plants, animals, and humans; however, the teachers felt that only plant reproduction should be taught.

The results illustrated that there was a wide difference in the background and interests of the students. This difference also occurred within the group of teachers. The study indicated that teachers should continue to teach those topics which were of immediate concern to students.

It was concluded by Bingham that the method utilized in the study to determine content for a science curriculum was suitable for use in science curriculum development. Furthermore, the study had value in pointing out those subject matter areas where more emphasis should be placed.

Craig's study generated considerable interest in the selection of content for science curricula and shortly after his study was published a number of similar studies were undertaken in the various disciplines of science. Robertson, 1934,[113] investigated a number of these studies, and thereby used them as a source of content.

The purpose of Robertson's study was to determine the content which would serve as suitable goals of instruction by answering children's questions and contributing to their understanding of scientific principles. Three criteria had to be met by a study in order that it could be included in his investigation. These criteria were concerned that the purpose of the study had been to select and construct a detailed list of scientific principles. The report of such a study must also indicate the rank order of the frequency of appearance of the principles in the materials analyzed. Ten studies were found which met the criteria and lists of major and minor principles were obtained from these sources.

To determine if the principles of science present in the studies were important ones, Robertson formulated criteria to determine the validity of the principles. To be a scientific principle it should be a clear statement of a process or interaction which was capable of illustration, but not part of a larger principle or a definition. Each statement which, in the opinion of any one of six subject matter specialists, was not true was discarded or reworded. This evaluation resulted in a list of two hundred forty-three principles. These

principles were then submitted to a panel of twenty supervisors and professors in the teaching of elementary school science who evaluated each principle as to its appropriateness as a goal of science instruction. The evaluation of each principle was recorded on a five-point scale. The final list of principles which was to serve as goals of science instruction numbered one hundred thirteen.

To obtain a list of subject matter topics Robertson selected those studies with a detailed list of science topics. A further consideration for acceptance was that the list of topics must have been arrived at by a technique of research accepted by a graduate committee of a reputable institution. Five studies were found which satisfied these criteria.

Collectively, the five studies included data derived from thousands of children's questions, analyses of nearly one hundred fifty courses of study, extensive reviews of authoritative opinions of laymen, experts, and analyses of science magazines. The data from each of these five sources were then tabulated and resulted in two thousand, three hundred twenty-four topics. Seven qualified experts and the investigator then determined the relative value of each topic.

To determine the need for the principles of science in answering the questions of children, six thousand, four hundred twenty-nine questions were obtained from students in Michigan schools. The principles and the number of questions asked about each principle were then tabulated. The rank of each principle was determined by the number of questions associated with or in relation to the total number of questions asked about all the principles. It was found that ninety-three and two-tenths of all the questions students asked were related to the principles determined in the study. As a whole, more questions were asked about biological than physical topics. In effect, Robertson's study attempted to determine the basis for the selection of course content as used by Craig, and replicated in others which he selected for his study.

It should be noted that whilst the studies undertaken by Craig, Bingham, and Robertson, employed many sources, and thereby used a broader perspective than those previously mentioned, they nevertheless neglected important areas of interest. For example, in Craig's study, the influence of teachers and discipline scholars was minimal when compared to that of the laymen and the students. It is recognized that the layman's opinion is an important one but so is that of the teachers who know the needs, interests, and abilities of the student which is important in selecting content for a curriculum. Likewise, the children's questions are a useful guide in content selection for a curriculum, but how can they ask questions about things of which they have no knowledge such as the fundamentals of the disciplines whose worth is known to the scholar?

A lack of balance can also be seen in the influences bearing on curriculum development in Bingham's study in which the opinions of the laymen were replaced by those of the teacher. And, whilst contemporary developments in leading scientific journals were checked for the study, no discipline scholars were directly involved in the developmental procedures. The omission of laymen and scholars who are representative of society and the discipline respectively may now be seen as a serious weakness, inasmuch as the interests of society and the disciplines were not represented in the study. Such weaknesses are therefore inherent in Robertson's study which incorporated studies with serious omissions regarding important areas of interest in curriculum development.

Textbook Studies

In the past, considerable use has been made of science textbooks to establish the worth of topics and principles for inclusion in a science curriculum. The reasoning behind most content analysis of textbooks was that the material therein had been substantiated by authoritative expertise and had met the test of time. The utilization of textbooks as a source of information is common to many studies on content selection.

Heiss, 1932,[114] made use of the content found in textboooks to ascertain the basic facts, principles, and applications around which the general science courses were built. He conducted a content analysis of seven general science textbooks published between the years 1923 to 1927. The data obtained from the textbooks were then grouped under unit headings to show the frequency of their occurrence in the texts. No material was considered basic or included in the grouping unless it had occurred in at least a majority of the texts. Heiss found that there was a considerable degree of uniformity in unit content material in the textbooks he examined.

It was also considered that textbooks had been prepared after many years of study, that they were usually based on a contemporary course, and that the content therein was therefore teachable. Pettit, 1939[115] recognized this influence of textbooks and undertook a series of studies on general science textbooks used in grades seven, eight, and nine. The investigator wished to determine the extent of agreement for concepts, commonality for units, the degree of emphasis given to commonly used concepts, and to the sciences used in presenting given topics. It was hoped that the findings would contribute to the solution of the problem of what the content of a junior high school curriculum should be.

Five textbooks were analyzed by Pettit for grade seven, four for grade eight, and four for grade nine. The results of the analyses were tabulated according to the units found in the textbooks. He noted that there appeared to be uniformity of opinion as to what the content should be; however, he found that twenty-nine of the units on science were unique, that is, found in only one text. Although agreement appeared to be present at the unit level, the actual content found in each unit differed considerably.

In a similar manner, Pettit analyzed and tabulated his findings on the topics used in the development of the units in junior high school general science textbooks, and also the total number of concepts evident. He found that of the total of one hundred fifty-five topics appearing in the five general science textbooks for grade seven, only eleven per cent were used in the majority of texts. Also, no topic was common to all five of the textbooks. Of the total of six hundred fifty concepts appearing in all of these textbooks only eighty-six of the concepts were found to be common to three or more of the texts. The results of the study dealing with grade seven general science textbooks showed there was a complete lack of uniformity in the choice of units, topics included and used under the units, and in the concept employed in the development of the topics. Pettit concluded that the teacher is justified in organizing a general science grade seven course to suit local needs rather than rely on a textbook. The results of the content analysis of the grades eight and nine general science textbooks were similar in nature to those in grade seven. Pettit found little agreement among the authors as to what content should be included in a general science course at the different grade levels.

Wolford, 1935,[116] attempted to determine the extent to which the subject matter in textbooks was applicable or adaptable to a general science curriculum in the Southern Appalachian Region. The investigator studied the organization of the material in textbooks in order to classify the material in the study. An analysis was conducted on ten general science textbooks to determine the subject matter and the extent to which their authors agreed on what content was essential in a general science curriculum. A further analysis was then conducted on eight other general science textbooks, none of which was more than six years old. A comparison was then made of these analyses regarding the content and organization of subject matter. The amount of space devoted to each subject matter unit and to each activity situation was determined in square inches of space in each textbook. Wolford found there was little agreement among authors as to what should be included in a general science textbook, and that no textbook had been prepared that was specially adapted to a particular region.

More recently, Hankins, 1968,[117] conducted a study to ascertain what the content should be in a biology curriculum for the purpose of general education at the freshman college level. The subject matter of

twenty textbooks designed for use in college introductory biology were analyzed, summarized, and classified under eleven broad content areas. Current opinions were sought on the content obtained from these textbooks by using a random sample of one hundred fifty research biologies, college and university teaching biologists, science educators, and science historians.

There were three parts to Hankin's study in which three different groups of scholars, one group for each part, were asked to judge the selected content areas by means of a mailed questionnaire. Questionnaire 1 was sent to fifty research biologists for their opinions on content emphasis, inclusions, and omissions. Questionnaire 2 was sent to fifty biologists and sought their opinions regarding the extent to which a contemporary biology course should reflect the recent dependency of biology on mathematics. Questionnaire 3 was sent to forty biologists and ten science historians who were asked to judge the emphasis placed on the contributions and methodology of men of science. The data were analyzed by means of descriptive percentages. Ten major conclusions were made from the results of the study. The major content emphasis was focused on environmental biology which was closely followed by evolution, energetics, and metabolism, in that order. The results indicated that biology principles and evolutionary approaches should be utilized in the organization of the content, but that topics related to health and disease should not be included in the curriculum.

Collectively, the textbook studies illustrated that wide variations existed in the expectations of what content should be in a textbook. As textbooks were usually the main source of subject matter their content should be relevant for a science curriculum. The studies examined showed a general lack of agreement among the authors as to what content should be included. This can be observed in the studies which indicated considerable differences in the content included in textbooks supposedly covering the same subject matter at a particular grade level. The studies also revealed that even when there was agreement on the content in different textbooks, the degree of emphasis or adequacy of coverage varied considerably. These differences were most noticeable at the factual, conceptual, or principle level. Also, that many of the topics included in textbooks were found to be irrelevant for particular environmental regions. This wide variation between the content in textbooks and the expectations of experts in the field affected the effectiveness of the textbook influence on content selection for a science curriculum.

The Use of Discipline Scholars

During the past decade, there has been a growing tendency to break away from the influence of previously published material. The identification and extraction of concepts from textbooks may not be entirely free of the investigator's preferences. In an attempt to eliminate the possibility of the investigators' bias, recent studies made use of an increasing number of discipline scholars whose collective expertise allowed them to establish the credibility of the concepts suitable for a science curriculum.

The purpose of Roth's[118] study was to develop a taxonomy of fundamental concepts for environmental management in grades K-16. He also attempted to determine whether or not biases existed among selected representatives of the various disciplines or the ecological regions relative to the selection of content. A survey technique was employed which used written questionnaires and personal interviews to obtain and validate concepts deemed appropriate for environmental education.

An initial list of ninety-eight concepts was constructed by Roth from his analysis of the related environmental management literature. The list of concepts was then submitted to a panel of University of Wisconsin discipline scholars for their judgment as to the credibility of the statements. The scholars were requested to delete or add concepts to the list and to make corrections to statements in which errors were present. The discipline scholars on the panel were then interviewed and asked to explain any changes they had made. A list of one hundred fifty-seven concepts evolved from this evaluative procedure.

The revised list was then submitted to the judgment of the discipline scholars who were requested to judge the appropriateness of the concepts for inclusion in a K-16 curriculum. To be included in the list these concepts must have been judged as desirable for inclusion in a curriculum by at least seventy-five per cent of the scholars. A list of one hundred twenty-eight concepts emanated from this evaluation.

This list was next judged by a national panel of three hundred fifty discipline scholars. Their evaluation resulted in one hundred eleven of the concepts meeting the criterion of being acceptable to ninety per cent of the respondents. These concepts were then organized into a taxonomic list according to topic on the basis of a weighted item-mean score. An examination of the seventeen unacceptable concepts and the frequency of their rejection by professional or ecological region provided little evidence to support any speculation of the existence of possible bias. Roth concluded that the discipline scholars from forty discipline areas, and twelve ecological regions of the United States, were in agreement on the majority of concepts which should be emphasized in environmental management education.

The published material-scientist relationship technique was continued by Janke, 1969[119] who reversed the procedure used by Roth. Janke undertook the study to determine the degree of agreement between science textbooks and discipline scholars in earth science relative to the earth-science concepts to be included in a K-12 science curriculum.

An initial list of earth-science concepts was constructed by requesting scientists on the University of Wisconsin panel of discipline scholars to state those concepts which they felt to be most important in their specialty. This resulted in an initial list of seventy-one concepts which was then submitted to a second panel of one hundred fifty-four experts. Each evaluator was requested to add or to revise any of the concepts which in his judgment were suitable for inclusion in a K-12 science curriculum. Six concepts which were considered unacceptable or undesirable for inclusion in the list were deleted. The revised list of concepts was then judged by three hundred twenty-six discipline scholars on a national panel. This final evaluation resulted in a list of fifty-two earth-science concepts judged as being important for inclusion in a K-12 science curriculum.

The final list of earth-science concepts was then compared with data obtained from a concept analysis of elementary, general, physical, and earth-science textbooks. The results indicated that a majority of the concepts identified by the earth-scientists were probably included in any one, or a combination of the textbooks analyzed. It was found that the scholars from the earth-science disciplines were in general agreement as to what earth-science concepts should be included in a grades K-12 science curriculum.

Previously published materials, particularly textbooks, have wielded considerable influence over studies involved in the construction of lists of concepts deemed suitable for science curricula. Thompson, 1970[120], avoided this influence by using a national panel of university biologists, science educators, and high school biology teachers, to construct a list of currently credible biology concepts for Grades K-12 curricula.

A panel of University of Wisconsin discipline scholars was formed which involved scientists engaged in each one of the forty-four biology or biology-related academic specialties. Personal interviews were held with each university scholar during which the purpose of the study was explained. The concepts of biology submitted by the scientists were recorded and classified by area after being examined for similarity. The selected concepts were then edited to ensure consistency of style. The initial list developed by the Wisconsin panel contained one hundred fifty-one biology concepts.

The initial list was then sent to the Wisconsin panel for each concept to be judged for credibility and precision. In addition, the importance of each concept was to be rated on a scale weighted from one,

unimportant to five, important. The frame of reference by which each concept was rated for importance was: "This concept should be encountered by each child sometime between kindergarten and graduation from high school."[121] Additional concepts could also be added by each discipline scholar and this evaluation process resulted in a second list of one hundred fourteen biological concepts.

The second list of concepts was then submitted to a national panel of three hundred eighty-seven biologists, science educators, and biology teachers. All evaluated biological concepts on the list returned by the national panel were examined for ratings given, content modification, and the addition of concepts. The second list of biological concepts as modified by the national panel then became the final concept list considered suitable for a curriculum. Thompson found that all three groups in the national panel were similar in their rating of biology concepts. He concluded that the final list of concepts resulting from the study demonstrated the practicability of identifying, formulating, and evaluating science concepts by the method utilized.

The studies by Roth, Janke, and Thompson, illustrate curriculum development that is controlled by the disciplines. In each of these studies the discipline scholars stated those concepts which they considered were relevant, and in so doing, collectively, formed the list of concepts to be judged suitable for a science curriculum. Large numbers of discipline scholars were used to select and evaluate the science concepts and, in effect, they dominated these studies. In this manner, the interests in content selection expressed by the laymen, the students, and except for Thompson, the teachers were minimal. Thus, the interests of society and the growth needs of the students were omitted in the selection and organization of content for a science curriculum.

5. Validation of Content Selected for a Curriculum

Studies that have been conducted on the selection of content for a science curriculum have used two distinct steps in the validation process. Initially, the concept would be identified and a list of science concepts formulated. The initial list was then scrutinized by the investigator, sometimes aided by selected specialists, to verify the precision of each concept. The revised initial list was then sent to a panel of experts to judge the validity of each statement, and where necessary, delete or alter a concept. In this manner, each concept was validated for accuracy by specialists.

Ashbaugh's study, 1968[122], is an example of this method of validation. He formulated an initial list of concepts in geology by identifying each concept in the literature. These concepts were then categorized and critically appraised for accuracy and clarity by a panel of judges. The panel was composed of professors of geology and education, curriculum directors, and classroom teachers.

A study which used a process of validation similar to Ashbaugh's had been previously conducted by Robertson[123] in 1935. With the aid of three science teachers, the investigator formulated an initial list of principles derived from a survey of ten studies. Collectively, these studies had analyzed seventy-five textbooks. The initial list was then refined by a panel of six university professors and the investigator. Each statement, which in the opinion of any one of the subject matter specialists was not true, was discarded or reworded to make it a true statement of the principle.

The method used in fairly recent studies by Hankins[124], Roth[125], and Janke[126], followed the same pattern; the identification of science concepts in the literature, then judgment as to the precision and acceptability of each statement by a panel of experts. Thompson[127] changed the format of this procedure by removing any reference to the literature and using the expertise of the discipline scholars at all levels. Collectively, these studies show a steady increase in the number of discipline scholars involved in curriculum development. Recent studies have also attempted to minimize or eliminate possible biases of individuals by requiring that science concepts should be credible to a large number of experts.

Once the validity of the science concept had been established its importance or appropriateness for a particular science curriculum was then determined. In Ashbaugh's study[128], the appropriateness of each concept was determined by testing the teachability of the selected concepts in the schools. He found that thirty-seven of the forty selected concepts were adequate for an elementary science curriculum. However, in most studies the appropriateness of content was usually determined with the aid of previously established criteria.

Criteria for Content Selection

Several methods have been used in research studies by which the appropriateness of the content for a curriculum was determined with the aid of criteria. These methods show a variety in the type and number of criteria used.

Craig's study[129] made use of three criteria to construct a list of two hundred principles (see page 140). Each principle was then evaluated by one hundred eighty laymen and the results compared with the frequency of occurrence of questions the students asked about each principle. Since the principles had to meet the criteria before their inclusion in Craig's initial list, the criteria were a controlling influence.

In a similar manner, Robertson[130] formulated three criteria which previously conducted studies were required to meet prior to being accepted into his investigation (see page 141). He then formulated other criteria to determine the validity of each principle (see page 142) found in the ten accepted studies prior to having a panel of four evaluate their importance.

The criteria used for the election of content for discipline-oriented curriculum were basically concerned with the structure of the discipline under study. However, in studies concerned with general education considerable emphasis was given to criteria associated with the social and cultural needs of the students. The criteria in Bingham's[131] study reflected social concerns that were prevalent in the literature of the time.

A profusion of criteria evolved from the many studies undertaken for the selection and organization of content for science curricula in the early thirties. The professional organizations recognized the importance of criteria and examined many lists of criteria to determine if commonalities and agreement existed. From their investigation they constructed a list of criteria to serve as a guide in curriculum development (see page 137).

Lists of criteria for the selection and organization of content are present in today's curriculum literature. These criteria are concerned with the same aspects of content selection as those found in the nineteen-thirties and they will be referred to in the next section.

In the two sections dealing with the background of the problem and the methods and sources used in studies on content selection it was possible to discern various influences acting upon curriculum development. Initially, this perspective illustrated how changing socioeconomic conditions influenced the selection of content for a science curriculum; e.g., developments in the fields of science and technology resulted in the selection of content that would aid the student in his environment. Emphasis on content that is of a utilitarian nature since it accomodates the needs and interests of society can be identified with Macdonald's Circular-Consensus model.

The high school science curricula that were developed as college preparatory courses gave emphasis to the discipline's content. In this respect they can be readily associated with the discipline-oriented conceptions of curriculum and Macdonald's Linear-Expert model. It should also be noted that when concern was expressed at the turn of the century for curricula that would meet the divergent needs of the students that these were concerns easily associated with Macdonald's Dialogical model.

In general, the historical perspective presented in the last three sections illustrated that varying degrees of emphasis have been given at different times to the control of curriculum development by the disciplines, the needs of society, or the needs and interests of the students during the past century. It is therefore possible to associate these changes in emphasis with the values and perspective found in each one of Macdonalds's curriculum development models. This historical perspective thereby gives credence to each one of the models identified by Macdonald.

The studies examined illustrate that different methods have been used in content selection for science curricula, also, and that persons with different backgrounds were involved in these methods. It may be assumed that when laymen, teachers, or university scholars were utilized in these studies that it was in response to an expressed need, usually by professional societies, for functional science, science for a general education, or discipline content necessary to prepare students for higher learning. Thus, over the years, the influence of the professional literature could be seen in the research studies undertaken. In the main, these studies concluded that the methodology utilized was suitable for the selection of content for a science curriculum. And, as the methods and persons used were intended to produce a particular type of curriculum, e.g., discipline-oriented curricula to aid students interested in further education, then the studies examined can be associated with certain conceptions and models for curriculum development.

Both the professional literature and the studies give credibility to the fact that different curriculum development models do exist. Furthermore, that inherent in each model are the values and perspectives that are unique to that particular model. However, there is a lack of information regarding the effect these models have on the selection of content for a science curriculum. The question may now be posed: Is the content selected using one particular curriculum development model significantly different to that produced using a different model? If the resulting content is different, how is it different? An investigation was undertaken by the author[132] to secure such infomration, and, as both the literature and the studies give support to the credibility of Macdonald's models they were chosen as the basic framework for this investigation. The specific subject-matter area chosen to obtain this information was the junior high school physical-science curricula since there exists an abundance of science curriculum materials in this area. A brief description of the investigation is to be found in the next section.

6. An Empirical Substantiation of Macdonald's Models

Since it was considered possible to identify and categorize science curricula according to the paradigm provided by Macdonald for his three development models, a study was undertaken that was based on his description of model typology and asked the question:

> Do the value positions suggested by Macdonald to be inherent in each of his curriculum development models result in different content and content organization?

In particular does the content selected and organized for a junior high school physical-science curriculum depend on the type of curriculum development model used? Specifically, with reference to content selection criteria common to the literature, does the content of the curriculum differ in the emphasis it gives to:

1. The contemporary content of the discipline?
2. Content that provides for the acquisition of new knowledge?
3. The investigative procedures common to the discipline?
4. Content associated with the social and cultural perspective of a nation?
5. An appropriate balance between the breadth of topics and the depth of their treatment?
6. Its coverage of a wide range of objectives?
7. Materials deemed suitable for the intellectual development of the student?
8. Information which relates to the social and cultural norms of the students?

9. Content that meets the needs of students?
10. Content that meets the interests of the students?
11. The logical development of the discipline's content?
12. Content that can be utilized by the student in his everyday environment?
13. Material related to the nature of man's affairs?
14. Content which aids man in the growth needs of human development?
15. Knowledge which is sanctioned by governing authorities?

Unfortunately the literature does not provide information which readily answers these questions, nor has it been verified that the different value positions result in different content. And, as there is now a growing awareness of the importance of content selection, and the possibility that different value positions may influence content selection, an investigation was undertaken to obtain such information. In this respect the following null hypothesis was made:

Hypothesis
The content and its organization in junior high school physical-science curricula will not vary depending on the developer's orientation (as identified by Macdonald in his curriculum development models).

The investigation that was conducted in order to test this hypothesis will now be described.

A list of thirteen junior high school physical-science curricula was compiled from the responses received to a request for information concerning the curriculum being used in the schools in the Provinces of Ontario and Quebec, Canada. A simple questionnaire was then sent to the developers of the listed curricula to obtain information as to the manner in which their curriculum had been developed. The responses received from the curriculum developers were then categorized by ten high school science teachers according to Macdonald's description of each model.

The instrument used to obtain information regarding the content in each curriculum was a single page questionnaire developed from a cumulative list of criteria for content selection and organization obtained from many professional sources (see Figure I). This list is representative of the many lists of criteria examined for commonality and agreement as to the content-selection criteria that should be used in curriculum development. To validate this content selection questionnaire a three-phase procedure was employed involving ten curriculum graduate students, thirty science teachers, and ten university professors who reduced forty-five questions to the fifteen used in the questionnaire. This questionnaire required the study participants, ninety science teachers, to rate on a four point scale the degree of evidence present in a curriculum of content associated with the fifteen selection criteria listed in Figure I.

To gain a first impression of the pattern of response to each item, the data collected from the teachers' evaluation were examined for frequency of response according to personal data using contingency tables. In order to obtain simultaneous tests of the mean vectors within each of the personal data groupings (sex, academic background, teaching experience, and level of teaching), multivariate analyses of variance were then performed using Finn's Multivariance Program (133). The computer printout also provided the univariate analysis for each of the items representative of selection criteria. To procure information relative to Macdonald's three curriculum development models and content selection, a two-way multivariate analysis of variance was conducted using model and curriculum as the main effects.

The data obtained from the multivariate analysis of variance for the curriculum representative of each model indicated that a significant difference existed in the content associated with the three curriculum development models. The univariate analyses suggested that differences occurred among the models for those items representative of selection criteria concerned with contemporary knowledge, inquiry, sequence,

appropriateness, student's interests, utility, nature of man, and, social and cultural respectively.

To facilitate the interpretation and analysis of the differences among individual items for each model, a discriminant analysis as recommended by Tatsuoka (134) was then undertaken. For, when a particular effect has been found significant in MANOVA, there is still the question of how the groups representing the levels of that effect differ in terms of the variables used. The multiple discriminant analysis performed on the collected data yielded two discriminant functions which were statistically significant with a p 0.0001 and p 0.0242 respectively.

Based on the findings of this study which was limited to physical-science being used in the Provinces of Ontario and Quebec, and the evaluation of these curricula by science teachers in the English speaking schools in the province of Quebec, the following conclusions seemed valid:

1. Significant differences do exist in the content and its organization in curricula representative of Macdonald's three curriculum development models.
2. Content associated with contemporary content, inquiry, appropriateness, student's interests, utility, student's needs, social and cultural, and social and cultural norms, was responsible for differentiation among the models.
3. Content representative of specific groups of selection citeria such as discipline-oriented, societal needs, and student needs was also responsible for differentiation in the content among the models.
4. From conclusion 3, there are different value positions in Macdonald's model which result in the selection and organization of different content that depends on the model used.
5. The null hypothesis of no significant difference between the content and its organization in junior high school physical-science curricula was not upheld.
6. Content representative of selection criteria for objectives and breadth and depth was not responsible for any noticeable difference in content among the curricula resulting from the use of Macdonald's models.

The aforementioned conclusions indicated that the specific hypothesis of this study had been answered as have the questions posed on Pages 148 and 149.

From the overall results obtained in this study it was also concluded that Macdonald's models do provide a useful framework upon which to base an investigation into the influence of different curriculum development models on the content selected for a science curriculum. These results provide for a greater understanding of the human interests and value commitments to content that meets the needs of the discipline, society, or the students, and which thereby affect curriculum development.

Knowledge of the value commitments of curriculum developers and the corresponding design aids the potential consumer of their curriculum or those educators who wish to develop a specific type of curriculum to match the needs and interests of particular students. In this respect, a curriculum developed using the Linear-Expert model may be considered the most appropriate for students who wish to pursue further studies in the discipline at the university level. A curriculum developed using the Circular-Consensus model with its emphasis on societal concerns may be suitable for those students who do not desire to pursue post secondary studies, but who should have some practical knowledge of their envirnonment. Also, for a curriculum of a very personal nature such as special education, the Dialogical model in which the knowledge of the culture is matched with the needs and interests of the students may be the most appropriate to use in its development.

An awareness of the different levels and kind of value perspectives inherent in each one of Macdonald's models leads to the possibility of the categorization of curriculum development models. Knowledge of the model category may prove useful when large school boards attempt to implement a curriculum throughout

the schools in its system. Problems have arisen in the past when teachers failed to recognize the values implicitly inherent in a curriculum. As these values are now known for each of Macdonald's models, they can be more easily related to and understood by teachers who are required to implement the curriculum. In this manner, a better understanding of the values involved in curriculum development may prevent some of the misunderstandings which usually arise during curriculum implementation.

The substantiation of Macdonald's models by the literature, which together with the findings of this empirical study, should provide useful information to the educators involved in curriculum development or its implementation. These findings also provide potential for curriculum theory and a framework for further inquiry into curriculum development.

CRITERIA (rows) × **AUTHORS** (columns)

CRITERIA	G. Inlow[135]	D. Manning[136]	R. S. Zais[137]	H. Taba[138]	P. deHart Hurd[139]	R. C. Doll[140]	V. E. Anderson[141]	R. C. Cook & R. C. Doll[142]	G. Beauchamp[143]	N. B. Henry[144]
SANCTION	X	X				X	X			
HUMAN DEVELOPMENT	X	X	X		X		X	X	X	X
NATURE OR MAN	X	X	X		X	X	X	X		X
UTILITY	X	X	X	X		X		X	X	X
SEQUENCE	X		X	X				X	X	X
INTERESTS		X	X	X		X		X	X	X
NEEDS	X		X	X	X	X	X	X	X	X
SOCIAL & CULTURAL NORMS	X	X	X	X		X	X	X	X	X
APPROPRIATENESS	X	X	X	X	X	X	X	X	X	X
OBJECTIVES	X	X	X	X	X	X	X	X	X	X
BREADTH & DEPTH	X	X	X	X	X	X		X		
SOCIAL & CULTURAL	X	X	X	X	X	X	X	X	X	X
INQUIRY				X	X	X	X	X	X	X
FUNDAMENTAL	X	X	X	X	X	X	X	X	X	X
CONTEMPORARY CRITERIA	X		X	X	X	X	X	X	X	

FIGURE I — COMMONALITY OF AUTHORS' CRITERIA

FOOTNOTES

1.   Philip Abelson, "Excessive Educational Pressures", in *Science*, Vol. 156, May 12, 1967, p. 741.

2.   Daniel Tanner, *Secondary Curriculum: Theory and Development*, New York, The Macmillan Co., 1971, p. 128

3.   L. Carroll King, "High Student Failure Rate Serious Problem," *Chemical and Engineering News*, Vol. 45, February 20, 1967, p. 44.

4.   James B. Macdonald, "Curriculum and Human Interests," in *Curriculum Theorizing: The Reconceptualists*, Wm. Pinar, Ed., Berkeley, California, McCutcheon Publishing Corp., 1975, pp. 292-293.

5.   Ibid. p. 294.

6.   Ronald T. Hyman, Ed., *Approaches in Curriculum*, Englewood Cliffs, New Jersey, Prentice-Hall, Inc., 1973, p. 5.

7.   Elliot W. Eisner, & Elizabeth Vallance, Eds., *Conflicting Conceptions of Curriculum*. Berkeley, California, McCutchan Publishing Corp., 1974, pp. 1-12.

8.   Michael Polanyi, *The Tacit Dimensions*, New York, Doubleday Co., 1966, pp. i-xi, 1-108.

9.   James B. Macdonald, *Op. Cit.*, 0. 292.

10.   *Ibid.*

11.   *Ibid.*

12.   *Ibid.*

13.   *Ibid.*

14.   *Ibid.* p. 293.

15.   *Ibid.*

16.   Ralph Tyler, *Basic Principles of Curriculum and Instruction*, Chicago, University of Chicago Press, 1949, p. 1.

17.   Philip H. Phenix, "The Disciplines as Curriculum Content," *Curriculum Crossroads*, H. Pasow, Ed., New York, Teachers College, 1965, pp. 189-196.

18.   Arthur R. King, Jr., & John A. Brownell, *The Curriculum and the Disciplines of Knowledge*, New York, John Wiley & Sons, Inc., 1966, pp. 1-221.

19.   Philip H. Phenix, *Op. Cit.*, pp. 189-196.

20.   *Ibid*, p. 142.

21.   Philip H. Phenix, "The Architectonics of Knowledge", in *Education and the Structure of Knowledge*, Stanley Elam, Ed., Chicago, Rand McNally Co., 1964, p. 45.

22.   *Ibid.*, p. 49.;

23.   *Ibid.*, p. 50.

24.   Philip H. Phenix, *Realms of Meaning*, New York, McGraw-Hill, 1964, pp. 10-12.

25.   Philip H. Phenix, *Op. Cit.*, p. 189.

26.   King and Brownell, *Op. Cit.*, pp. 1-221.

27.   *Ibid.*, p. 166.

28.   *Ibid.*, p. 158.

29.   *Ibid.*, p. 190.

30.   *Ibid.*, p. 203.

31.   Joseph J. Schwab, "The Practical 3: Translation Into Curriculum," in *School Review*, Vol., 81, No. 4, August, 1973, pp. 501-522.

32.   *Ibid.*, p. 501.

34.   *Ibid*, pp. 502-508.

35.   *Ibid.*, p. 512.

36.   Decker F. Walker, "A Naturalistic Model for Curriculum Development," in *School Review*, Vol. 80, No. 1, November, 1971, pp. 51-65.

37.   *Ibid.*, p. 52.

38.   *Ibid.*, p. 54.

39.   T. Sergiovanni & T. Starratt, *Emerging Patterns of Supervision: Human Perspectives*, New York, McGraw-Hill, 1971, p. 237.

40.   *Ibid.*

41.   *Ibid.*

42.   *Ibid.*, p. 261.

43.   *Ibid.*, p. 262.

44.   *Ibid.*, p. 264.

45.   *Ibid.*, p. 243.

46.   *Ibid.*, pp. 264-265.

47.   G. Weinstein & N. Fantini, Eds., *Toward Humanistic Education, Curriculum of Affect*, New York, Praeger Publishing, 1970, pp. 3-223.

48.   *Ibid.*, p. 18.

49.   *Ibid.*, pp. 35-36.

50.   *Ibid.*, p. 39.

51.   James B. Macdonald, *Op. Cit.*, p. 284.

52.   Ronald T. Hyman, *Op. Cit.*, p. 5.

53.   Eisner and Vallance, *Op. Cit.*, pp. 1-12.

54.   O. E. Underhill, *The Origins and Development of Elementary School Science*, Chicago, Scott Foresman & Co., 1941, pp. i-xii, 1-347.

55.   Herbert A. Smith, "Educational Research related to Science Instruction for the Elementary and Junior High School: A Review and Commentary," in *Journal of Research in Science Teaching*, Vol. 1, No. 3., 1963, p. 200.

56.   Ibid., pp. 200-201.

57.   R. Will Burnett, *Teaching Science in the Secondary School*, New York, Holt, Rinehart and Winston, 1960, pp. 60-61.

58.   *Ibid.*, p. 63.

59.   Claude W. Gatewood & Ellsworth S. Obourn, "Improving Science Education in the United States," in *Journal of Research in Science Teaching*, Vol. 1, No. 3, 1963, p. 358.

60.   *Ibid.*

61.   Burnett, *Op. Cit.*, p. 75.

62.   Nathan S. Washton, *Teaching Science Creatively in the Secondary Schools*, Philadelphia, W. B. Saunders, Co., 1967, pp. 74-75.

63.   Gatewood and Obourn, *Op. Cit.*, p. 358.

64.   Nelson B. Henry, Ed., *Rethinking Science Education*, Part I, The Fifty-ninth Yearbook of the National Society for the Study of Education, Chicago, The N.S.S.E., 1960, p. 156.

65.   Herbert A. Smith, *Op. Cit.*, p. 204.

66.   Guy Montrose Whipple, Ed., *A Program for Science Teaching*, The Thirty-First Yearbook of the National Society for the Study of Education, Bloomington, Illinois, Public School Publishing Co., 1932, pp. i-xii, 1-370.

67.   *Ibid.*, p. 20.

68.   *Ibid.*, p. 21.

69.   *Ibid.*, p. 110.

70.   *Ibid.*

71.   *Ibid.*, p. 111.

72.   *Ibid.*, pp. 208-209.

73.   Nelson B. Henry, Ed., *Science Education in American Schools*, The Forty-sixth Yearbook of the National Society for the Study of Education, Chicago, University of Chiago Press, 1947, pp. i-xii, 1-306.

74.   *Ibid.*, p. vii.

75.   *Ibid.*, p. 159.

76.   *Ibid.*, pp. 166.

77.   *Ibid.*, 166-167.

78.   *Ibid.*

79.   Burnett, *Op. Cit.*, p. 82.

80.   Henry, *Op. Cit.*, pp. i-xii, 1-306.

81.   *Ibid.*, p. 17.

82.   *Ibid.*, p. 158.

83.   *Ibid.*, p. 156.

84.

85.   *Ibid.*

86.   Gatewood and Obourn, *Op. Cit.*, p. 362.

87.   *Ibid.*, p. 363.

88.   *Ibid.*, p. 362.

89.   *Ibid.*, p. 363.

90.   Donald D. Pettit, "The Content of Junior High School Science", in *School Science & Mathematics*, Vol. 40, Nos. 7&8, October, 1940, pp. 643-654, November, 1940, pp. 763-776.

91.   *Ibid.*, p. 644.

92.   Edward E. Cureton, "Junior High School Science," in *The School Review*, Vol. 35, No. 10, December, 1927, pp. 767-775.

93.   Martin L. Robertson, "The Selection of Science Principles Suitable as Goals of Instruction with Elementary School," in *Science Education*, Vol. 19, February 1935, a, pp. 65-70 & April, 1935 B, pp. 1-4.

94.   W. E. Martin, "A Determination of the Principles of the Biological Sciences of Importance to General Education," in *Science Education*, Vol. 29, April, 1945 a, pp. 100-105, & May, 1945 b, pp. 152-163.

95.   Francis D. Curtis, "A Synthesis & Evaluation of Subject-Matter Topic in General Science," *A Program For Science Teaching*, G. M. Whipple, Ed., Reported in Part I of The Thirty-First Yearbook of the National Society for the Study of Education, Bloomington, Illinois, 1932, p. 113.

96.   Benjamin Novak, "Science in the Newspaper," in *Science Education*, Vol. 26, October, 1942, pp. 138-143.

97.   Frances E. Ruffner, "Interests of Ninth-Grade Students in General Science," in *Science Education*, Vol. 24, January, 1940, pp. 23-29.

98.   Harvey D. Matteson, & Paul E. Kambly, "Knowledge of Science Possessed by Pupils Entering Seventh Grade, " in *School Science and Mathematics*, Vol. 40, No. 3, March, 1940, pp. 244-247.

99.   D. L. Janke, "The Concept of Currency of K-12 Science Textbooks Relative to Earth Science Concepts," Unpublished Ph.D. Thesis, University of Wisconsin, 1969, pp. 1-148.

100.   R.E. Roth, "Fundamental Concepts for Environmental Management Education (K-16)," Unpublished Ph.D. Thesis, University of Wisconsin, 1969, pp. 1-202.

101.   B. E. Thompson, "A List of Currently Credible Biology Concepts Judged by a National Panel to be Important for Inclusion in K-12 Curricula," Unpublished Ph.D. Thesis, University of Wisconsin, 1970, pp. 1-338.

102.   Francis D. Curtis, *Op. Cit.*, p. 113.

103.   W. E. Martin, *Op. Cit.*, pp. 100-105, pp. 152-163.

104.   R. E. Roth, *Op. Cit.*, pp 1-202.

105.   H. F. Smith, "A Determination of Principles Desirable for A Course of General Science at the Junior High School Level," in *Science Education*, Vol. 35, December, 1951, pp. 279-284, & Vol. 36, February, 1952, pp. 32-47.

106.   V. F. Trainor, "A Determination of Science Concepts that should be Taught in the Junior High School," Unpublished Ph.D. Dissertation, University of Connecticut, 1964, pp. 1-356.

107.   W. W. E. Blanchet, "Investigation of Student Opinion Concerning Survey Courses in Science," in *Science Education*, Vol. 32, February, 1948, a, pp. 24-32.

108.   W. W. E. Blanchet, "Subject Matter Topics Contained in Textbooks, in Survey Courses in Science," in *Science Education*, Vol. 32, March, 1948 b, pp. 88-93.

109.   P. P. Bryant, "Science Understandings Considered Important for Children and the Science Required of Elementary Teachers," Unpublished Ph.D. Dissertation, George Peabody College for Teachers, 1959, pp. 1-289.

110.   Gerald S. Craig, *Certain Techniques Used in Developing a Course of Study in Science for the Horace Mann Elementary School*, New York, Columbia University, 1927, pp. i-vii, 1-73, IL.

111.   *Ibid.*, pp. 56-57.

112.   N. Eldred Bingham, "A Study Made in Hillsborough County, Florida, to Determine What Science to Teach in the Junior High School," in *Science Education*, Vol. 47, No. 3, 1963, pp. 226-236.

113. Martin L. Robertson, *Op. Cit.*, p. 3.

114. Elwood D. Heiss, "An Investigation of Content and Mastery of High School General Science Courses," Unpublished Ph.D. Thesis, Teachers College, Columbia University, 1932. Reported in, Francis D. Curtis, Ed., *Third Digest of Investigations in the Teaching of Science*, Philadelphia, Penn., Blackiston Sons Co., Inc., 1939, pp. 54-57.

115. Donald D. Pettit, *Op. Cit.*, pp. 643-654, pp. 763-776.

116. Feaster Wolford, "Methods in Determining Types of Content For a Course of Study for Eighth-Grade Science in the High Schools of the Southern Appalachian Region," Unpulished Ph.D. Dissertation, Cornell University, 1935. Reported in, Francis D. Curtis, Ed., *Third Digest of Investigations in the Teaching of Science*, Philadelphia, Penn., Blackiston Sons Co., Inc., 1939, pp. 47-49.

117. Lela R. Hankins, "A Determination and Selection of Biology Content of Significance for a Freshman Level General Education Course," Unpublished Ph.D. Dissertation, Oregon State University, 1968, pp. 1-191.

118. R. E. Roth, *Op. Cit.*, pp. 1-202.

119. D. L. Janke, *Op. Cit.*, pp. 1-148.

120. B. E. Thompson, *Op. Cit.*, p. 63.

121. *Ibid.*, p. 60.

122. A. C. Ashbaugh, "Selection of Geological Principles for Intermediate Grades," in *Science Education*, Vol. 52, No. 2, March, 1968, pp. 189-195.

123. Martin L. Robertson, *Op. Cit.*, pp. 3-19.

124. Lela R. Hankins, *Op. Cit.*, pp. 1-191.

125. R. E. Roth, *Op. Cit.*, pp. 1-202.

126. D. L. Janke, *Op. Cit.*, pp. 1-202.

127. B. E. Thompson, *Op. Cit.*, pp. 1-338.

128. A. C. Ashbaugh, *Op. Cit.*, pp. 189-195.

129. Gerald S. Craig, *Op. Cit.*, pp. 56-57.

130. Martin L. Robertson, *Op. Cit.*, pp. 65-70.

131. N. Eldred Bingham, *Op. Cit.*, pp. 226-236.

132. W. E. Searles, "An Investigation Into the Type of Junior High School Science Curricula Produced Through the Utilization of Macdonald's Three Curriculum Development Models," Unpublished Ph.D. Thesis, University of Ottawa, 1978, pp. 1-182.

133. J. D. Finn, *Multivariance, Univariance & Multivariate Analysis of Variance, Covariance, & Regression*, Chicago, Ill., National Education Resources, 1972, p. 320.

134. M. M. Tatsuoka, *Discriminant Analysis: The Study of Group Differences*, Champain, Ill., Institute for Personality and Ability Testing, 1970, pp. i-iv, 1-57.

135. Gail Inlow, *The Emergent In Curriculum*, New York, John Wiley and Sons, Inc., pp. 23-26.

136. Duane Manning, *Toward a Humanistic Curriculum*, New York, Harper & Row, Publishers, Inc., 1971, pp. 117-122.

137. Robert S. Zais, *Curriculum Principles & Foundations*, New York, Thomas Corwell Co., 1976, pp. 342-348.

138. Hilda Taba, *Curriculum Development: Theory & Practice*, New York, Harcourt, Brace & World, Inc., 1962, pp. 265-278.

139. Paul deHart Hurd, "Toward a Theory of Science Education, *Theory Into Action*, Washington, D.C., National Science Teachers Assn., 1964, p. 11.

140. Ronald C. Doll, Curriculum Improvement: Decision-Making & Process, 2nd. Ed., Boston, Allyn & Bacon, Inc., 1970, p. 149.

141. Vernon E. Anderson, *Principles & Procedures of Curriculum Imporvement*, New York, The Ronald Press, Co., 1965, pp. 466-469.

142. Ruth C. Cook & Ronald C. Doll, *The Elementary School Curriculum*, Boston, Allyn & Bacon, Inc., 1973, pp. 461-464.

143. George A. Beauchamp, *The Curriculum of the Elementary School*, Boston, Allyn & Bacon, Inc., 1966, pp. 315-319.

144. Nelson B. Henry, *Op. Cit.*, p. 159.

The Meadowhurst Experience:
Phases in the Process of Educational Criticism

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The last decade has witnessed the birth and growth of a professional literature about the virtues and limitations of bringing the critical tradition to bear on the things of education. The content of these writings about educational or curriculum criticism has ranged from lofty meta-talk about methodological heritages to particular examples of critiques. Much of the literature has, in my judgment, been imaginative and thoughtful, and generally worthwhile.

One aspect of this topic that has largely escaped consideration in print, however, concerns what it is like to partake in this kind of inquiry process. Where for example, are the descriptions of the investigatory procedures engaged in by educational critics? Where are the reflexive accounts of the fieldwork and writing stages of this sort of research effort? Of what it feels like to do curriculum criticism? Of the psychological pressures felt in the process?

This absence is unfortunate, I believe, for both neophyte and experienced critics might benefit from enlightening discussions of the personal rewards and potential pitfalls involved in this kind of work.

This essay aspires to address some of these issues in the context of one particular educational criticism project. It tells the story of how certain intellectual and emotional pleasures and perplexities were confronted during the project. I have undertaken to articulate the contours of my own personal struggle to structure the educational phenomena perceived within a second-grade classroom; to convey the manner in which I came to make sense of a wealth of accumulatable and accumulated information; to describe how I chose to shape and convey that information. And, perhaps most importantly, this paper is a documentation of the metamorphoses undergone by my thoughts – and – feelings – a revelation of the phases that comprise this kind of inquiry experience.

In order to provide a kind of vicarious participation in the experience of the inquirer, I will employ (to some extent) a kind of evocative, suggestive, metaphor – laden language usually associated with novelists or writers of literary non-fiction. The use of this literary style distinguishes this paper from many other "introspective" reports by various social scientists about the feeling and thoughts they entertained in the course of their fieldwork. Social scientists engaged in participant-observation have in fact seldom reported anything in any way about the relationship of their personal lives and perspectives to their work. A few exceptions include Malinowski's "introduction" to his Argonauts of the Western Pacific and Powdermaker's more recent (1966) Stranger and Friend: The Way of an Anthropologist —— both personal reports (in discursive prose) of the field experiences of those two prominent anthropologists. W. F. Whyte's Street Corner Society (1955) contains a unique and insightful discussion of the influence of the biography of the sociologist on his study, and a chapter in Tally's Corner (1967) by Elliot Liebow entitled "A Field Experience in Retrospect", is an account of that observer's subjective involvement in his fieldwork. Also, Golde (1970), Henry and Saberwal (1969), and Freelich (1970) have edited collections of accounts of fieldworkers' experiences.

It is even more difficult to uncover examples of this sort of "methodological soul-searching" among qualitative evaluators or researchers in school settings. The reader is referred, however, to the first chapter of Smith and Geoffrey's book The Complexities of an Urban Classroom (1968) and to Florio and Walsh's (1976) paper, "The Teacher as Colleague in Classroom Research".

The inquiry experience portrayed in this paper was undertaken as part of a project investigating qualitative approaches to educational inquiry while I was a doctoral candidate at Stanford University. It is, however, in many essential aspects similar to experiences since that time connected with other educational criticism projects.

In this case the setting was a second-grade classroom at an elementary school (fictionally called Meadowhurst School in this paper) in the San Francisco Bay Area. My aim was to produce for one teacher and her aide a portrayal of the educational experiences being provided for the children in this class. The portrait would consist of a rather lengthy essay, a set of photographs and an accompanying videotape. To provide that portrait, I participated and observed in the classroom every second day for seven weeks. The length of the observation periods varied, but averaged approximately one and a half hours.

Here is what the experience of creating an educational criticism of this second grade classroom was like:

On My Own: The Road to Meadowhurst

In the beginning there was a dense grey confusion all around. Features always so familiar were now barely discernible, their colors muted and shapes softened by the mist.

Fog comes, said Sandburg, "on little cats' feet." Softly. Its present silence seemed to be a visual hush that had transformed the individual voices of the landscape — here the squawk of the red-orange metal sign, there the elaborate moans of the twisted, decaying oak tree — into a symphony of caressing murmurs. The sounds of discrete objects had yielded their boundaries to the wash, the brilliant patterns of their features faded.

I was all alone in this muck, feeling my way down the road. And so a vague anxiety had floated over me and seeped into the cracks of my consciousness.

The fog, I thought.

Its medium density was a treacherous one. Had it only been thicker, then I would not have ventured into its midst — for the hillsides would have been rendered totally mute, and the infinite number of possibilities for carving up the chaotic silence would have blinded me. So I'd surely have remained safe at home, resting calmly in front of a book. Or were it lighter, could my straining eyes penetrate a bit further down the road, making sense of the emerging figures before they'd already floated past... well, then my jitters would subside, the cause of their existence having vanished. The trouble — right then it felt like trouble — was that I could see the road tempting me onward into a murky morass that was outrageously demanding as a price for my trespassing in it, a more precise definition of its features.

But then I thought again. It was not only the fog that was feeding my apprehensiveness. No, my wariness could not be accounted for by the fog alone. One of its sources — my awareness of this was taking form slowly — lay in the day's mission. For this blurry morning marked the beginning of an adventure whose final shape (like those shadows up ahead) was at that point only approximately discernible. I was heading, as I counseled my Volkswagen van against ending its shaky marriage with the winding road, to Meadowhurst School, where I would be visiting for a while, looking at, and hopefully seeing, the goings-on there as I immersed myself in the activities of the children.

The sort of exploration I had chosen to undertake entailed a search for meaning, a probing into the delicate tissue of human experience. And as we know, every experience is virginal, an original transaction between a subject and his world. An accumulation of the expressions of these experiences make up a cultural scene — a throbbing, organic entity that evolves within a life of its own. The cultural scene which was

my destination was one particular classroom, a churning cauldron of activity where the expressions of experiences have characteristics —— pacings, and tones, and curlicues of meaning —— unprecedented in their peculiar mix.

So I was carrying no satchel of pre-packaged hypotheses with me. For most traditional researchers their Angst would have subsided by now, for the mental challenge largely ends with the forging of those hypotheses. Once those tools have taken shape, the terrible murkiness of the venture subsides, for only the technical procedures of measurement remain. What is left to be done then (in sober dispassion) is to ram them up against the side of the world —— in randomly selected spots —— to see if they break. On the outings of that kind in which I've participated there was usually a lingering suspense, born of curiosity, in gathering the results. But apprehensiveness? Tension? No.

But as I say, I was on my own. No pre-tested tests to administer, no gathering together of attentions to pre-formulated tasks. Only me, what I believe and know, and the shapes of those real experiences, as they emerge... shapes which must be explored at least partially on their own terms, observed within their own positions in the web of life, perceived against the backdrop of their own pasts. I was on an ideographic quest for educational import, something knowable only after it is seen, and not necessarily even then. So hypotheses exported from some foreign experience wouldn't do.

On the other hand...

I have always marveled at accounts of anthropologists who plunge headlong into foreign cultures (they "immerse" themselves —— that's usually the work), voluntarily reducing their own lifelong language and customs to the worth of Confederate dollars. For example, I have striven in vain to imagine the cultural shock —— no, the mental earthqualke! —— of Hortense Powdermaker, that sensitive and intelligent young woman from Baltimore and Philadelphia, as she sat there all alone on her very first night in her thoroughly new place. I have tried to feel what it must have been like.

> I'm in a veranda. I'm in a thatched-roof hut. I'm in a native village. I'm in Lesu.
> Lesu?
> Near Rabual, the capital of the Mandated Territory of New Guinea.
> Oh, that Lesu!

"What on earth," Ms. Powdermaker reported asking herself, "am I doing here? All alone and at the edge of the world!"

Over the edge of the world, if you ask me, and onto another. The first anthropologist to study this late Stone Age culture —— in the 1920's yet! —— she was surely the Ultimate Stranger as she struggled to wrench the meanings from a panoply of unfamiliar gestures, sound-symbols, implements, rites and rituals, values and mores.

Now that is fog. That is being on your own.

So although I was travelling sans hypotheses, it was comforting to realize (in contrast to Hortense Powdermaker) the amount of functional conceptual baggage I was indeed carrying with me. I'd like to consider that for a moment.

I was aware that when —— in a short time now —— I entered that hive of activity, I would not do so as a blind man. I had no precise hypotheses, it's true, nor even any "foreshadowed problems" of the sort that the anthropologist Malinowski used to smuggle into his more exotic locations. But I did, after all, have a past. My mind was not a tabula rasa. I had proclivities, tastes, needs, and interests, and (I dare say) when it

comes to the field of education, more conceptual categories than the average person. I could feel sure that they would guide my attention as I selected among the phenomena before me.

Furthermore, I would not be as much of a stranger as Hortense was. For one thing, there would be no new language to learn. Not really. I would be already equipped to interact symbolically with the people there —— including, most importantly, the children. In fact, I would share with these kids not only a language, but a whole stock of cultural assumptions that I had long taken for granted. They would have been largely socialized into my —— our —— society.

But now, at once, Meadowhurst emerged from the vapors. I was, in a sudden, hearing the very shrillness of my thoughts. They were a blaring cacophony, overpowering the cushiony whispers from the ghostly objects in the mist. I shooshed them. My van, obedient even to my tacit wishes, had parked itself. Stepping out quickly, I inhaled some fog, as if to convince myself that its reality for me was more than metaphorical. A gallon, it seemed. I was startled to discover that I exhaled even more! I chuckled nervously to myself. "Has all that seeped out of the cracks of my consciousness?"

I strode to the classroom, fixed my lips firmly in a smile-position, and turned the doorknob.

I was on my own.

On the Inside: Adrift

On the inside, I discovered that I had moved haphazardly and as though entranced to a tiny chair at the math table where Cathy, the teacher, and a group of students were comparing mounds of orange-colored sticks to some numbers on a page. A smile of recognition from Cathy, with whom I had had several preparatory meetings. A signal from me that I desired invisibility. Cursory glances from two or three of the children. These glances, though quite off-hand, made me conscious of a tenderness in my actions, a feeling that each move could leave a precious virginal imprint on their minds, a sacred first impression of my role and status in the classroom community, and the nature of my relationship with its other members.

This cautiousness was typical of my approach in those first few weeks. I treated the class as if it were a tub of hot water: I sort of sat by it, and tested the contents with my toe. (After the water had cooled a bit, I planned to do what every self-respecting field researcher does, of course —— I'd immerse myself, as it were, in a Bathtub of Life!) For the first two weeks I visited for about an hour every second morning, promoting the "natives" acclimation to my harmless presence, and attempting to acquire the status of a classroom fixture. I showed my friendly face, keeping one eye on the action and the other on myself. I gave my name away every chance I got, and I collected others as though it were my hobby. My standard introduction went something like this: "My name is Tom. I'm here to learn about your classroom so that I can become a better teacher. That's why I'm visiting."

I'd ask "random" and obvious questions of the nearest person about the most prominent aspects of the classroom. I was careful not to ask "personal" questions of the children about their attitudes towards activities or personalities because obviously, strangers do not ask such things. I asked, instead, for facts about specific characteristics of their classroom life. "Are there any desks that are always empty, where I could sit?... What reading group are you in, Syd?.... How often do you go to the library for reading hour?"

During this time the children seldom acknowledged my presence, but went about their business as usual. Only rarely would someone initiate a conversation. On the first few days, however, several children approached me to ask if I would sign their "contracts", sheets of paper on which were recorded the day's activities. On such occasions I demurred, saying "I'm sorry, but I don't think I'm allowed to do that." A split second's worth of hesitation almost invariably followed, and with perhaps an understated "oh" slipping from

their lips, they'd scurry off to find another "tall person."

The contracts served to structure the agenda of the students. As we have already discussed, my agenda was considerably less defined. As a result, during these first two weeks in the classroom a strange feeling, a sensation of flailing about, hung over me. I felt like someone who had just bought an expensive sailboat and then discovered that it doesn't have a rudder! My whims are the winds, I thought, and they're in charge!

A swatch from my field notes tells what it was like:

> Friday, January 28...enter room. Tired of observing Cathy at the math/reading table. Decide to sit in an empty desk and "socialize". Amidst three children focusing on workbooks. Intenseness in their comportment. (So what?) I mumble a few questions. The responses are terse little nuggets which, though delivered in a friendly and casual style somehow do not invite further questioning.
>   "May I try doing one of those?" I wanted to get a closer look at the workbook. Apparently it teaches about kinds of food, about how to balance a meal nutritionally, etc.
>   "There's one in Randy's desk."
>   I find it, open it. A curious fascination with its contents. I linger over the book. So what is there that is more important for me to be looking at?
>   Immediately I realize my lifelong interest in food. Two restaurants in the family as a child. Discovering restaurants in delicious San Francisco is a current hobby. And I have been known to cook a mean souffle.
>   My God! I think, is that the kind of capriciousness guiding my conduct of this supposedly serious study? A sinking feeling, laden with guilt —— as if I had just gobbled down one-too-many slices of a pepperoni pizza —— finally persuades me to move on.
>   Quick, an Alka-Seltzer....

The aimlessness was as unnerving as the fog I had driven through a few days before. What was I seeking? How should I move? With whom should I attempt to gain rapport? Should I relax and yield my mind to the intuitive forces submerged within it? Do I possess a "sixth sense" —— like the birds that migrate by feeling the earth's magnetic field —— that will guide me to a suitable destination? Or will it just guide me back to that workbook about food?

It was slightly consoling to realize that such drifting is common among anthropologists in the early stages of their work. Rosalie Wax herself had felt similarly (1971:17):

> Usually a beginner arrives in the field ready and eager to begin "gathering data". Then, for weeks, and sometimes months, he gropes and wanders about, trying to involve himself in the various kinds of human or social relationships that he needs, not only in order to accomplish his work, but because he is a human being.

And a lack of fixed purpose is certainly not unknown to artists who often begin a work like Henry Moore did, "with no preconceived problem to solve and with only the desire to use pencil and paper, and make lines, tones, and shapes with no conscious aim."

So I guess I was both a human being and an artist (of sorts), for I gave myself to my materials —— the phenomena of educational life which surrounded me. These varied phosphorescent fragments of Life dazzled my mind, each one sparkling in its separate micro-moment, shrilly whistling its demands for my attention. I would turn to this one, then another would screech at me, and I would hear it too. These denizens

of a vulgar neon jungle, each having barked its introduction with equal volume, were in competition for my attention. How could I capture on paper this myriad of impressions, many with the life span of some elusive sub-atomic particle, that confronted me?

I experimented with techniques and methods for recording what I saw. Sometimes I tape-recorded my thoughts on my drives to and from Meadowhurst blurting out swatches of ideas for later transcription into my notes. This was an excruciatingly difficult exercise, for my mind shoved forth dozens (it seemed like dozens!) of ideas all at once —— cold facts, naked, disjointed, apparently unrelated. Often I sat dumbfounded in their presence, unable to speak of them into the recorder. Like panicky individuals in a burning room who are trampled as they rush pell-mell toward the doorway, my thoughts could not exit from within me. Often I seduced myself into believing that tape-recording was a pointless exercise. It was wasteful of my psychic energy, I told myself, and wasteful of the time required, not to record my thought (I did that as I sat trapped inside my car), but to review them, and to elaborate in writing upon those judged worthy.

Of course, had a set of criteria emerged for assessing significance, then I'd have guidelines of a sort for discriminating according to importance. As it was, however, there reigned a kind of tyrannical egalitarianism among them. Every phenomenon a king! And therefore each a pauper.

So as it was, in these two weeks I vacillated between two extremes. On certain days, I indiscriminately recorded scads of notes, page after relentless page of detail, only a minute fraction of which, I realized even then, would later prove valuable. After other visits I felt too hounded either to tape-record or to write. On those days I would stew in my frustration, beseiged by piecemeal impressions, even though I know that if I merely let them simmer in my mental juices, then in time, they should yield a bouillabaise of some substance. (After all, it had happened before!)

If only I had come across this passage from Robert Bogdan (1972:25) before I had started my work:

> Doing research in the field is especially exciting early in the study. This is when the tendency to spend hours upon hours observing is particularly great. The researcher often feels that he doesn't want to leave the setting because he knows something of importance is about to happen that he should see. He leaves the field drained of energy and filled with so much information that he never gets a chance to record it. Observations are almost useless unless they are recorded in notes and become data. Start off right by controlling the length of your observations periods. When you feel you have observed as much as you have the time to record or the ability to remember, leave the field.

But, alas, I was to discover that particular passage only after I had experienced and discovered its awful truth for myself.

Meanwhile, the display of mental fireworks continued.

Caught in a gumption trap

——Monday, January 17... The warmth of Cathy's voice, her patient and caring demeanor, struck me today. Her reassuring tone creates a safe environment for these kids, does it not?.... There seems to be an unhealthy whimsicality in the doings at the art table. Making "houses" out of sticks of various shapes and colors. What's the point?....An incident today: June was comforted by Cathy because Molly accused her (June) of trying to "steal her (Molly's) friendship to Sarah. Points up the rarity of bickering and the (at least superficially) harmonious relationships here.

Safety. Lack of intellectual challenge at the art table. Harmony. And so on. The straining to discern some relationship between these qualitites and to locate their place within some grand theoretical super-structure continued after I left the classroom, for the qualities and events haunted me as I traveled through the day, invading my privacy every chance they got.

> Friday, January 21... Riding home. Still intrigued by the notion of needs. Could I some-how look at the experiences here in the light of Maslow's hierarchy of needs, for example? Are the more "civilized" needs for self-actualization being ignored while the emphasis is on the more "primitive" needs of esteem and safety?

This contemplation of Maslow's needs hierarchy was typical of my thinking these days. But it soon be-came obvious that its capacity for capturing the essence of these events, like that of several other notions I had kicked around, was limited. Another thematic cul de sac?

> Tuesday, January 25, 3 P.M...... On my way to the post office there occurred what seemed a useful insight. I recalled the plea of Carl Bereiter (in his book Must We Educate?, 1972, which I had read a year before) for schools with two kinds of activities, (1) those concerned with skill-training and (2) those "day-care" activities which did not aim to "educate" the child. This classroom is, it struck me, a microcosm of that kind of school. Bereiter's theoretical no-tion had been given flesh in this classroom.
>
> I searched my memory and my notes for instances to be sorted into these two theoretical compartments which had suddenly opened up. Workbook activities: skill training. Highly structures. Non-nonsense. Intense. Choppy. Carefully evaluated by the teacher. Etc., etc. ... Now the art table activities, for example. Unstructured. Lacking a rationale to a large extent. Main purpose: apparently to keep the kids involved in something — anything — so that they wouldn't interrupt the real business being transacted at the math/reading table.

Two distinct kinds of experiences. My theme at last? Again, I mulled this idea over for a couple of days, and while it seemed more promising than any scheme that had yet emerged, nevertheless it failed to blossom. I continued my search for an overriding organizing principle — with Bereiter on a back-burner.

Such were my daytime musings. In the course of my life so far, however, I have found that my most valuable thoughts often appear to me as I lie in bed at night. After my mind has been cleared of the mun-dane distractions of the day, the outline of a paper I've been writing acquires a starker clarity, or a solution to a problem that has been plaguing me appears as if my magic. From where, I'm not really sure. But when such a nocturnal event occurs, it reminds me of the passage by the German scientist Kekule concerning his discovery of the benzene ring while asleep. This is part of his description of that event:

> Long rows, variously, more closely united; all in movement, wriggling and turning like snakes. And see, what was that? One of the snakes seized its own tail and the image whirled scornfully before my eyes. As though from a flash of lightning I awoke; I occupied the re-mainder of the night in working out the consequences of the hypotheses...Let us learn to dream gentlemen. (cited in Pelto, 1070)

(Scientists could write in those days, couldn't they? Will we ever see such a vivid recreation of the birth of, say, the pi meson?)

It's fun to ponder why logic's eyes require the light of day for it to accomplish its linear deeds more readily. Why in blackened stillness does it so meekly abandon the jungles of the mind to the more noctur-nal beasts of insight and intuition? Again, take Balzac. Why did that wordwise wizard find it necessary to

create his magnificent worlds in the wee-est of hours? Well, the nights, for me, have not yielded the equivalent of a benzene ring, or a Pere Goriot, or a pi meson —— (yet!) —— but they are very often a bit more fruitful than my days of frantic searching.

'I suppose that nighttime (like Death, as someone once joked) is Nature's way of telling us to slow down. The night is placid. We relax, and can contemplate in serenity, and even toy with facts about the classroom as they parade past closed eyes. One has time to simply stare at them —— as advised by Robert Pirsig in his book Zen and the Art of Motorcycle Maintenance (1975). When attempting to repair your motorcycle, says Pirsig, you may get caught in the "gumption trap of value rigidity:"

> The overwhelming majority of facts, the sights and sounds that are around us every second and the relationships among them and everything in our memory —— these have no Quality, in fact have a negative quality. If they were all present at once our consciousness would be so jammed with meaningless data we couldn't think or act...
>
> What you have to do then...is slow down deliberately and go over ground you've been over before to see if the things you thought were important were really important and to...well... just stare at the machine. There's nothing wrong with that. Just live with it for a while. Watch it the way you watch a line when fishing and before long, as sure as you live, you'll get a little nibble, a little fact asking in a timid, humble way if you're interested in it. That's the way the world keeps on happening. Be interested in it.
>
> At first try to understand this new fact not so much in terms of your big problem as for its own sake. That problem may not be as big as you think it is. And that fact may not be as small as you think it is. It may not be the fact you want but at least you should be very sure of that before you send the fact away. Often before you send it away you will discover it has friends who are right next to it and are watching to see what your response is. Among the friends may be the exact fact you are looking for.

Wide-awakeness: seeing in the dark

Sat., January 29 at 1 A.M....Restless night. Couldn't sleep. My mind was filled with thoughts of Meadowhurst. What occured to me was the glaring contrast between a stated intention and a real condition. I mean, Cathy worships this new-fangled god of "individualization". Frustrated with her traditional classroom situation, she decided, fairly late in her career, to progress, to improve those situations by rearranging the "furniture" of her classroom life. Fact: She said she wanted to "individualize".

Now that fact concerning her intentions is not really relevant. But contemplating it has led me to its neighbors —— more questions than facts. Where is there individualization in this classroom? In what sense? Are the kids supposed ot be able to pursue their individual interests; is that it?

The pace of my thoughts quickened even more. How do the curricu

luar materials foster "individualization"? Are the activities tailored to the individual's "needs"? Or does being an individual learner mean that you get to choose your very own time for doing what each other person is doing at his very own chosen time?

What are the dimensions of individualization in this classroom? For a couple of years I have been intrigued by the notion of individualization, and maybe this would be a good chance to explore its meaning in context of a particular classroom.

My eyes were open and as wide as an owl's.

While calmly focusing on a discrete fact my peripheral vision did indeed playfully allow within my purview some neighboring facts, but what emerged was more than a mere conglomeration of truth-particles. It was as if the night served as a dark relief against which the individual facts, like the stars against a blackened

sky, formed constellations of truths with beguiling relationships between them. Patterns of stars in which could be discerned recognizable, sensible shapes.

And so, here, finally, may be —— was a way to see, an ordering principle that could penetrate the soul of the experiences in that classroom and at last —— perhaps —— reveal their structure.

In retrospect, the selection of this particular theme was not as mysterious an occurrence as I have suggested, or indeed, as I initially thought. For a couple of years, in fact, I had periodically wrestled with the notion of individualization, deploring its lack of definition in the literature, and the catch-all-and-so-catch-nothing fuzziness of its meaning as used. The annoyance was, I think, due to what I perceived as a move (generally successful) by a portion of the technologically-oriented sector of the educational community to co-opt the phrase. And when you consider that I had long considered "personalization" of education (true individualization, by my reckoning) to be endangered by the "modern" thrust toward technocratic schooling, the picture becomes even clearer. What I really discovered that night, therefore, was the appropriateness of this particular classroom as a vehicle for exploring and developing the idea, and, vice versa, the potential which the notion had for framing the events I had been observing.

It is clear that other qualitative evaluators observing in this classroom would have found different frameworks —— already partially constructed within their personal histories —— through which to view the experiences of these children. I was just thankful for this newly reconsidered framework of my own, for it came like a dry breeze, slowly lifting the fog that had till then obscured my vision and fed my apprehensiveness.

On the following days, I became aware that as my potential theme took shape, I was simultaneously attempting to conjure up a means for conveying it. Which conjuring immediately opened up a Pandora's Box of problems: How is this theme related to sub-themes, and how would I blend them into a literary unit? Could I bring these ideas to life by a vivid rendering of events and personalities in this classroom? And always, WHERE DO I START?

Most sociologists and anthropologists who work qualitatively cleanly divide the writing phase of their work from their fieldwork stage. That is, they accumulate their data in the field —— sets of facts which are only later transformed (some, alas, never reach this stage!) into a literate, understandable whole. The latter process, Rosalie Wax (1971) admits, is much more difficult and time-consuming than the former.

But there are strong reasons that urge against the adoption of such an approach with two clearly delineated stages. For one thing, it is more time-consuming when practiced "to the letter." The concern that I not write several times the amount necessary was a genuine one, for there was the problem of deadlines — always a real one in a project such as this. One which adds its own measure of tension to the pot-au-feu of anxieties.

While there was a pressing urge to write something more than merely notes —— to write, that is, something quasi-final —— the urge was always held in check by a lurking fear that the resulting manuscript would be premature. I remembered, though, that on my last outing of this sort I had partially skipped the stage of "factual" note-taking. On that occasion I was moved by the ambiance of the room as I sat in a corner, and began to write a literary style about the physical make-up of the classroom. The words had appeared with natural ease in the presence of the real atmosphere they were to convey. And this was quite early in the course of the project, yet the writing held up well. The result was a set of linguistic strokes which finally found themselves in one corner or another of the final verbal protrait.

And anyway, at least now a theme had emerged. I was finally mastering the onslaught of impressions, structuring and making sense of the hitherto bewildering phenomena. I should begin to transform them

words. The theme, perhaps could gestate during the actual writing.

Yes, I thought, I should begin to write.

Now, as you might guess, the act of logically deducing that I should commence writing, and even the intuitive "knowing" that the time is ripe —— neither is itself the act of writing. A significant aspect of paralysis is its involuntariness. "Writers's block" is equally insensitive to reasoned appeals and "gut feelings." Yet, I thought, I will try to write, even though it both bothered and amused me that I still wasn't clear about where to start. As was the case, however, I did not have to wait very long before clarity began to emerge.

Crystallization.

One of the most vivid recollections I have of my high school classes is the memory of a particular chemistry "experiment." (My teacher called everything from burning a Popsicle stick and capturing the oxygenless fumes, to hatching fruit flies, an "experiment.") In this "experiment" heaps of a certain chemical compound were added to a test-tube of hot water, super-saturating it. Then the water was cooled, another tiny grain of that chemical was added, and —— voila! —— the entire contents of the test-tube instantly solidified. Crystallized.

Later we were shown a film which illustrated how the molecules coalesced around the "seed" in precise patterns, growing ever outward from the center until the chaotic fluidity had fully yielded itself to a fixed, rigid, and pervasive structure. It was an amazing performance, and despite my acceptance of the very logical, scientific explanations of its how's and why's, unto this very day it contains for me an element of magic.

And how it seemed that something analogous was occuring within me. In the course of my stay at Meadowhurst, my mind had also been overloaded with impressions that swam independently through my thoughts. When, in darkness, my anxiety had cooled a bit, a single fact, a seed in the night, fell into the pool of my ideas. And soon this thought had recruited others which adhered to it in accordance with an emerging design.

It was clear in the morning light that the pattern of ideas was transforming the entire shape of my investigation. The schema was not only serving as a guiding or principle in structuring incoming impressions, but was also influencing my manner of seeking out new data, and even providing structure for my writing. Let me tell you how.

On the drive back to Meadowhurst that next day the crystallization of my thoughts continued apace. I wanted to illuninate what "individualization" meant in context. What was "individualized" about the experiences in this one classroom? How was uniqueness, in the name of "individualization", being squelched, and how was it being nurtured? What would I have to find out to answer these questions?

I would surely need to provide some theoretical discussion and then I could "ground" the theory in specifics. Specific what? Specific actions of specific personalities which are either growing in uniqueness or being molded into what every one else is. Then almost immediately: What compositional strategies —— formats, techniques, styles of writing —— might be appropriate?

I thought I might paint protraits of two or three "typical" but individual children as they navigated through their day. They would be "typical" inasmuch as certain aspects of their approaches to the classroom scene reflected the styles of a sizable number of other members of the class. In portraying the nature of their experiences, I thought, I might provide "indicator phenomena" (of. Honigman, 1959:59), or

particular events that lie at the heart of a flow of events in a cultural scene. Certain of the experiences of the children to be highlighted in writing, therefore, would have to be such phenomena. They would have to typify, in some respect, the experiences which pervaded the classroom milieu. Which aspects were to be at issue was dependent, in turn, upon the emerging theme. That is, certain experiences of certain children might dramatically illustrate the manner in which individualized interests and needs were ignored here and which were attended to.

The next step was determining who these students were going to be. In this particular study three students emerged as archetypical, almost personifications of certain qualities of action that pervaded this classroom's atmosphere. For example, many of the kids in this room seemed to have been "co-opted" by the system. That is, whatever "higher" needs for self expression might lay unfulfilled were apparently being sacrificed to the more basic needs of self-esteem and approval. These kids, surely the majority, were cozying up to the rewards of recognition. I realized quite early that very few, if any, of the children played this game of cheerful acquiescence quite as well as Carl. When it came to milking the established reward system, Carl was the best. As such, he was an early-on favorite for portrayal.

There was also at times avoidance of many of the prescribed activities, especially when no adult was close at hand. This was a clear indication that much of the curriculum was not intrinsically important to the kids. This could be most poignantly conveyed, I thought, by detailing the daily routine of the Classroom Procrastination Queen, Sarah Bowman.

Sarah was often a sulking daydreamer, but not always. On those occasions in which the curriculum touched her interests school became meaningful to her. On those occasions — and only on those occasions — Sarah sprang to life. It occurred to me that, by contrasting these "personalized" activities with bleaker aspects of Sarah's classroom life, I could illustrate an ideal kind of "individualized" learning.

Finally, there was Mike. I had always been watching Mike, for his antics were hard to ignore. But now, since the first two members of my trio of protagonists were to be the "mature", self-composed, achievement oriented Carl and the inconsistent Sarah, then — in accordance with the theoretical framework that had been taking shape — I needed a third person who was the very soul of unrestrained impulse. There was no doubt about who fit that description!

It is noteworthy that the selection of these three children as protagonists, although surely guided by that framework, occurred prior to its full articulation. That is, there was a submerged, tacit pulling toward these three characters without a conscious, "intentional" selection process taking place. The children whose activities and personalities were to be highlighted, therefore, were not picked because they were the best "key informants," but because of their archetypicality. Furthermore, it is not always necessary to focus on a small number of selected students in this kind of evaluation endeavor. On other occasions I have included important theme-related incidents regardless of the specific children involved.

In the early stages of my visit I actually participated in many of the classroom activities. One point of participating was to garner a "feel" for the activities, a greater understanding, say, of the restlessness of a child who is chained to an uninspiring workbook. In the beginning phases this was a very helpful strategy. But now this reason was likewise evaporating as I discovered a "cheaper", more "efficient" form of participation for the later stages of my visit.

After the first two weeks, I found that actual physical participation did not generally provide as much new information or hunches as did the dynamic combination of my observations and imaginings. Together these allowed for a kind of vicarious experiencing. It was helpful, however, to observe the actions of a single child for an extended period of time, rather than dividing my attention among several. (This is probably

especially true for this kind of "open" classroom where a multitude of activities occur simultaneously, and where the potential for observer distraction is heightened.)

Through the sustained observations of individual children I was, therefore, able to achieve a degree of empathic identification with them. This was especially true in group activities in which I would enter the situation by imaginatively reacting to events through the child's eyes. By reading the cues emitted, I could grasp the personal significance of the activity, rendering my actual presence in the event superfluous.

The greatests portion of my time was now spent positioned in my own desk. The desk was strategically located, providing a view of nearly the entire room. It was close enough to the math/reading table to overhear the goings-on, and yet was tucked into a somewhat obscure corner. It was a private spot, ideally suited for unobtrusive observations. Most importantly, the desk served as a sanctuary where I could remain undisturbed as I composed my notes.

For indeed, there was a cloudburst of notes! Since the emergence of my theme scarcely a moment elapsed without a recording of some information that seemed useful. Gone was the "cognitive overload", the mental logjam that had left me virtually powerless to choose among expressions competing for recognition. Now purposely I focused on particular kids. I felt some assurance of the value of certain impressions. And since no one likes to loose something of value, there was a need to record my thoughts quickly —— to freeze them, as it were, while they were still fresh, lest their character decay over time. And so I'd sit at my desk and write undisturbed, never revealing the content of my scribblings to those whose peculiar experiences they attempted to transfer to paper.

I did not always stay locked into my desk, of course. Very often I would make forays into the jungle of activities within my view. This occurred most often when I was uncertain about the motive of a particular action, or when my view of the proceedings was obstructed. Or when I saw the chance for an informal interview. But by and large I became much less mobile than I had been during my earlier visits.

But now as my thinking crystallized into written words, the project raced toward the finish line. Having completed my participation — observation, I was soon taking photographs that were to be included in the written portrait. Then, after a few weeks, the visits ceased entirely, and I holed up in my apartment to complete my manuscript. Later the results would be shared with the teacher and her aide, and the project would draw to a close.

Retrospection in the sunshine

By this time I had become aware that this research experience, like others before and since, was comprised of several phases each of which possessed a distinct personality. We might consider the nature of those phases in hopes of learning more about the process of educational criticism.

Educational or curriculum criticism is, it is clear, a problem solving process — one that is in some respects similar to the kind discussed by John Dewey in his book How We Think. In that book, however, Dewey was primarily concerned with the nature of scientific problem-solving, in which "the scientific worker operates with symbols, words, and mathematical signs (1910:16)." The process of curriculum criticism clearly contains some qualitative elements. In this respect it resembles the qualitative problem-solving process about which David Ecker (1967) has written. The educational critic does indeed attempt to make sense of qualitative phenomena —— forms of classroom life —— and to render these "things of direct experience" in a way that would do justice to their character and the relationships between them. But the critic also attempts to "match" those qualities with certain symbols or theoretical notions so that each illuminates the other. That is, the qualitative rendering — if it is a good one — makes vivid the otherwise empty, dessicated, or only vaguely realized symbols that "stand for qualities but are not significant in their

presence" (Dewey, 1910:73), while the theoretical super-structure provides guidance in the selection of qualitative phenomena for the rendering, and a conceptual handle for understanding them more fully. So the result is, I believe, a hybrid species of problem-solving — one permeated with both "artistic" as well as "scientific" elements, and on which thereby defies categorization into either of these existing slots.

What all three of these processes (Dewey's, Ecker's and this one) have in common is (among other things) that they each have a pattern of inquiry, a series of identifiable stages. Ecker has identified several stages in the qualitative problem-solving process that correspond to Dewey's famous "stages of a complete act of reflective thinking (1910)." How do the stages in educational criticism compare with these?

1. The initial haziness and random discrimination of qualities.

My ultimate goal was a structuring and a rendering of some of the important educational phenomena in this classroom. Yet during the first week or so I confronted a welter of available data that surrounded me. Even the methods by which I attempted to get at this data were to some degree initially unclear. The result was close to what Dewey insists always accompanies the discovery of a difficulty: "an undefined uneasiness and shock (1910)." Actually, my uneasiness was not entirely undefined: even before I entered the class I had articulated for myself the shapes of some of the difficulties I anticipated encountering. In this inquiry, in fact, Dewey's first phase had somewhat bled into his second: the definition of various elements of the difficulty.

Stage one in this endeavor was actually closer to Ecker's first stage in qualitative problem-solving — "the confrontation of the quality or those qualities which achieve candidacy for alteration, reconstruction, or change." Certain qualities of classroom life did indeed become apparent in this stage (Cathy's patience and her reassuring demeanor, the whimsical quality of certain activities, the generally harmonious tone of the events). Yet the qualities were, in a sense, "raw phenomena", that is, not subordinate to some explicit overall structure or pattern and so they appeared to be random.

2. Emergence of potential themes, sub-themes, and structured fragments.

The second stage of this inquiry was somewhat analogous to Ecker's "substantive mediation" stage in which "new qualitative relations are instituted (1967:67)". Relationships between various phenomena began to be perceived, and patterns of qualities discerned. The patterning was tentative and probing and generally relied upon understanding and appreciating the phenomena in terms of concepts and theories with which I, the evaluator, was already familiar (Maslow's hierarchy of needs, Bereiter's scheme, etc.). Greater imagination can result in a kind of "grounded theory" (cf. Glaser and Strauss, 1967) emerging from this particular educational context. At any rate, the notions which appear in this stage encompassed only a portion of the phenomena, and fell short of providing an ultimate theme, ordering principle, or pervasive structure for the portrait.

3. Emergence of the theme or pervasive structure.

Dewey's third stage in the analysis of a complete act of inquiry is the "occurrence of a suggested explanation or possible solution." For Ecker, the qualitative problem-solving process "climaxes" at this stage as a pervasive quality emerges "from the qualitative components being introduced, manipulated, and related to other components and the qualities emerging from these respective relations (1967:67)."

I am unclear about the psychological mechanism whereby "individualization" first presented itself to me as a potential theme. When it occurred to me, however, I "intuitively" felt its appropriateness and power as a notion around which the phenomena appearing here could be fruitfully clustered.

Yet even though the notion was to serve as a pervasive, the "definition" of individualization was not to be the historically prevalent definition, but was itself to emerge in the course of the work, in congruence

with the qualitative phenomena to which it would come to refer. The "theme", therefore, at once served as a pervasive structure for the various components of the piece, while simultaneously growing in clarity and definition itself.

Now, it is possible for an evaluator to preselect a theme for his work prior to engaging in fieldwork, to decide beforehand that his aim was to illuminate a particular aspect of educational theory and then to choose a classroom in which to work. Or even more drastically, one may, as is done in "normal science" (as opposed to "revolutionary science" –– see Kuhn, 1970), work within a pre-existing paradigm to generate a set of hypotheses that will likewise have been preformulated. In both of these cases one will have chosen (in varying degrees, since I believe a continuum is involved here) to focus upon preselected aspects of that classroom, and to that extent will be less concerned about the ideographic configurations of events located therein. In fact, in such a prestructured approach the researcher need not even enter the particular classroom until stage four:

4. The elaboration of the theme.
This step involves the "teasing out" of the implications of the controlling idea. In this particular investigation, as the theme emerged it served as a "qualitative mediator" (Ecker's term, 1967:67), First, as a "criterion" of sorts for selecting among the mass of qualitative phenomena that were present. Secondly, as a kind of patterning principle for revealing relationships between the qualitative phenomena so attended to. And finally, as a kind of "logical" premise for inferring sub-themes (which themselves serve as "sub-principles" for selecting and interpreting phenomena).

The total portrait gradually emerges, therefore, as each component part is tested for its "fit" in the pattern. Does each component –– this piece of theory, this interpretation of this particular event, this vignette rife with qualitative nuances –– contribute to the development of the theme or themes? As this process occurs, some accumulated pieces of information must necessarily be discarded, not because they are not "true", but because they do not further the "story line" which is being developed.

5. Finally, as Ecker states (1967:68), "the work is judged complete –– the total achieved –– the pervasive (our 'theme') has adequately been the control."
This achievement of the total, I would add, almost inevitably serves as escort for a mood of deep satisfaction - one that contrasts with and even compensates for the edginess that accompanies the initial phases of this kind of project. In the beginning there is a universe to carve up into recognizable forms. The anxiety of where to first stick the knife – well, I have already attempted to convey those feelings. But the ending feels differently. I can recall with remarkable clarity what it was like that time at Meadowhurst.

It was April in Northern California and there I was just a-lyin' out there scribblin' these notes and feelin' good. Sprawled out on the grass basking in a delicious day of royal blue.

As I rested sweetly in the afterglow of that research experience, my eyes traced the pencil-thin horizon line that restrained the velvety-green Santa Clara Mountains as they strove to lift themselves against the spacious sky.

The consistently blue, cloudless sky. No floating fog to obscure the view today, I thought to myself, to make one anxious about tomorrow.

It was just as cloudless, in fact, as I was at that moment. With no past and no future. With only an infinate and fully crystallized present.

BIBLIOGRAPHY

Bereiter, Carl, *Must We Educate?* New York: Prentice-Hall, 1972.

Bogdan, Robert, *Participant-Observaton in Organizational Settings.* Syracuse, New York: Syracuse University Press, 1972.

Dewey, John, *How We Think.* Boston: D.C. Heath, 1910.

Ecker, David, "The Artistic Process as Qualitative Problem-Solving," in Elliot Eisner and David Ecker (eds.), *Readings in Art Education.* Waltham, Massachusetts: Blaisdell, 1966.

Florio, Susan, and Martha Walsh, "The Teacher as Colleague in Classroom Research." Paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1976.

Freilich, Morris (Ed.) *Marginal Natives: Anthropologists at Work.* New York: Harper and Row, 1970.

Glaser, Barney and Anselm Strauss. *The Discovery of Grounded Theory.* London: Wiegenfeld and Nicholson, 1967.

Golde, Peggy (Ed.) *Women in the Field.* Chicago: Aldine, 1970.

Henry, Frances, and Satish Saberwal (Eds.) *Stress and Response in Field Work.* New York: Holt, Rinehart and Winston, 1969.

Honigman, John J. *The World of Man.* New York: Harper and Brothers, 1959.

Kuhn, Thomas S. *The Structure of Scientific Revolutions,* Second Edition, Enlarged. Chicago: University of Chicago Press, 1970.

Liebow, Elliot. *Tally's Corner: A Study of Negro Streetcorner Men.* Boston: Little, Brown, 1967.

Malinowsky, B. *Argonauts of the Western Pacific.* New York: E.P. Dutton, 1922.

Pelto, Pertti, *Anthropological Research: The Structure of Inquiry.* New York: Harper and Row, 1970.

Pirsig, Robert M. *Zen and the Art of Motorcycle Maintenance.* New York: Bantam, 1975.

Powdermaker, Hortense. *Stranger and Friend: The Way of an Anthropologist,* New York: W.W. Norton, 1966.

Smith, Louis and William Geoffrey. *The Complexities of an Urban Classroom.* New York: Holt, Rinehart and Winston, 1968.

Wax, Rosalie H. *Doing Fieldwork: Warnings and Advice.* Chicago: University of Chicago Press, 1971.

Whyte, William Foote. *Street Corner Society.* Chicago: University of Chicago Press, 1966.

Educational Criticism: Reflections and Reconsiderations[1]

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Introduction

This paper discusses reflections and reconsiderations of notions about educational criticism. In it, I raise many questions and reflect some misgivings and resolutions of some of those misgivings in hopes of developing a spirit and method of inquiry appropriate for curriculum matters.

What is educational criticism? It is both a process and a product. It is a process in that a critic observes, wonders, speculates, interprets and critiques phenomena, and linguistically renders that experience to an audience. It is a product in that a criticism is an illuminative description with significant interpretations and appraisals of the phenomena experienced leading to an understanding, an empathic identity between critic and audience. Varied interpretive frameworks are employed by educational critics, such as theories from sociology, anthropology, psychology or knowledge of contemporary events or those out of history. In addition to describing and interpreting phenomena, the educational critic also appraises them, pointing to strengths and weaknesses and discussing for what reasons particular practices should be encouraged or discontinued. Theory and practice, observations and theories have a dialectical relationship in educational criticism, for each informs the other. In 1969, John Mann wrote an article calling for such a form of inquiry in education. Several others, such as Elliot Eisner (1979) and George Willis (1978), have further argued for such a form.

Educational criticism is a process of inquiry, brought about by an intensive experiential encounter between a critic and some sort of educational phenomenon—a parent training workshop, a set of social studies books, a high school algebra class, the facilities in a school for paraplegic children, the practice of rewarding children with tokens to be used to buy candy, a government policy regarding the finding of education, or whatever. My own research has been in classrooms and has focused upon what children have an opportunity to learn and to do in schools and how that curriculum gets into the schools.

Criticism is not intended to be solely negative. It is intended to heighten readers' comprehension of education-related matters and to encourage reflection about such matters. (See McCutcheon, 1979, for elaboration.)

It is important to note that educational criticism is, in some ways, related to critical science. In both forms of inquiry, researchers make use of their theoretical and value positions as they collect evidence, interpret it, and critique the phenomenon under study. Critical science rests on an epistemology from the social sciences while educational criticism rests on an epistemology from the arts and the social sciences. The two forms of inquiry are also different in that an educational critic is concerned with rendering the phenomenon in evocative prose to facilitate an intersubjective understanding on the part of the audience. Another large difference is that critical scientists employ a Marxist/neoMarxist framework, while educational critics draw upon various pertinent theories, values and knowledge from history and the current scene for their frameworks. Methodologically, then, the two may seem parallel, but epistemologically and ideologically they differ.

Recently, several issues about educational criticism have begun to plague me. The remainder of this paper addresses a few of them.

Exploring the Metaphor

For one thing, we need to explore the metaphor of criticism far more fully than we have. Which types of aesthetic criticsm do we draw upon when we discuss educational criticism? Historically, traditions of aesthetic criticism are at least as diverse as are traditions of educational research. Yet not all traditions of aesthetic criticism may be appropriate as foundations of educational criticism. Which ones are? From which do we borrow the metaphor? In what ways are some appropriate, and in what ways are others not appropriate? A few examples from literary criticism will illustrate these points.

Horace, the greatest of Roman critics was conservative, calling for the imitation of poets who wrote in the past and for proper etiquette or decorum. Stick to tradition, try not to look foolish would be his advice to poets. Is this theory of criticism appropriate for educational critics?

During the Middle Ages, not surprisingly, critics' work was imbued with ethical and religious beliefs. Boccaccio, for example believed the Holy Ghost spoke through the poet.

During the Renaissance, threads of nationalism and class structure were evident in criticism. Poetry was to be written in the language of three social class groupings, the high, middle and low. Grand style, according to Scalliger, was to be reserved for "gods, kings, heroes and generals, and not for inferior characters such as sailors, hustlers and tradesmen" (Hall, 1963:37). Genres were also to be divided among classes. Tragedy should deal with the activities of kings, comedy with the middle class and farce for the lowest of class. Indeed, Shakespeare's tragedies roughly follow this dictum with regard to rank, action and language conforming to these notions of decorum. During this era, the poet was seen as divine and inspired, but for reasons of genius rather than the Holy Ghost using the poet as mouthpiece. Milton believed poets to be teachers of purified religion and the love of liberty. He was anti-class standards, more interested in standards of ethics and morality.

In Neoclassical times, critics believed poets should follow the rules laid down by forebearers. These rules were seen to grow out of the nature of the art, much like Kepler's laws about the nature of the solar system grew out of his and Tycho Brahe's observations of planets. Excess and enthusiasm were to be restrained. In Alexander Pope's (Hall, 1963:71) words,

> In words, as fashions, the same rule will hold;
> Alike fantastic, if too new, or old
> Be not the first by whom the new are tried
> Nor yet the last to lay the old aside.

The Romantics were against rules and models, believing genius should be given free reign. Victor Hugo, for instance, called for scorning rules and replacing them with rights of genius.

Walt Whitman believed the future belonged to America because of its diversity, largeness, uniqueness, and its beliefs in democracy. He recognized that politics and literature are inextricably intertwined. No people or subject matters were to be unworthy——docks, plains, workers, wives, magistrates, and prostitutes. Language was not to be limited to that of one class or place or another, and he believed free-flowing rhythm reflected the nature of America. How different from Horace's hearkening back to the past or Boileau's Neoclassical rule-governed poetry![2]

Is education free-flowing or rule governed? Should excess and enthusiasm in education be restrained by rules, as Pope ordained should be true of poetry? Are, as Whitman suggested, all subject matters and roles equally worthy, or are some more worthy than others for our attention as educational critics? The social reality of a particular era clearly influenced its critics. Should we as critics be influenced by an era's social

reality, or strive to reshape it?

Granville Hicks, in his work about criticism, The Great Tradition, characterized American life as a class struggle; in his view writers in tune with the proletariat were more likely to perceive the forces shaping society. As a Marxist, he clearly did not believe all subjects nor all writers were as worthwhile as others. A host of present-day literary critics belong to the tradition of New Criticism, applying the theories of Freud, Marx, Buber and others to literary criticism.

Theories of criticism, then, indicate at least five orientations used when judging artistic forms.

1. the extent to which aesthetic objects or events faithfully represent nature
2. the extent to which they follow the rules of a particular art form
3. the extent to which they perform an instrumental function (such as critiquing society, uplifing us, helping us understand religious events)
4. the extent to which they are a unique or original creation of a mind
5. the extent to which they are internally consistent

Partly due to various influences on society throughout history, at one time, one orientation has ruled and others gained prominence at other times. Is one of these orientations more appropriate than another for our metaphor? Narrowing the lens to the Twentieth Century, we can see diversity even about a single issue: what is considered to be the role of the critic.

Coce (Hall, 1963) believed the role of the critic is to teach others where to begin in their appreciation of the arts. Dewey (1958) believed the critic was to educate the perception of the audience. Hazlitt (1933) believed critics interpret paintings for the public to enrich their experience of it. Mencken (in Hazlitt, 1933) saw a critic as a catalytic agent between a work of art and a spectator; the catalyst, in Mencken's view, produces understanding, appreciation and intelligent enjoyment. The Chicago critics (Crane, 1957) sought the assumptions underlying a piece of literature. Simon (1975) believed a critic was to think aloud to enable the public to understand the processes used when a critical mind engages a work of art.

While each view portrays the critic as a teacher (with the possible exception of the Chicago School) each of these views is slightly different. What are implications of adopting any one of them? Scholarly work is needed that explores the nature of the metaphor in this regard. That is, in what ways can educational inquiry adopt aesthetic criticism as a metaphor? Which orientations, traditions or parts of aesthetic criticism are most apt and in what ways? What have been the roles of aesthetic critics, and which seem suitable to the metaphor of educational criticism?

Additionally, we need to explore the metaphor of aesthetic criticism in another way. Aesthetic criticism not only has its historical, ideological and philosophical traditions and orientations, but is also varied in terms of the art form under study. Which forms are more appropriate to the metaphor of educational criticism, and in what ways? Music and drama are scripted, yet artistic geniuses are free, within limits, to interpret a work. One hears slightly different cadenzas as different virtuosi play Mozart's clarinet concerto. Richard Burton says his portrayal of Hamlet is different each night. Aleatoric music and improvizational jazz are less scripted than other forms of music. Is schooling scripted? If so, to what extent and what are the sources of the script? Does this resemble the scripted arts? Opera and ballet are based on the interplay of several art forms——music, drama, stage design, and vocal music or dance. Paintings and symphonies are more singular forms of art. Is schooling multidimensional, like opera and ballet, or is it of a single dimension, like painting and symphonies? In what ways? A novel and poem can be seen as documents, while a play, opera and ballet are enactments. Is curriculum a document, or is it an enactment? Is it both?

I realize I have raised more questions about the nature of the metaphor than I have answered here. The need is for sophisticated scholarship regarding the traditions, orientations, forms, and aspects of aesthetic criticism that are appropriate and inappropriate to educational criticism. We need to explore the metaphor; right now it seems slippery. And perhaps another way to examine the metaphor is to attend to the places where there is not a good fit between educational matters and aesthetic matters. That is, where does the metaphor break down?

Exemplifying and Elaborating Methods

Secondly, most articles about educational criticism call for it, justifying it for several reasons. These justifications are well known —— that we come to know the world through arts as well as sciences, that we need a form of inquiry that does not deny the normative nature of the enterprise, that right hemispheric thinking is important, that qualities of schooling are often ignored when we try to reduce them to quantities, and so forth. Few articles have discussed epistemological and methodological issues. And where are the examples; We have a virtually exclusive preoccupation with aruguments for educational criticism, which diverts us from the important task of doing research and evaluations using educational criticism. It is an important task to exemplify and elaborate the methods for two reasons. For one, a wide range of examples will permit us as a field to weigh whether and how educational criticism is worthwhile, and to critique it so it can be improved as a form of inquiry. Secondly, methodological, ethical and epistemological matters frequently arise in relation to specific problems encountered when engaging in inquiry. These problems can be recognized, encountered and considered, discussed and exemplified in the context of an inquiry. Thus, while doing educational criticism, we would do well to keep reflective logs about the process of inquiry as well as maintaining field notes. This would permit us to discuss and exemplify problems arising out of the process of inquiry within the context of a study.

We also need studies of audiences' reactions to educational criticisms. It is an assumption of educational criticism that our work relies on intersubjectivity (rather than on objectivity), an empathic communication between the critic and the audience causing the audience to stand within the phenomena being critiqued. Secondly, we claim our work is useful to many constituencies. Yet the claims have not been investigated as to the points where intersubjectivity has been achieved nor what in a piece of criticism evokes intersubjectivity. Is it the linguisitc style? Is it the process? Is it the significance of matters being discussed? I believe it is all of the above. Who derives what sorts of things from an educational criticism? An audience's understandings and use (in action or in reflection) need to be explored.[3]

Thus far, I have called for examples of educational criticism and elaboration on epistemological and methodological issues. The next matter concerns the role of the critic as public connoisseur.

Exploring the Critic's Role

As educational critics, we enter a classroom to observe and partake of the goings on, notice the people in the room, the nature, character and qualities of many things and happenings. Now, aesthetic critics rarely interview an artist —— a composer, painter, performer, choreographer or whomever. That is, critics would be unlikely to interview Pavarotti about his portrayal of a role, or Louise Nevelson about a new sculpture, for critics examine a work of art and let it speak for itself. The artists's intention, it is argued, is inherent in the work and therefore is evident.

In some ways, borrowing this notion from aesthetic criticism could lead us away from important aspects of schooling. Usually, when arguing for educational criticism, we argue against making surface interpretations and ascribing meaning and motive to events solely on the basis of evidence of behavior. We generally characterize teaching as an enterprise requiring reflection about practice. How can we believe, then, that we can understand practice merely by watching events, without discussing them with the actors? Such discussions can reveal how the actors perceive events as well as reasons for various events. In addition to having

access to information necessary to the understanding of practice; another reason for discussing events with participants is that a teacher's teaching is not merely evidence of intentionality. Teaching is also shaped by the school's social climate, policies, materials, parent pressure, the schedule, colleagues' and administrators' views and other matters. So I wonder if crucial aspects of schooling are inaccessible to us unless we discuss events with the participants in a setting. We have a tendency to portray teachers as bumbling, foolish, not aware of all they might be. We portray them as ignoramuses at worst and at best as victims of the institution.

For example, we might observe a teacher relying exclusively on the textbook when teaching reading. We might critique that as overuse, only teaching through one approach and hence rendering reading inaccessible to the students who cannot learn through such an approach. If we extended the metaphor of criticism fully to education, we as critics would not delve into the matter further; the teacher's teaching provides evidence of intentionality, we would say. Yet other matters might be worth exploring. Why is the teacher relying so heavily on the text? Is strictly following the text mandated? Are no other materials available? Did the teacher's education stress only phonics, so this teacher's null curriculum forces the teacher into such a route? Unless we step behind the stage curtain, descend into the orchestra pit or venture into the studio, as it were, to discuss such matters with participants, we cannot come to understand many important matters. Hence we cannot conceive of how to intervene to improve schooling.

Further, it is true that some of us are experts in certain areas. My own connoisseurship is in curriculum. In my view, many teachers are experts in certain areas as well. For instance, they know the workings of the school — what they can and cannot do, procedural matters, expectations of administrators, parents and other teachers, strengths of their students, and so forth. What are teachers' rationales, justifications, motivations and personal theories supporting what they do, teach and how they do these things? How do peer pressure, administrative policies, state mandates and parents' demands affect what teachers do? We also need to do research about matters of interest to teachers, which are often not as superficial as we might think.

Awareness of these problems has led me to adopt the stance that most of my research in schools is collaborative in nature. Involving teachers in reasearch gives them access to research skills and processes we've denied them, provides a wider picture of an issue (sometimes incongruent with our own), educates a researcher about other things that might be seen in a classroom, and broadens the base of power regarding what constitutes research, who controls it, what we should study and how to study it. Historically, the research model has been our doing research on teachers and students and then telling teachers how to improve practice rather than promoting an understanding so they can decide what to do. This sets up a strange power situation; researchers tell teachers what to do, teachers reject the research and theories.

Now, by all of this I do not mean I have discarded educational criticism. Rather, I have incorporated into it a dimension I see as necessary and desirable, that of collaboration with teachers. I have further called for strengthening this form of inquiry through more scholarship, through actually getting on with doing some criticisms and reflecting on methodological problems arising in the context, and through studies of audiences' reactions to examples. I believe criticism, as described earlier in this paper, is an important means for doing research in schools. It permits us to blend theory and practice — to weigh one against the other, to discern where the fit is untidy or totally lacking. It forces us out of our offices into classrooms, keeps our feet on the ground, reminds us of what it's like Out There. It also forces us to conceive of patterns, theories and yet new problems to investigate. It is an exciting and challenging way of doing research in a manner that causes us to form links between practice and theory.

FOOTNOTES

1.   An eariler version of this paper was presented as an invited address at the Curriculum Theory Conference, Airlie, Virginia on Hallowe'en, 1980.

2.   In the section about the history of literary criticism from Horace until the Twentieth Century, I drew upon Vernon Hall, Jr., *A Short History of Literary Criticism*. New York: New York University Press, 1963.

3.   See Dianne W. Kyle's symposium "Learning from Curriculum Criticism: Exploring the Possibilities" at the annual meeting of the American Educational Research Association, Los Angeles, April, 1981 for such a discussion. Other panel members are Carol Andreini, Antoinette Oberg, Dorene Ross, John Van Hoose and Gail McCutcheon.

REFERENCES

Crane, R.S. *Critics and Criticism*. Chicago: Phoenix Books, 1957.

Dewey, John. *Art as Experience*. New York: Capricorn, 1958.

Eisner, Elliot. *The Educational Imagination*. New York: Macmillan, 1979.

Hall, Jr., Vernon. *A Short History of Literary Criticism*. New York: New York University Press, 1963.

Hazlitt, Henry. *The Anatomy of Criticism*. New York: Simon and Schuster, 1933.

Mann, John S. "Curriculum Criticism," *Teacher's College Record, 71* (1969), pp. 27-40.

McCutcheon, Gail. "Educational Criticism: Methods and Application," *Journal of Curriculum Theorizing, 1*:2 (1979), pp. 5-25.

Willis, George. "Introduction." In G. Willis (Ed.) *Qualitative Evaluation*. Berkeley: McCutchan, 1978.

The Indecent Curriculum Machine:
Who's Afraid of Sisyphe?

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Introduction

This paper is a passionate and desperate attempt to add foolishness to the dryness of contemporary pedagogical thought. We speak of death and more specifically of a murder. The hanging of simpleness. The executioner has decided to put an end to the boring discourse of truth and laughs behind his hand thinking that even if he doesn't believe in God he has a change of underwear in his luggage (Woody Allen). This comical and dramatical nonsense is not characterized by a lack of sense but on the contrary provides an excess of sense. The complexity of which subjugates the mind. The obstinate sustenance of this state of perplexity in the face of complexity and the bringing out of the possibility of an indecent and even perverse way of acting: This is our program. From the simpleness of the pedagogical thought we want to move towards a virgin forest of complexity in which this project takes place. It aims to open a working site, to precise its nature and indicate here and there some particular tasks that seem important to be achieved. This research will limit itself to the analysis of some propositions that will be developed in more detail in other works.

The feeling of only skimming the surface, of lightly stroking the problems, of having very few solutions to propose and of leaving a lot of unanswered questions is coherent with our idea of opening a working site and leaving it open. This implies a choice: One of surfaces rather than one of depths. However, it would be a mistake to confound surface and superficiality. As Valery says, "The deepest is the skin".[1]

We will have to unfold this curricular skin, analyse it in a pagan way from complementary points of view: First, according to the problem of identity and the search thereof in curriculum and second, according to the theory and practice relation in education. A paradoxiacal instance travels through these two paths and constitutes the indecent curriculum machine.

It will be possible from this consideration to get a glimpse of the functioning of the machine and perceive its contribution to the educational practice.

The initial draft of this text was written in French. Because of our limited knowledge of the English language and its subtleties, there may be a loss of information and intensity in the English version. Additionally, in spite of our efforts, some particular term or expression may be misused.

Nevertheless, we believe that to approach the curricular phenomenon with a structuralist's whiff can contribute to enrich the actual debates.

ONE DAY SISYPHE BOUGHT AN INDECENT CURRICULUM MACHINE THAT FUNCTIONED ONLY IF IT GOT OUT OF ORDER.

IMMEDIATELY SISYPHE HASTENED TO START THE MACHINE AND SINCE IT WORKED VERY WELL IT GOT OUT OF ORDER AT ONCE.

HAPPY WAS HE TO SEE THAT HIS MACHINE WORKED BUT SAD WAS HE ALSO TO SEE THAT IT WAS OUT OF ORDER'

PART ONE: THE SEARCH FOR IDENTITY

A) The Problem of Defining the Curriculum

The perception of a feeling of uneasiness among the curriculum specialists does not require a particular talent. Indeed, it is easy to detect in many papers this insecurity of not being like many other more stable disciplines with better defined frontiers. It is then possible to observe an obsession to define the curriculum, to find a place. In other words, to find an identity. "Thus, like most newly emerging fields of disciplined inquiry, curriculum appears to be a field somewhat in search of itself"[2]. For example, Beauchamp urges that the definition of curriculum is the sine qua non condition to develop the field[3]. McDonald also is looking for a consensual universal definition[4]. Some others like Tanner and Tanner adopt a more relativist point of view but nevertheless propose their own definition[5].

The curriculum field is full of many competing definitions, each one proclaiming to be the best one. All the authors in curriculum have this reflex of defining the field. Many of them complain about the state of confusion in the discipline[6] and finally decide either to look for the consensus or to accept relativism because no agreement seems possible.

The debates on the nature of curriculum have always been structured according to Tanner and Tanner[7] in terms of permanent dualism: Thought-Action, means-end, subject matter-instruction. In other words, it seems that the debates have always been based on the relation between prescription and description.

Pinar[8] has presented a brief summary of curriculum history reflecting this situation. According to him, there would be a first group, the traditionalists, concerned by concrete tasks like planning, implementing and evaluating the curriculum. The how centralizes their activities.

A second group, in the same spirit, wants to establish a more scientific approach of the field basing it on theory and practice of social sciences. They are the conceptual empiricists. They want to relate theory and practice more systematically. Like Beauchamp[9] they stress the idea that a well articulated theory will be a better guide for practice. Walker[10] insists on the systematic inquiry of observable phenomena in order to solve practical problems. Since this group is strongly centered on the how, it will be considered in this paper as representing the prescription side. The third group, in which Pinar identifies himself, is not particularly interested in guiding the practice as the first two groups but instead tries to understand. They are named the reconceptualists. They are dissatisfied with the instrumental orientation of the field and want to promote a missing pole: The theoretical activity per se not centered on prescription but on description[11]. According to him, the curriculum has almost always been seen through a practical eye and there is a great need for pure theoretical activity. They do not deny the necessity of a practical orientation in curriculum but they want to affirm a missing term. It is possible then to say that they reduce their activity to the theory. They no longer want to define themselves by a reduction to the practical side. Instead, "Having challenged the boundaries and horizons that had previously delimited the field of curriculum theory"[12], they define themselves in another way.

If the preceding ideas reflect a bit of truth, it is possible to say that in curriculum the debate has almost always been centered on the search for an identity either by a reduction to practice or a reduction to theory. For us there are two sides to the problem. On one side the concept of identity is based on a paradox the search of which creates another one. On the other side the relation between theory and practice can be analysed with a paradoxical framework resulting in the idea of complexity.

This particular way of conceptualizing problems is missing in the curriculum literature which is filled with discourses looking for truth or efficiency. This view can contribute, we hope, to shift the researchers' and practitioners' interests and practices in other directions. As a matter of fact, even if we work on the

paradoxes or are worked by the paradoxes, we have to accept their displacement effect on us.

B) Paradox and Identity

The concept of paradox is not new and has been discussed by the intellectuals for many centuries. Some paradoxes are famous such as the one attributed to Epimenide the Creton (6th century) stating that all Cretons are liars. If this is true, Epimenide tells the truth but when he tells the truth he lies. On the other hand, if he lies he tells the truth.

Some other examples such as "be spontaneous", "let's have a consensus on this idea of conflict", or a poster on which one can read the sentence "Don't read this poster" help to better understand the concept.

Whitehead and Russell have written a fundamental work, Principia Mathematica[13] that has prompted many researchers to look further in this direction. In their book, the authors build the theory of logical types in which they study the paradox of a class becoming a member of itself. When somebody talks about a class in the same terms as if it were a member or inversely, he contradicts the formal language rules and consequently creates a paradox. According to them, these logical levels must not be confounded.

It is possible to structure the paradox of Epimenide in another way[14]. "Everything that I say is a lie". This sentence refers to all my statements; this is the class. Then consequently, I also lie when I say "I lie". This sentence refers to this particular statement; this is a member of a class. In conclusion, two logical levels have been confounded — a member and a class. Consequently, the fundamental axiom of the theory has been transgressed thereby creating a paradox.

Is all that just a game with words? It does not seem so simple. Gregory Bateson has made an important contribution to the understanding of social sciences by studying the effects of paradoxes in human communication. He proposes a theory in which schizophrenia is defined as an answer to a double bind or a paradox. This theory can be summarized in this way:[15]

1. Two or more people live an intense relationship which is quite important to them. A mother and her son for example.
2. In this context, a message is transmitted and is structured as follows: a) It affirms something. b) It affirms something on its own affirmation. c) These two affirmations are mutually exclusive.

Let's imagine the mother saying to her son that she is not angry and while she is saying that her son perceives the agressive tone of her voice and the exasperation of her gesture. There are then two mutually exclusive messages.

3. The receptor of the message cannot step out of the frame of the message because from inside some rules cannot be challenged.

Usually a child trusts in his mother but also cannot deny the fact that what he sees he sees. The non-belief of his mother is difficult to admit for a child but also not to believe his own perceptions is also a problem.

When a message is paradoxical nobody can react to it in an appropriate way. This is the essence of Bateson's double bind theory.

Paradox and contradiction have a different meaning. In the case of a contradiction when it is possible to choose one term or another, in the case of a paradox, contrarily, no choice is possible. Weakland and Jackson[16] have used the expression "The illusion of a possible choice".

> "They make the observation that when schizophrenics try to make the right choice between two possible solutions they face a dilemma. The situation in which they communicate is structured in such a way that any choice made is a bad one because the two solutions are part of a double bind and the patient makes a mistake if he chooses and makes a mistake if he does not choose. There is no alternative in which one may make the right choice. The hypothesis that a choice is possible and has to be made is a mistake. To understand that there is no possible choice is to identify the nature of the double bind."

To be caught in a paradox is the same as to be caught in a vicious circle or in a never-ending game. Watzlawick and al. state as an example a game in which the rule is to substitute each affirmative sentence by a negative one and inversely. All the messages mean the reverse of what they say. The players agree on the rule and the game begins. Soon a problem arises. How to stop the game? They cannot say, "Let's stop the game" because according to the rule it means, "Let's continue to play". Inversely, to say "Let's continue to play" can confuse everybody because this statement is at the same time a part of the game and a statement on the game. It is uncertain that the players will stop to play if they hear this statement.

Consequently, there is no way of getting out of this dilemma theoretically. In other words, it is impossible to change the rules from inside and the players are condemned to play for ever and ever.

It is now easier to perceive the meaning of the problem of this study. Firstly, it seems that the obsession in curriculum has always been to define the field and secondly, that the content of the definition has always been thought of in terms of the relationship between prescription and description. Even if this relationship is "problematic" this is the content of the second part of this study the present intent is to examine the concept of identity and its search in an attempt to define this field of study.

It seems that this concept of identity is based on a paradox and reduction of the curricular activity to prescription or to description can only be what we called earlier the illusion of a possible choice. In this perspecitve, to debate theory and practice is like a never-ending game. Inside a paradoxical framework any choice is a bad one.

What is this paradox created by the concept of identity? To answer this question we have to make another distinction. All paradoxes do not have the same form. Some of them named paradoxes of meaning have the same structure as the class being a member of itself. Others, paradoxes of sense[17], have a different form and the paradigm is the infinite regression. For example, in order to define a phenomenon we use words but these words also need to be defined and the words used in these definitions need to be defined too and this infinitely.

It seems that this concept of identity is based on a paradox of meaning whereas the search of identity calls for a paradox of sense.

Clement Rosset[18] defines reality as something that has no double. It presents but does not represent. It is undefinable because it is singular.

In this sense for Rosset, unlike Sartre, the contrary of being is not nothingness but double.

"If reality is singular, it will always be impossible to recognize it because its recognition implies, by stressing the "re", the establishment of another reality which is excluded by its own definition."

This concept of identity is then inconceivable because it requires a double replacing the reality. Rosset states this paradox in the following manner:

"That which is identical means firstly the thing identified, to recognize this one as this one is idem in Latin. But that which is identical also means at the same time and probably in all the languages of the world that one term is equivalent to the other, to consider that one as this one, idem in Latin. This second sense is exactly the reverse of the first one because it substitutes the idea of equality to the idea of singularity."

If really necessary it would be possible to see in this a paradox. One of the same kind as the class being a member of itself.

To define a phenomenon is to give it an identity. This concept of identity presupposes the concept of "sameness". Two things have to be the same in order to be identical. But if everything is singular, different, how can we talk about the sameness when there is nothing else to testify to it? To define is to say that this is that. Now, this cannot be that because if it were it would not be this but that.

Let's take as an example a wine and cheese party. When tasting a piece of cheese someone may declare "Here is the Camembert". To say that implies no information at all on the nature of the cheese itself. All one says is that the Camembert is different from the other cheeses on the table. To identify it is to recognize many Camembert tasted before but it does give any information at all on the identity of its taste. To recognize it as a Camembert is to identify it as incomparable[19]. In the linguistic field, Saussure defines the sign in the language not by an identity but by what permits to differentiate it from others.

The search for identity is as paradoxical as the concept of identity but in a different manner. Lacan[20] uses the term "To be missing from its place" (manquer a sa place) to describe how impossible it is to attempt to identify. In the Séminaire sur la lettre volée[21], Lacan explains how a problematical object moves. It is not where we think it is and is where we do not think it is. This story, The Purloined Letter, written by Edgar Allen Poe can be divided in two series. In the first series, a king does not see a compromising letter received by the queen. In a hurry, the queen hides the letter by leaving it in sight of everyone. Finally, the minister having understood what is going on steals the letter. In the second series, even if the policemen tried hard to find it they failed because the minister also had hidden it in sight of everyone but Dupin having understood the minister's strategy finally stole the letter from him.

This concept of series is fundamental for the structuralists.

Deleuze[22] states three conditions for building series. The first one is that each series be constituted of terms defined only by reference to other terms. The second one requires at least two heterogeneous series. One named most of the time the "signans" series which presents an excess on the other named the "signatum" series. The third one, a paradoxical instance which ensures the displacements inside the series but which is not a member of anyone nor both. The function of this paradoxical instance it to "articulate the two series one towards the other, to throw back one onto the other, to ensure that they communicate, co-exist and branch out".[23] If we use The Purloined Letter to illustrate the first condition, it is possible to say that the minister fills two different places in the series. He is the stealer in the first series and the stolen one in the second. His place is related to the places occupied by the other members in the series and inversely.

In the same spirit, after the letter has been stolen in the first series, we discover a place without an occupant.. Since no object can be used to fill it, an empty space is created.

In the second series, we are struck by an occupant having no place. That is the untraceable letter. Even if the policemen looked everywhere they did not find it. There was no place where it could be found. The letter is like the occupant having no place.

Finally, the letter becomes the main concern in the two series. Depending on the place it occupies, the various subjects in the story will consequently be displaced. Thus, the letter is the paradoxical element. It is at the same time the empty space and the supernumerary object, the place without an occupant and the occupant without a place. It is missing from its own identity because it is a pure symbol.*

Lacan explains the problem of personal identity in the same way. For him each subject follows a symbolic path. We are determined by this problematical moving object. Each subject follows the empty space. It is not the subject's death but instead the subject's dissolution. Subject: Thought without image, object following an empty space always moving.

For Lacan[24] the fundamental question is: When the subject is talking about himself is the same as the one about whom he is talking? In other words, is the place I occupy as a "signans" the same as the one I occupy as a "signatum"?

From Lacan's point of view, the philosophical cogito is like a mirage because it makes man sure of himself when he doubts about himself[25].

Basing his thought on Freud Lacan insists on the fact that the symbolic order constitutes the subject by the moves of a "signans" missing from its own place. This symbolic order is in the same spirit as the paradox.

As for the letter, this problematical object, object = X, has meaning only by its moves.

In this perspective to look for one's identity would be an impossible task because the subject is considered at a symbolic level and is always missing from his own place.

C) Identity and Curriculum

To conceive the curriculum as a symbol; as a thought without an image; as an empty space and as a supernumerary object: This is the perversion.

Curriculum: Paradoxical object. Curriculum: Nomadic object, unfixable. The idea is not to fix it in a place and consequently to stop the game but to keep on playing.

It seems that the authors in curriculum are not interested in playing anymore because most of them try to fill the empty space and find a place for the supernumerary object.

As in The Purloined Letter, it would be possible to simulate the curriculum history in two series.

In the first one, there would be three places among which two of them are occupied and one is empty. In the first place the curriculum is considered as something practical, that is, the prescriptive perspective. As shown before, this place has been occupied by the traditionalists and the conceptual empiricists. In the

* This will be explained in more detail in the second part.

second place the curriculum is considered from the theoretical side, that is, using a descriptive point of view. This place is claimed by the reconceptualists. In the last place, there is no occupant because it cannot be occupied. It is the place for the metareflexive discourse. This is the curriculum problematical area meaning that to talk about curriculum is to occupy a place and to identify this place implies that there is another ground and to explicit this new one requires another one and this infinitely. Like Lyotard, quoting Godel, we reaffirm the impossibility of a universal metalanguage[26]. The functioning rules of science cannot be demonstrated but instead they result from a consensus among the experts.

Therefore, there is an unoccupiable place in the "problematical" of defining the curriculum and this place is the ultimate discourse.

The second series is determined by the empty place moving and creating, by this fact, a new pattern. The practical place is the first one in this series and was occupied earlier by the traditionalists and the conceptual empiricists but is now filled by the reconceptualists.

Indeed, what are the reconceptualists doing other than a prescriptive discourse on a descriptive one? They are trying to fill the empty place but as we know each time there is an attempt to occupy it the empty place moves. The fact that an author and another one and another one have a tendency to focus on understanding instead of instrumentality is one thing but to elaborate a discourse on their discourse is another one. From our point of view this is what Pinar seems to do when talking in the name of the reconceptualists. By boosting a missing pole, the theoretical one, Pinar registers himself in a prescriptive orientation because even if he puts a certain kind of instrumentality aside, he proposes another one nevertheless. (for example, currere).

The second place in this series, the descriptive place, filled by the reconceptualists earlier is now occupied by the two other actors. Indeed, even if their concerns are to prescribe the various planning, implementing or evaluating models, the fact is that they cannot escape from a discourse joining them by a description of their activity. Other discourses, other places. For example for Walker the curriculum could be defined by the problems the practitioners have to face[27]. When he synthesizes their practical concerns by a sentence like "What should be taught, studied or learned", he uses a descriptive discourse. For him the curricular phenomenon is, in some way, described by these various attempts to prescribe. Therefore, there is a descriptive discourse on a prescriptive one.

Finally, the third term in the second series is the occupant without any place. This occupant is the final actualization of all the potential metalanguages created by the empty place moving infinitely. Each language becomes a metalanguage for the preceding level and from the superior level it is a simple one[28].

In Poe's story, the letter missing from its own place ensures the actors' moves in the two series and its discovery would have put an end to the plot. It is the same in curriculum: To place an occupant in the empty place would be to stop the game. To act, consciously or not, as if it were possible to occupy the empty place would be in some way to say that it is possible to have a universal metalanguage and consequently, impede the evolution of the field. If one admits that talking about ourselves is different from ourselves, then having a discourse on the curriculum would stand on a different level than the curriculum itself. Is a discourse on curriculum part of the curriculum as a whole?

D) To Assume the Paradox

It is then proposed to conceive the curriculum as an object missing from its place and as a place without any occupant. In other words, as a paradoxical instance.

The task is not to assign a place to an occupant or inversely, an occupant to a place but instead to

accompany this empty place towards new unsuspected territories. In the same manner as the self is dis solved, the curriculum is also dissolved. Its place cannot and should not be filled.

Our idea is not to stabilize the field but, on the contrary, to accelerate its destabilization. As Lyotard would say, everybody knows that the moves mean evolution but our interest is to fight against any identifi cation[29].

The identification stabilizes and concurrently facilitates the emergence of power. It helps to distinguish, like platon, the copy from the simulacrum or, like Aristote, the genus from the species.

When the identification is impossible, no excluding power can be installed. Permanent revolution. More particularly, it is in this perspective that the curriculum can become an indecent machine. So, the interest is not to propose to stop to define but, on the contrary, to multiply the definitions, to drive the field to wards foolishness.

> "When it spins fast and when many combinations form and disappear rapidly (dreams, emotions, research works, perceptions) the power cannot come because any domination implies a permanence, self or social apparatus that stabilizes the fortuitous exchanges in repetitive cycles."[30]

In this sense, we maintain the necessity of defining the curriculum but the arguments are different. In the same manner as it seems unthinkable for an individual not to try to define himself, it also seems un thinkable for the researchers in a field not to try to define this latter. As Camus would say, "We are on one side confronted with the irresistible drive to know the world and on the other side to the impossibility of understanding it."

As for Sisyphe, our situation is hopeless. We are condemned to constantly try to find a solution while at the same time knowing of its impossibility.

The question is to know if it is possible to imagine Sisyphe "happy"? Can we also imagine the curricularists "happy"? Are the researchers in other disciplines "happy"?

It has been said precedingly that the definition of curriculum has a status of undefinability. This saying can be applied to all the disciplines. But it seems that even if their problem is not solved, they face fewer open definition conflicts. Why? To say that the curriculum field is in its infancy is not sufficient an explanation. Education existed long before physics but nobody would now compare their respective status. Given the same degree of undefinability, how come it is so difficult to come to a certain kind of organized practice in education? Is there an interesting explanation to this problem? In the second part of this analysis, we try to answer this question by examining the legendary problem of theory and practice relation. We will try to develop the idea of education as a complex science. Usually, the scientific activity is oriented towards description but, in education, there also seems to be a necessity to prescribe.

This incursion in the field of values makes the undefinable complex. So that it would be possible to imagine Sisyphe happy in a complex theoretical practice: Sisyphe as an artist.

ONE DAY SISYPHE BOUGHT AN INDECENT CURRICULUM MACHINE THAT GOT OUT OF ORDER ONLY IF IT WORKED.

IMMEDIATELY, SISYPHE HASTENED TO START THE MACHINE AND SINCE IT GOT OUT OF ORDER VERY WELL, IT BAGAN TO WORK AT ONCE.

HAPPY WAS HE TO SEE THAT HIS MACHINE GOT OUT OF ORDER BUT SAD WAS HE ALSO TO SEE IT WORKED.

PART TWO: THE RELATION BETWEEN THEORY AND PRACTICE AS A PARADOX

A) Theory and Practice

The relation between theory and practice as well as the gap existing between one and the other call for some clarification of these two words.

The expression "Theory of Education" is not quite clear. Besides, Downey and Kelley (1975) are not too far from the truth when they assert that: "The fundamental problem is that no one has ever been quite clear what education theory is".[31] For the term "theory" would have at least three meanings in education. We will, to some extent, borrow some of the definitions given by Downey and Kelley. However, our project is different in its context and calls for reserves as to their analysis.

In its more usual sense, the term "theory" means a corpus of hypotheses, interrelated and used to describe, explain and at times forecast certain phenomena. It's the case particularly in the sociological or psychological theories most often used in education. For example, Parson's functionalist theory or Piaget's genetic psychology each propose a certain pattern or reality built upon key hypotheses to be applied to some facts or phenomena in order to bring about scientific knowledge. But does this knowledge really describe or explain reality? This question does not concern this kind of scientific production directly but rather concerns an aspect of this other activity with which it is closely related: Epistemology.

Likewise, when certain facts cannot resist against one or the other of the patterns and call for the revision of the hypotheses then epistemology is there to explain the alterations to the hypotheses and, if need be, the complete overhaul of the theories.

This twofold work of epistemology, the logical and historical analyses, completed by a third which is the thematic analysis brings about a second meaning of the expression "Theory in Education". Now, the moment has come not to describe, explain or forecast so-called natural phenomena but rather to establish, in the process of a theory of knowledge, interrelated problems and methods into a specific science as well as in various disciplines. This theory is fundamental since it determines the research programs which will attract research workers. Also, it is an indication of the historical relevance and the logical consistency of these research programs. In a recent publication of the "Centre Royaumont pour une science de l'homme" (The Royaumont Center for a Science of Mankind) Piattelli-Palmarini (1979)[32] has clearly shown how the programs of Piaget and Chomsky differ fundamentally as to their presuppositions. Consequently, theoretical works in educational sciences, in the first sense of the word "theory", produce totally different outputs according to the kind of research program.

The two meanings of the word "theory" circumscribe quite fairly the theoretical activity involved in various empirical or logical sciences. Education, we all know, although calling upon the knowledge of masters in an important number of disciplines is not solely a scientific activity strictly speaking because it is closely bound to educational practice.

A third meaning of the word "theory" is thus suggested by the eminently pragmatic character of education. It is in this comparable to medicine which cannot be conceived otherwise than as being a science whose aim is to heal or prevent diseases, (Ellenberger 1969).[33] Certain values or beliefs according to which one must give a certain kind of education still adhere strongly to the notion of education. Finally, all our institutions are based on this idea (values and beliefs) which prevents all attempts to provide a rigorous scientific definition to words such as education, instruction, training, etc. The analogy with medicine proves quite fruitful: "It is impossible, maintains Ellenberger, to prove scientifically that medicine should be concerned with the healing and the prevention of diseases rather than with their production or aggravation. It is to be noted equally that it has not been possible up to now to provide a rigorous scientific definition

of notions such as: health, disease, healing".[34] The example of Nietzsche is startling: He made of illness a superior perspective of health![35]

"Theory of Education" in the third sense of the word is not to be built on scientific hypotheses or statements but on systems of values and beliefs which spread out in doctrines or philosophies in the usual acceptance of these terms. The outputs are no longer in the order of knowledge but in the order of prescriptions, of directions for use. There is nothing to prevent that these doctrines stem up from facts of knowledge but their incentive to translate the substance in imperatives is irrelevant to the world of knowledge but relevant to the world of values and morals. This aspect of the theory has always been acknowledged in education and most of the time qualified as normative as compared to other aspects which are called objective (Avanzini, 1976).[36] There are as many examples as there are pedagogical trends or doctrines such as: Marxist, humanist, essentialist, etc.

So, three meanings have been attributed to the expression "Theory of Education". Far from being exclusive, these three meanings are conveyed in a complex similar to that of medicine. All at once centered on the educational practice and eager for rigorous learnings, education just like medicine constitutes what Ellenberger[37] calls a complex science. One must not confound complexity with interdisciplinarity. Education is surely at the crossroads of many disciplines but it is complex in that insofar as it is a science it serves a certain practice and we might even say a certain vocation which is to educate. As we proceed further, we will come back on the specific character of this complexity but let us first examine the notion of practice.

The term "practice" in education has appeared to us as ambiguous as the term "theory" and the determination of its meaning as "problematical". In a first sense, the term designates the educational reality itself, the concrete activity of education and most particularly institutionalized teaching. Those for example who appeal to practice as opposed to theory finally pretend that their interest lies with the real problems they meet in the field. They thus distinguish between a practical work, useful and based on the educational reality, and a theoretical work often despised because it is irrelevant to this reality.

In a second sense, probably its most usual sense, the term means the preoccupation to bring out the applications of theories and doctrines. The practice of education then appears as a concrete accomplishment of the prescriptions contained in the theories. We find again the normative approach yet primarily concerned more with the means than by the ends.

Finally, the term moreover means the theoretical activity itself. We have previously seen that the three meanings of the word "theory" imply a certain productive work. In the theory in the sense of a corpus, descriptive and explanatory, a certain result of knowledge must stem from the bare facts, worked upon and transformed progressively as the instruments of analysis are applied. So it is with the production of prescriptions which proceed from the doctrine and of the setting up of a field of problems fed on postulates inherent to the theory of knowledge Althusser[38] has much to say on the theoretical practice inasmuch as it belongs to practice and completes, namely, the political practice.

There would then exist three theoretical practices in education. One properly scientific, a second epistemological and a third ideological. In each one of them the relation theory/practice does not seem to be laid down the same way as it is in the relation knowledge production/prescriptions and their applications to the educational reality. In other words, the theoretical practice is not to be confounded with the application of theories. Likewise, education being a complex theory, the complex theoretical practice cannot be laid down in the same way for each of the simple theoretical practices. There are enough indications to imagine the existance of many types of relations and differences between theory and practice. However, our purpose in this short article is not to examine all types of problematical relations/differences existing between theory and practice they are liable to generate but to circumscribe our analysis to a single type of

problematical difference. Two reasons have prompted our choice: First, it takes into account a certain epistemological specificity which is proper to education and second, it means, we believe, what many people understand when they complain about the gap between theory and practice.

B) A Problematic Gap Between Theory and Practice

The gap in question may be conceived analogically to what Deleuze (1969)[39] refers to as the paradox of Levi-Strauss:

> "Universe has long signified before we started to know what it signified... Man, from the outset, possesses an integrality of "signans" which embarasses him greatly when time comes to allocate to a "signatum", given as such but still unknown. There always exists a disparity between both."[40]

And Deleuze specifies:

> "...No matter which way language is acquired, the elements of language have to have been given all together. All at once they do not exist out of their possible differential relations. But the "signatum" series in general is of the order of the known. Well then the known is subjected to a progressive movement going from parts to parts, partes extra partes and no matter what the summations that knowledge effects they remain asymptote to the virtual totality of the language or the tongue. The "signans" series puts up a previous totality whereas the "signatum" series puts in order the totalities produced."[41]

These two excerpts clearly express the idea of a lack of balance inherent to the phenomenon of complexity proper to certain sciences such as: The Sciences of Education and the Medical, Moral and Administrative Sciences. Let us recall in fact that some sciences have a conflictual double task. On the one hand objective and on the other normative. This is what makes them complex sciences according to Ellenberger. For it is not sufficient that knowledges be produced on one hand and that norms and prescriptions be given on the other but knowledges have yet to be useful to the norms. In other words, in a complex science the knowledges are not primarily at the service of truth but of the values by virtue of which the norms are set up. Then insofar as the objective knowledges are subordinated to them there exists between them and the values a lack of balance similar to the one existing in the paradox of Levi-Strauss. Indeed, one may very well analyse the values constitutive of the normative approach which actualize themselves in a doctrine in a way similar to the inscription of elements of a language in a tongue. The Marxist, humanist and essentialist doctrines all presuppose, for example, a group of values to be given all at once for this one reason that many values being common to each of the doctrines express different meanings only inasmuch as they inscribe themselves in different, well constituted groups. Let's take liberty for example. Each of the aforementioned doctrines considers liberty as a cornerstone of its normative edifice. But, as we all know, this value has not the same meaning in each case because, once again, it acquires its sense by proximity of other values which constitute with itself a coherent system. In Marxism, liberty goes along with the notion of equality which is, under the circumstances, so determinant that liberty cannot have the same meaning as in humanism, for example, where equality is assured only in function, justly of the integral respect of individual freedom. These are differential relations between a doctrine's constitutive values which determine the meaning itself of the values prescribed by this doctrine in its normative edificaton. Thus, the normative course is entirely a "signans" series as defined by a certain structuralism.

Now, let's take a look at the objective approach. How can we determine this approach as being a "signatum" series? We first have to specify that each element of the "signans" series calls for a "signatum", a little like a place or seat calls for an occupant to fill it. If it's true that a normative series is "signans" it should therefore assign some places, for example, to comportmental expectations for which a "signatum"

series shall determine places, in this instance, we think, effective comportments. But places have to be assigned before they are occupied and if it is true what we have seen that they must, of necessity, be assigned all at once they will be, on the other hand, occupied successively and for this reason a doctrine always implies individual or collective comportments which have not been completely carried out or not even carried out at all. That is to say that we are challenged by "signans" for which no allocation has been made to a "signatum" given as such without being known. This is a real problem. Here the reference to the "known" and to the world of facts, no longer to what is possible and neither to that of the values, is a fundamental parameter of the "signatum" series. Indeed, a thing is signified to us inasmuch as it is known to us. But it becomes an obsession long before it is known since by virtue of the system of "signans" a kind of compulsion to discover it unconsciously weighs upon us with all the weight of the law.

This inadequacy of a "signans" series is found again effectively between expected comportments prescribed by a normative approach and the effective comportments which as an objective approach is revealed to us by the facts. It is well understood that comportments may be effective without being known but it is as if they were not effective. They are prescribed as long as they have not been found.

Then, insofar as the knowledge is effectively subjected to the law of a progressive movement and that it includes in itself the occupants for whom all places have already been assigned in the "signans" series, these occupants will effectively fill the places progressively as they are found and known through an objective approach which in fact constitutes a "signatum" series.

It surely has been understood so far that the relation between the normative approach, determined as a "signans" series, and the objective approach, determined by a "signatum" series, are effectively a relation between theory and practice in this that what is at stake is nothing less than a theoretical practice of a practical theory. It has also been understood that the problem or the problematical gap in question is demonstrated in the inadequacy existing between the "signans" series and the "signatum" series. This is seen in the paradox of Levi-Strauss.

It is wise to bear in mind that the bird's eye view that has been made of the curriculum has revealed two major tendencies toward this paradox. We would like to show here that first, these two tendencies constitute a blocking-up of the functions of these series and that second, the sole assumption of the paradox, in conformity with the structuralist's thesis requiring that there be in every situation a paradoxical instance which pervades as a condition to assure the functioning of the constitutive series, alone then, the assumption of the paradox leaving intact the gap between theory and practice, permits not to resent it as a lacuna to be filled and thirdly, that this assumption creates a third approach as a preliminary condition to the functioning of the two others which is nothing less than an artistic enterprise. This constitutes what we have called the indecent curriculum machine. Machine in the sense of an activity of prolific writing, curriculum machine in the sense of a writing produced wherever the curriculum stands, and finally, an indecent machine whereas this prolific writing is contingent to the fantasies of the unconscious and inscribes itself literally in the tempo of the poetical involvement at the risk of engendering delight.

In order to discuss these three points, we will expound an example taken in the field of pedagogy. The one chosen surely represents an influence of great importance as well as most equivocal for our epoch. Indeed, there are few present pedagogical trends that do not owe something to the influence of J.J. Rousseau and furthermore, many of contradictory trends acclaim him as if doctrine could go in all directions. After all, we are but half troubled by these quarrels of interpretation. What really matters is to read Rousseau in a way that may illustrate our purpose. We will now try. First, to determine in Rousseau a minimal "signans" series and one or more corresponding "signatum" series; secondly, to determine a problematical instance which pervades in both series and thirdly, to show that this paradoxical instance begets a writing activity which is neither normative nor objective but profoundly artistic and that it is through it that the

pedagogy of Rousseau is made possible in its double aspect: Normative and objective.

We have seen that in education the normative approach constitutes a "signans" series whereas the objective approach constitutes a "signatum" series. It would be fitting to be more explicit on the meaning of these terms by giving a few precisions on structuralism.[42]

C) About Structuralism

In addition to the dialectic of the real and the imaginary which up to recently had largely dominated our way of thinking, now, with structuralism comes a third order: That of the "symbolic". "It is the refusal to confound the "symbolic" with the imaginary as well as with the real which constitutes the first dimension of structuralism"[43] and the series, "signans" and "signatum" organize themselves inside the "symbolic" in order to build up a structure. But both series have to be heterogeneous, in the same sense seen in the paradox of Levi-Strauss, so as to make the structure possible. Let us take a game of chess for example. The whole of the virtual moves are all given at once by the rules of the game and this preliminary exceeds by far the real order of the chessboard or the imaginary order of the moving of each of the chessmen. This is what makes it in fact a pure "spatium" of the symbolic order.[44] There is a constant inadequacy between the whole of all the possible moves and each series of moves made. It is understood that a "series of moves made" is a game of chess for example. Here we find again a "signans" series which previously determines some places which are all determined at the same time because they acquire a sense only in relation to one another and various "signatum" series represented, in this instance, by each of the games played. Here a game is determined as a "signatum" series because the game is itself totally produced move by move and is necessarily inscribed as a partial realization of a virtual whole always greater than itself. But this condition of two heterogeneous series, one determined as a "signans" series and the other one as a "signatum" series, though necessary as seen previously, is not sufficient. In short, there are at least two other conditions which must be observed. First, the elements of each series have to be determined by differential relations as in the case for phonemes and morphemes in the language and second, there must exist a problematical instance or paradox which pervades both series without belonging to neither and be in excess in the "signans" series (place without an occupant) and in default in the other (Occupant without a place).

With regard to the differential relations, it is clear that every move made in the chess game takes a sense which is determined only by the relation of the chessman moved with all the other chessmen of the game. A same move in two different games will not have the same sense even if there were only one chessman not occupying the same place in both games. We have already seen that the determination of the sense of values constituent of pedagogical doctrines were easily thought of according to the differential mode, hence symbolic. This determination of a sense that would be properly symbolic is essential to structuralism insofar as its goal is to prove that this third order is first in relation to the real and the imaginary. In fact, as will be seen later, all confusion of the symbolic with the real and the imaginary brings about a block-up of the structure.

As to the last criterion, the paradoxical instance, it has been worked up previously in "The Purloined Letter" and it could well be imagined on the chessboard. The paradoxical instance is nothing else, in fact, than a two-faced figure, one of which looks at the "signans" series as an empty case (place without an occupant, floating "signans") and the other is turned towards the "signatum" series as accompanying subject (occupant without a place, supernumerary object, floated "signatum"). That this instance be alluded to as an empty case or supernumerary object it is, in fact, a one and same thing. Let's have a closer look at the empty case. When we play chess there is on one side the totality of all possible moves which virtually exist ("signans" series) and on the other side all the moves made ("signatum" series). What was designated as an inadequacy between these two series was primarily the empty case as a functioning condition. Indeed, we have to suppose that the "signans" series always exceeds the other so that after each move made it may be possible to make another one in order that after each game it may be possible to start a new game. What is

making a move if not filling a "signans", in fact, actualizing a virtual move. One will readily understand that the succession of moves in a game is made possible only by this place without an occupant. A place which is never filled but is constantly displaced and allows the continuance of the game up to the check mate which constitutes the catastrohphic filling within the limits of a game. Moreover, this empty case in perpetual motion in the "signans" series is accompanied in its nomadic prowessness by a move that has not, as yet, its place but is still ever present and threateningly so: Checkmate. It is in fact on account of its presence that the game has a sense. But this occupant without a place, present from the outset to the end, occupies its place only to bring the game to an end. This supernumerary being is nothing but the counter part of the empty case which it escorts to the end of the game when only then the player fills it to put an end to the game. Besides, defensively speaking, the game consists in avoiding the checkmate which finally happens in the game usually when the one who most ardently sought to impose it is taken by surprise. The opponent is all the more surprised that for him, nearsighted, it was missing from its place. This para- doxical instance, at the same time empty case and supernumerary object, is defined by Deleuze as "non- sense" that distributes sense in both series. This is easily understood when one knows that the sense here, according to the term of Levi-Strauss, is positional. This we have seen in the differential relations commen- tary. Then, inasmuch, as each element of each of the series find their sense only in relation to the various places occupied by each element and inasmuch also as paradoxical instance or perpetual motion pervades both series, one gathers that this instance, in spite of its status of nonsense, really distributes the sense in the series.

To discover such an instance in the field of education we have to determine special series and see in each case how they function. This is why we have chosen to give an example and Rousseau's example appeared particularly interesting since, in addition to the reasons given already, no study, to our knowledge, has up to now conceived his works as a structure prompted by series of differential gaps and even by a paradoxical instance.

D) An Example: J.-J. Rousseau

There exists in Rousseau's works a kind of symbolic constant which consists in classifying the origins according to a triple time process. In the essay on inequality[45], Rousseau somehow enters an action against modern man who would institutionalize a world of corruption, degradation and decrepitude. What is most interesting in this essay are the main steps which would have characterized the "development" of the species: Man in his natural state, man in his savage state and man in his civilized state. In Emile[46] on the other hand hope is somewhat prevailing on Rousseau and it seems that the origins of the individual; child, adolescent and adult may to a certain point be put to good use in order to amend through education the most dreadful effects of the cilvilized state. The triple time process is here present again and its parall- elism with the origin of the species in the "Second Essay" was fully put in evidence by G. Lapassade (1956).[47] The origin of language in "Essay on the Origin of Languages": cry, music, language could also be added. Here again the parallelism is clear as it has been demonstrated elsewhere. (C. Kintzeler, 1979)[49].

We think that these various triple time sequences constitute minimal series. The relations of the three places among themselves being the "signans" series and the distribution of the places in the species, the individual or the language represent as many "signatum" series.

Indeed, we discover a network of three places which are determined in relation to one another and they effectively have no sense except in their differential relations. Each of the three places would have a dif- ferent sense if they would be found not in a network of three places but in a sequence of four or five places for example. Likewise, the various attributions of these places in the species, the individual or the language, determine the sense of the expressions which justify them. The state of nature, for example, has no sense "per se" but takes its sense in the relation that this expression has with the two other states. The state of childhood has no more sense "per se" but takes its sense in the relation that this expression has with the

two other states. The state of childhood has no more sense "per se" because the sense it acquires is totally different according as it is thought of in a two-term sequence (child/adult) or a three-term sequence (child/adolescent/adult). In the two-term sequence, the state of childhood coincides with a psycho-physiological reality, for example, more vast that the same adolescence appropriates for itself a sense which of necessity perturbs the sense given to the stages of childhood and adulthood in the series with two elements.

Among the various possible series, let's examine the series of the species and that of the individual in order to determine, with the help of the first one, a place without an occupant and, with the help of the second, an occupant without a place. But let us carefully avoid getting mistaken about the sense of these words. We know that the place without an accupant belongs to a "signans" series and the occupant without a place to a "signatum" series. Insofar as the origin of the species will inform us on the place without an occupant we must not, for all that, conclude that it constitutes the "signans" series, whilst only the origin of the individual would constitute the "signatum" series. Let us make it clear, the "signans" series is made of places only but these places to be thought of have to be occupied, that is "signatum" and that is why we have to pass through a "signatum" series in order to determine the place without an occupant in the "signans" series. We think that "the origin of the species" gives a very good example of what could be in pedagogy a place without an occupant whilst "the origin of the individual" in the context of the "Emile" gives a good example of an occupant without a place.

In the "Second Essay", Rousseau describes the three great stages through which the human species would have passed proceeding, apparently, in an identical manner. However, there is an essential difference between the way he depicts man in the state of nature and the two other states. The first could be but imagined. So much so that it was believed to be the Garden of Eden whereas the two others could be objectively described. Indeed, the savage man was an empirical reality attested to by numerous voyages overseas of the explorers of the day and civilized man was nothing but the state of the author. In fact, man in the state of nature is a fictitious occupant which can be but imagined. There even is, according to the paradox of Rousseau which defines man as a social being by nature, a radical impossibility that man may exist in the state of nature. On the other hand, this place without an occupant (occupied in a fictitious way) is, for all that, a requisite for the expose on the origin of inequality among men. The thesis of the progressive corruption of the human species presupposes a place of origin where man was good, just and happy.

> "...in considering man briefly such as he must have come out of the hands of nature, I see an animal weaker than some, less nimble than others but, all in all, much better organized than all. I see him gorging himself under an oak; quenching his thrist at the first stream; finding a bed at the foot of the same tree which has supplied him with food and so his needs are satisfied"[50]

In the "Emile" there is as an echo of this place without an occupant, in this that Rousseau tries to "build", through education, a being according to the prescriptions of nature. But this being who has to grow up guarded against the social influences in order to preserve the qualities of childhood, is not more objective than the state of nature but constitutes rather its other face: The occupant without a place. The fictitious character of this pedagogical hero is ever present throughout the book on account of the utopian conditions of such an education. For example, to keep all the children away from the family context is impossible. The same applies to the idea of providing for every child a preceptor who would neither be his father or his mother and we could go on and on with aberrations. However, this occupant without a place is nevertheless as useful as his reverse for he constitutes the accompanying subject who follows the moves of the empty case. Among the moves made, let's observe that the empty case positioned on number one in the origin of the species is now number three in the origin of the individual. Indeed, neither the child nor the adolescent now constitute empirical impossibilities but the adult. For it is the adult who now becomes the utopian place. We well know that the child and the adolescent, as described by Rousseau, exist also

empirically. It is in fact the challenge of Rousseau to preserve the objective qualities of the child (first birth) and of the adolescent (second birth) up to adulthood which is, as Rousseau deplored, not yet realized. On the contrary, the objective adult man behaves in conformity with man in the civilized state. But the adult man whom he describes in the origin of the individual is not to be confounded with the objective adult but must be considered rather as a place which has to be occupied in an ideal way. And this place without an occupant is always accompanied by the idea of Emile: The occupant without a place.

How can we qualify this problematical instance which pervades the works of Rousseau. We think that the word "utopia" would be particularly fitting. So much so that many authors agree to define it as a paradox. Mucchielli[51], for example, sees in More's Utopia the product of an "undecidability", analogous, we think, to the Batesonian double bind. Piron[52] defines it as an absolute gap between theory and practice. Whatever may be of these interpretations, the word "utopia" corresponds well to the feeling which is shown towards all the great pedagogical ideals.

Utopia, as paradoxical instance, would constitute in a working condition some "signans" and "signatum" series in Rousseau's works. Moreover, utopia as an ideal or as a "has to be" inscribes the "signans" series as a normative series. The objective series is, for its part, well illustrated in the idea of origin especially in the "Emile" which obliges one to consider education as a process. Therefore, as a produced totalisation whose absolute coincidence with utopia remains asymptote.

All the pieces of the puzzle have now been given. It is now time to interrogate the forms of block-up of the structure and their most manifest consequences.

E) Block-up of the Structure and its Solution
According to Deleuze, there exists two great illnesses of structure.[53] The filling-up of the empty case by its accompanying subject and the empty case left alone without accompaniment. The consequences in education are, in either situation, very serieous: Terrorism in the first and nihilism in the second.

Let's first consider in Rousseau the filling-up of the empty case in order to appreciate the effect of terrorism to misinterpret the objective conditions so that being like Emile and a society in the image of the Garden of Eden be realized is in itself a kind of violence which could be equalled only by psychological conditioning and the most morbid dictatorship. But is it not, basically, what is going on in varying degrees in the numerous attempts to realize the greatest pedagogical ideals?

The opposite error consists in refusing to define an ideal, to propose a model and thus leaving the empty case really dig a lacuna which, sooner or later, will be felt as a deficiency. It is then when our acts become strictly reactional that the nihilist's way of thinking settles down. In our opinion, this feeling harasses most of those who consider that the gap between theory and practice as a vacuum that must, by all means, be filled even at the price of excluding one or the other of the alternatives. Too often, conscious that an ideal cannot be reached, one sees no reason in devoting time to a more precise definition of the ideal. Yet this apparently useless activity is a requisite to all pedagogical structure and paves the way to a third approach which Rousseau has notably practiced with great care — the writing, let us say artistic, with all which this implies of devotion, poetical intensity and sensibility.

This third approach is in fact born of the excess of normativity and objectivity. The dangers inherent to this attempt to fill-up or reduce the gap between the normative and the objective are, paradoxically, calls for the prudence of the artistic excess. We have already said that the two main illnesses were the filling-up of the empty case and its abandonment to itself. These two excesses well illustrate the actual tendencies of the curriculum. Either we try to fill the gap by filling it up and by all possible means we will attempt to actualize and concretize its prescriptions or else we agree to a reduction of one term to the other, thus ex-

cluding the absolute practician from the scientific field and, in the same move, the pure theoretician from the educational field.

In the first instance, we find terrorism in at least two ways: First, all radical transformation of what exists in conformity with what we believe it should be implies a violence against reality and this deserves to be called sheer terrorism, especially when this reality is the child. Second, as there are many doctrines and as they are practically all competitive ideologically, each one tries to convince the other that his is the true one. This constitutes, according to Lyotard's expression[54] a theoretical terrorism whose effects will sooner or later irremediably call for violence. In this double instance, there is a filling-up of the empty case in this that the occupant without a place called upon by the "signans", stalls the game because it no longer pervades in the world but it's the rest of the world which invades its sense. Indeed, utopia becomes a concrete political prescription equalled only by machiavelism. Referring to the example of the chess game it is as if we had started the game by the checkmate and expected the game to go on. No comment is needed: The absurdity of this hypothesis is obvious.

In the second instance, abandonment of the empty case, it is nihilism rather in a two-way direction as previously seen. First, the desertion of the scientific to devote oneself to vain speculations or to so-called practical or concrete activities and then this obsession of "concretisation" becomes the one and only possible ideal; then education becomes a patched-up activity, the missing part of it finally weighs as much as a ton. A something which is disturbing and brings about a frustration which becomes the driving-power of our actions. This perspective is nihilist in the sense that our acts instead of being asserted for what they are (see Nietzsche) are reactive to something which does not exits. A mere nothing which is harassing and soon gives a bad conscience. The situation is not very different in the abandonment of the normative field to devote one's activity, for example, to so-called normative speculations but without any real intention of application nor strictly objective aims such as the description or the explanation of phenomena. In this case, the absence of a proper educational "problematic" may well be, if not felt by its leaders, deplored at least by those who are closely linked to it. Here again this vacuum may soon be perceived as a lacuna which could, paradoxically, explain the obsession that one may have to fill in the gap between theory and practice. But this desire is just the same nihilist for it is prompted by a vacuum and not an affirmation.

Terrorism and nihilism in self-defense call to their rescue an activity without which the pedagogical structure cannot function. This activity consists in maintaining the gap between theory and practice by producing most particularly a "language" capable of differing forever the meeting of normativity and objectivity, of practice and theory as recommended by Mallarme[55] in the poetic process regarding the meeting of words and things. This third approach, the foundations of which we are attempting to lay, must mainly maintain the paradox of the pedagogical complexity by keeping the normative and objective series available. This may be done on one condition only. That of keeping in constant motion a problematical instance which would have, with the definition of the paradox, this double characteristic to be, at one and the same time, incompatible with the good sense and the common sense, That this instance has no "good" sense as a particular attribution is inherent to its nomadic nature as to its allergy to common sense is inherent to its extreme mobility. In fact, moving from one sense to another without rest is practically impossible in that there will ever be anything "common" among all these diverse senses. This unbecoming pleasure to exhibit so many sense recalls Valery's definition of poetry as: "The poem, this prolonged hesitation between the sound and the sense." If it is possible to define poetry this way, it may well be possible to define music as a prolonged hesitation between sound and sound and pedagogy as a prolonged hesitation between sense and sense.

CONCLUSION

The two parts of this article also constitute series in which a paradoxical instance moves. They could be analysed later with a structuralist's approach.

One could also imagine these two parts as two verses of a song crossed by a chorus: The omnipresence of paradox. As a matter of fact, Deleuze considers a song as an example of an elementary structure.

In fact, we started off with an intuition about the relationship between theory and practice. The explicitation of which caused the emergence of two distinctive problems: The search for identity and the gap between theory and practice.

The convergence of these two presupposed divergent problems has been ensured by the use of paradox as a paradigm.

ONE DAY SISYPHE BOUGHT AN INDECENT CURRICULUM MACHINE THAT FUNCTIONED ONLY IF IT GOT OUT OF ORDER AND THAT GOT OUT OF ORDER ONLY IF IT FUNCTIONED.

IMMEDIATELY HE HASTENED TO START THE MACHINE AND SINCE IT WORKED VERY WELL IT GOT OUT OF ORDER AT ONCE BUT ALSO SINCE IT GOT OUT OF ORDER QUITE WELL, IT BEGAN TO FUNCTION.

TWO UNKNOWN INHABITANTS OF THE EARTH, HALF DRUNK, TOLD HIM RECENTLY IN AN AIRLIE BAR THAT THIS PROLONGED HESITATION DEFINED THE CURRICULUM.

This chorus is the fuel for the indecent curriculum machine presented in two ways: As an "unpower machine" (machine d'impouvoir) and as a writing machine. This is another way of considering the problem of theory and practice and the infinite identity of the curriculum.

We believe that from this "full of sense" machination may emerge some kind of organizational practice of anarchist planning.

A team of professors from the Universite du Québec à Rimouski mandated to study the relations between pluralism and education went through an interesting experience illustrating pretty well the indecent curriculum machine. In the early process, the members of the group felt obliged to try to adjust their activities to the discourses they were having on pluralism.

Instead of focusing on a consensus or a majority vote over the various world views, the impossible challenge of coexistence was attempted.

This experiment assumed differently by each participant in the group generated writing gathered in a recent publication showing that Sisyphe can be an artist.[56]

FOOTNOTES

1. Valery, P., cited in Deleuze, G., *Logique du Sens,* Paris, Editions de Minuit, 1969, p. 20.

2. Gress, J.R. and Purpel, David E., *Curriculum: An Introduction to the Field,* Berkeley, McCutchan, 1978, p. 469.

3. Beauchamp, G., *Curriculum Theory,* Wilmette, The Kagg Press, 1975, p. 67.

4. MacDonald, J.B., cited in Tanner, D. and Tanner, L., *Curriculum Development: Theory into Practice,* New York, MacMillan, 1975, p. 6.

5. Tanner, D. and Tanner, L., *op. cit.,* p. 45.

6. Goulet, Georges, *Analyse comparative des notes attribuees au curriculum par un groupe d'auteurs choisis et ébauche d'une théorie générale,* thèse de doctorat. Université d'Ottawa, 1976.

7. Tanner, D. and Tanner, L., *op. cit.* p. 48.

8. Pinar, W., *Curriculum Theorizing: The Reconceptualists,* Berkeley, McCutchan, 1975, P. XI-XIV.

9. Beauchamp, G., *op. cit.*

10. Walker, D., "What Curriculum Research" in Gress, J.R. and Purpel, D.E., *op. cit.*

11. Pinar, W. and Grumet, Madeleine, *Theory and Practice and the Reconceptualisation of Curriculum Studies,* paper presented to the Learned Socity Conference, Montreal, 1980, p. 25.

12. Pinar, W., idem, *op. cit.* p. 15-16.

13. Whitehead, P.W. and Russel, B., *Principia Mathematica,* 3 volumes, Cambridge, Cambridge University Press, 1910-1913.

14. Watzlawick, P., Weakland, J., Fisch, R., *Changements: Paradoxes et psychothérapie,* Paris, Editions du Seuil, 1975, p. 86, Translation. Original title: *Change Principles of Problem Formation and Problem Resolution.*

15. Watzlawick, P., Bevin, H.J., Jackson, D., Une logique do la communication, Paris, Seuil, 1972, p. 211-213. Original title: *Pragmatics of Human Communication.*

16. Watzlawick, P., *op. cit.,* p. 235.

17. This term comes from Gilles Deleuze and is said "paradoxe du sens" in French.

18. Rosset, Clement, *L'objet singulier,* Paris, Editions de Minuit, 1979, p. 5.

19. Rosset, Clement, *op. cit.* p. 23.

20. Lacan, J. *Ecrits,* Paris, Seuil, 1966, p. 35.

21. Lacan, J., *op. cit.* p. 19-75.

22. Deleuze, G., *op. cit.* p. 54.

23. Deleuze, G., *op. cit.* p. 66.

24. Lacan, J., *op. cit.,* p. 276.

25. Lacan, J., *op. cit.,* p. 276.

26. Lyotard, J.F., *La conditon post-moderne,* Paris, Les Editions de Minuit, 1979.

27. Walker, *op. cit.* p. 511.

28. Gardner, Martin, *La magie des paradoxes,* Paris, Pour la Science, 1980, p. 24.

29. Lyotard, J.F., *Economie libidinale,* Paris, Editions de Minuit, 1974, p. 24-25.

30. Lipovetsky, Gilles "Pouvoir de la répétition", in *L'arc,* Lyotard, Paris, 1976, No. 64, p. 74.

31. Downey, M.E., Kelley, A.V., *Theory and Practice of Education,* NewYork, Harper and Row, 1975.

32. Piattelli-Palmarini, M., *Théories du langage, théories de l'apprentissage. Le débat entre Jean Piaget et Noam Chomsky,* Paris, Seuil, 1979.

33. Ellenberger, H. *Crimonologie du passe et du present,* Montreal, Universite de Montreal, 1969.

34. *Ibidem.*

35. Zweig, S., *Nietzsche,* Evreux, Stock & Plus, 1930, 1978.

36. Avanzini, G., *Introduction aux sciences de l'education,* Toulouse, Privati, 1976.

37. Ellenberger, H., *op. cit.*

38. Althusser, L., *Pour Marx,* Paris, Maspero, 1965, Particularly chapter VI.

39. Deleuze, G., *op. cit.*

40. Levi-Strauss, C., *Introduction à la Sociologie et l'Anthropologie de M. Mauss,* in Deleuze, G., op. cit. p. 63.

41. Deleuze, G., *op. cit.,* p. 63.

42.   Deleuze, G., A quoi reconnait-on le structuralisme?, in Chatelet, F., *Histoire de la philosophie. le XXe siècle*, Paris, Hachette, T., 8, Chapter VII, 1973.

43.   *Ibidem*, p. 301.

44.   *Ibidem*, p. 307.

45.   Rousseau, J.J., "Discours sur L'origine et les fondemonts de l'inégalité parmi les hommes"., in *Oevres complètes*, 3 T, Paris, Seuil, 1971, T. 2.

46.   Rousseau, J.J., "Emile our de L'education" in *Oeuvres complètes*, op. cit T. 3.

47.   Lapassade, G., L'oevre de J.-J. Rousseau. Structure et unité in *Revue de Métaphysique et de Morale*, Juillet-Décembre, 1956.

48.   Rousseau, J.-J., *Ecrits sur la musique*, Evreux Stock/musique, 1979.

49.   Kintzler, C., Preface in *ibidem*.

50.   Rousseau, J.-J., *Discours sur l'inégalité...op. cit. p. 213*.

51.   Mucchielli, M., *Le mythe de la cite idéale*, Paris, PUF, 1960.

52.   Piron, c., "Lettre et "esprit" de l'utopie" in *Le discours utopique*, Colloque de Cerisy, Paris, U.G.E. 10/18, 1978.

53.   Deleuze, G., *op. cit.*

54.   Lyotard, J.-F., *Rudiments paiens*, Paris. U.G.E. 10/18, 1977, particularly chapter 1.

55.   Thevoz, M., *Le langage de la rupture*, Paris, PUF, 1978, p. 96.

56.   Daignault, J., et al., *Positions du groupe pluradoxe sur le rapport Marcil-Lacoste*, Rimouski, Université du Québec à Rimouski, monogrphie no-4, Juin 1980.

Beyond the Window: Dreams and Learning

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This semester I devised a course on the child from a Jungian perspective. Our readings centered on Jung's essay "The Psychology of the Child Archetype" and included accounts of a fictional child in myth, fairytale, the Bible, and literature. My interest was to place the child inside a symbolic framework, seeing the child archetypally and culturally rather than empirically and realistically. This was in accord with Jung's distinction between symbol and fact: "The mythological idea of the child is emphatically not a copy of the empirical child, but a symbol clearly recognized as such; it is a wonderchild, a divine child, begotten, born, and brought up in quite extraordinary circumstances, and not —— this is the point —— a human child."[1]

From the start of this venture in the classroom it occurred to me that seeing the child in an archetypal manner is an act of major educational importance. I was asking the students to make two moves. First, I was asking them to draw connections between modern and ancient writings, back and forth continually until time became more of an ebb and flow than a line. Second, I was asking the students to tap time's flow within themselves, by attending to their dream images. While the first move is accepted procedure in thematic courses, the second move to inner introspection is definitely non-standard.

Indeed, Jung's psychology is non-standard. His is a psychology not of science but of art, not of ego but of archetype. Freud, on the other hand, is standard, with his scientific approach to the psyche. His acceptance by psychology departments and his litanizing by literature departments further attests to the ease with which colleges and universities have adopted mainstream thought. According to this orthodox view, the unconscious is a thing, capable of manipulation. But Jung's approach is different. Basing his psychology on archetypes, he delves deeper into the unconscious, showing it to be not a thing but a person, and not even one person but many types of persons. One facet of the inner self may be like the Trickster, another like the Great Mother, or the Hero, or the Child: all figures familiar in folk tales and wisdom writings. Jung thus makes an astounding point. The unconscious is a poetic not a scientific reality. It can only be apprehended in an as-if manner, through personification and metaphor. So embedded are we in orthodoxy, however, that most of us are ignorant of the poetic nature of inner life —— just as we are unaware of the rich deviations of our own culture. The task for the teacher, as for the analyst, is to teach how to read psychic speech, if the individual is to be brought together with the nurturing symbols of culture.

Such a rapprochement views the unconscious as a hidden, creative power that sustains culture and self-hood, alike. The alchemists of old understood this concept, calling their project of changing base lead into gold the Great Work. For them, the transmutation of metals was really a poetic analogy for another transformation, far more exciting and dangerous than any tinkering with flasks and fire. Instead of treating matter as a thing, the religious alchemists co-existed with matter in an act of imagining. They wanted to acquire the "gold" of reborn consciousness. Centuries later Jung identified the psychological principle underlying the alchemical experiment. In his most mature writings Jung labeled it the principle of compensation, according to which no thing is merely itself: a solid, literal reality.[2] This notion has tremendous implications for education. To learn to see archetypally is to see the self poetically. This is a Great Work, indeed. It could turn a classroom into an alchemical lab.

Jung's highly heterodox theories may leave us feeling less comfortable than do Freud's. For Jung, man is not master in his own house.[3] The terrible error of empirical science, however, has been the over-valuation of the role of the ego. The ego has one big role to perform: like the hero of myth, he must slay and

win. But the house of the self has many rooms and many roles, as anyone with the slightest introspective sense knows. A study of the child archetype is a study of the non-heroic, non-egoistic side of human experience filled with risk, fear, and failing. Such a study can cause discomfort. But I wonder if the time has not come when the classroom, like orthodoxy itself, should not rattle the bars of creed. Archetypal images have been safely caged for too long.[4] Their livingness, as an other side of the self, must be felt if we are to avoid projecting our furies blindly onto others.

My plan for seeing archetypally was to integrate readings from the folk tradition with jottings in dream diaries. My colleague Bob Sidwell, with whom the course was taught, and I wanted to make conscious the connection between theory and practice, reading and imagining, talking and dreaming. It was our intention to bring together the shadow side of Western culture (fairy tale, myth, wisdom writings) with the shadow side of consciousness (the unconscious). What is common to both is poetic expression. Both have a logos of the psyche. The "psyche logic" of pattern and image formed the core of the course.

It seems appropriate that we met at twilight, from 4:30 until 7:00 at evening. We were between times of day when the students, many of them teachers, felt that the day's work had been done. We were also between meals, when hunger was most keen. Precisely at these between moments does the unconscious function best, Jung claims, for the waking mind then is least focused.[5] Like a thief at the gates, the unconscious slips through the cracks of conscious control. Bob would begin our sessions by narrating from memory a folk tale. The students settled down to listen; some dozed. After story time, we moved to a consideration of one of the readings. Either Bob or I would lecture briefly on such topics as initiatory structures in myth, the role of the Night Journey, the meaning of archetype, or the two modes of Western thought: rational and non-rational. The remainder of class time was spent in group work, where the students applied the lecture theme to the reading, discussing among themselves the initiatory pattern in "Snow White", for instance, or the motif of the Night Journey in "Pinocchio" or Jung's paradox "smaller than small, bigger than big" as exemplary of the role of the dwarf in fairy tales. One student remarked that she always left our class with a headache. She said she was using a part of her head that had never been used before!

The Great Work of the course, however, was done at night. We asked the students to jot down their dreams into a special dream book, for a period of four weeks. Our hope was that the material of the course, reminiscent of childhood readings, would fertilize their imaginations and connect each dreamer with the symbolical child within. We wanted to give the students the real opportunity to feel-again the mysteries of the non-hero, who lives just below the surface in the embers of being.

Our first set of papers was to be the fruit of these night labors. We asked the students to cull through their dream books and select one or two dreams for focus. They were to pay particular attention to specific image patterns, in accordance with Jung's advice for dealing with non-rationality. "Give (the emerging content of the unconscious) your special attention," he said, "concentrate on it, and observe its alterations objectively. Spare no effort to devote yourself to this task, follow the subsequent transformations of the spontaneous fantasy attentively and carefully. Above all, don't let anything from outside, that does not belong, get into it...."[6] This dictum, based on the writing of an alchemist, allows the dream to speak with its own "psyche logic," complete with absurdities. The dreamer's task is not to figure out the images, but to figure them in: to see, in other words, the figure each image makes. To help the students with the simple art of dream recording, I read from my own dream book. What follows is an excerpt of a dream in which I return to the house I grew up in:

> When I got to the house I was very scared. I don't remember being let in. I just remember being on the second floor, where the owner, a young woman, was showing me around. I wanted to see my old bedroom. When I went into it, it had been changed, made smaller and more

crude. It had the feel of a camp, as if people come to it only for short visits. It was clear to me that the house was in very bad shape. I kept thinking of the young woman guide, 'She has made a bad bargain.' When I looked down, the wainscotting had come loose from the floorboards. There was green ooze at the corners, indicating to me that the place was rotting out.

I wanted to share this dream to illustrate an important Jungian motif; namely, that the archetypal child is both beginning and end.[7] Unlike the empirical child, who outgrows his condition, the archetypal child recurs through time to remind us of our poetic origins. Dreams, for Jung, are our best natural resources whose treasures need to be carefully mined.

I told the students that the dream had left me uneasy but that I came to see it as a gift. It seemed to be warning me against too much intellectualizing about the house of the self. My ascent, after all, to the second floor of the dream house was without regard or knowledge of any foundations. And it was the foundation of the house that was rotting out, as if to underscore a danger to my selfhood. Perhaps in actuality I was viewing the child from a superior-instructional perspective, instead of the symbolical one Jung spoke of. In not feeling the child as real in a symbolic way I was setting my inner life apart from my intellectual life, viewing the inner space as smaller, cruder and more camp-like. One loses connection with one's total being, however, if the self is split off into camps. Further, my dream self was harboring a secret thought against my dream guide, thinking the guide had "made a bad bargain." There is no way to make deals with the unconscious or to bargain-away psychic facts. Really it was I who was on the losing end. As if to draw my gaze to the source of difficulty, the dream shifted direction to the wainscotting. Down there lay the gift in the moist, green ooze. Its greenness and dampness imply a life-giving factor. In that image the dream was showing me what I understood intellectually but needed to see more archetypally: the way to integrated wholeness is not up, but down, to the littler, smaller things that connect us to ourselves.

Self knowledge involves seeing more clearly into our unacknowledged prejudices and fears — what Jung calls the shadow. Judith Morris Ayers, writing in the JCT Newsletter says of Jung's shadow theory that it enables teachers to see better their problems in dealing with particular students.[8] I think we can go one step farther and say that dreams enable all of us to confront what shades our perceptions — of ourselves as well as of others. The teacher's role can be expanded to include teaching insight into the hidden archetypes that provide our foundation, both culturally and personally. In such a way the dream becomes part of a vast hermetic subculture, entirely consistent with the images of Western heterodoxy: from the alchemists and folklorists, from the secret book of Revelation and the parables of Jesus, up to and including Jungian archetypal psychology and visionary poetry. If we as humanists are to transmit our culture, let us consider carefully the shadow side of mainstream thought, for therein lies the treasure hard to attain: the gold of self knowledge.

The dream papers the students wrote were to contain two parts: first, a description of a dream or dreams dreamt during the semester; and second, an analysis of image patterns, keeping close to the image. How did dream images bring out the shadow, giving it depth and texture, so that the dreamer could face fears and see lurking problems from another, fictional perspective? One student responded, "I feel these dreams are telling me that I have not yet adjusted to (my mother's) loss sub-consciously. All three of the dreams had me travelling in the dark. I feel that this may be symbolizing a period of liminality." Another wrote, "In the dream I was torn between accepting my uncle's righteous advice or joining with my cousin to satisfy my personal pleasure...The fish represented a test for me, to choose between pleasing myself or doing what is right." And another student concluded, "In getting to know the child better we can see that most everything the child does has some kind of meaning, even though we may not know exactly what it is. Even in regards to oneself we can conclude that our actions are not stupid or foolish, but real expressions that are being held within all of us, and these expressions are released when we need to escape from the real world for a while."

One advantage to these comments was in their pointing students along a royal road to introspection. There was considerable surprise at the generative myth-making capacities of dream images, as well as the gamut of feeling not usually felt during daytime living. The child can be the father of man if we heed the child's special province of feeling. Loneliness, risk, sadness: these are given a place in dream life, allowing each dreamer the chance to connect with roots. At the vey least, acknowledging one's fears opens the possibility that felt aggressions will not turn into literal actions. As one student put it, "By better understanding the child I can learn to live with fears and the mysterious thoughts that often flash into my mind."

At the most, acknowledging the child as archetypally alive in ourselves allows us in the West a peculiar luxury. It allows us a path to self individuation not practiced by the East. Jungian archetypal psychology, rooted in Western heterodoxy, is not transcendental. It does not hold that one should go beyond this world to another state where all is bliss, nor does it advocate that one should "let go" of one's negative feelings. One need only read Jung's startling essay, "An Answer to Job," to see the highly paradoxical nature of Jungian thought, which includes the heretical notion that even our godhead is not a total positive, all one in goodness and light.[9] The transcendental Self, in its egolessness, is reductively singular in its search for purity, love and happiness. According to Yoga practice, through meditation one finds the still center of bliss. As the Swami Muktananda puts it, "Absorbed in the little bliss of sleep, we forget the pains of the waking state."[10] But for us in the West neither forgetfulness nor bliss will lead to selfhood. The violence that surrounds us is of our own making and cannot be ignored. Our soul searching must take us into the heart of darkness. If we fail to read our dream messages we could deny the one motif that undergirds our entire culture, the lesson of the "Happy Fall." The archetypal child is divine not becasue it is above our suffering but because it shares in the suffering moment. The child is bringer of light to our shadows.

The child functions as a herald of change because it allows us the opportunity in dream to see our own opposite. Sometimes the opposite awakens a deep sense of yearning, showing the psyche's desire to incorporate both poles of the opposition between child and adult. One student dream in particular constellated many of the motifs surrounding the child archetype:

> There is this one particular dream I remember: looking out of this window. As I look out this window I see a young girl. She must be a child of ten. She is skating on an ice rink. I remember trying so hard to open the window to get at the child but just couldn't. I realize as the child runs past me, it is I. Looking out of this window, I feel I am trying to reach that person, me, who was on the ice. This window is keeping me from the child me. I think that maybe the window side is the reality of myself, the true me. Beyond the window out on the ice rink is the child part of me I just can not get ahold of. I do remember enjoying ice skating but this child was like a gifted skater. I can't skate at all. I have always wanted as a child to be a good skater, but, to save my life, I couldn't. I still can not. When my girl friends went skating I sat and watched...This time I am watching myself. I can not believe, though that I had this dream at my age.[11]

For most of us, windows are barriers to reflection in the psychological sense. That is, they only allow one to see what is Out There, literally and really.[12] But this dream window enables the dreamer to see a poetic image, another imagined reality of the self. A different kind of seeing is required. As if to dramatize the dream's importance, the metaphor of ice pervades. While the dreamer can't quite get ahold of the gifted child, she is given ample opportunity to view her motions against a frozen backdrop. The dream has caught time's flow but yet is filled with flowing motion: the other person "runs" past and skates "like a gifted skater." The whole thing defies reality, utterly, as the dreamer concludes with her statement of disbelief.

The dream's un-reality is further felt by the discrepancy between the two selves. There is the "true me" on one side of the window — the side that watches and wishes but cannot perform on ice — and the "child me" that does the impossible, gifted act. What the dreamer does not quite recognize is that the "true me" is not just the side that sits in reality, watching and wishing. The "true me" is both sides. Indeed, recognizing that simple truth of conjoined opposites is life-saving. It would save the life of the soul to have the gifted child skater brought into full psychic awareness of the dreamer. The dreamer's sense of frustration and yearning suggests that she is sympathetic to the dream's "psyche logic," which is circular, flowing, and on-going.

My claim in this paper has been that seeing archetypally is educationally significant. A curriculum that uses dream speech provides a new dispensation for learning about the self and culture. A course could be designed from the inside out, turning current curriculum practice around. Teachers skilled in following images could connect students first to their prime dream images and then to cultural expressions of these same prime images. In such a way a student is brought together with those symbolic expressions that have the most deep, personal meaning. Nor should these images be drawn from one period or genre. Once they had been elicited from dreams they could be researched in various fields and media. Students could present their research (a searching-again of what had already been imaged in the dream) in a variety of ways: expositionally, fictionally, artistically, dramatically, or whatever.

Modern Western man has lost his soul. Our poets tell us that we are hollow: "shape without form, shade without colour."[13] But there are ways to fill the hollow within our own cultural dispensation. We can allow the pains of the waking state to take on form and color in our dreams. We can learn to see our shadows. Education should not just lead out; it should lead in. Let us follow the child archetype into fantasy's reality and psyche's logic. These await our insight, just beyond the window.

FOOTNOTES

1.   C.G. Jung, "The Psychology of the Child Archetype," in *Psyche and Symbol*, ed. Violet S. de Laslo (Garden City: Doubleday & Co., 1958), p. 124n.

2.   Jung's compensatory principle stands in direct contradiction to the sort of literalism characterized for instance, by Bishop Butler's statement, "Everything is what it is, and not another thing."

3.   Freud's ego psychology, setting ego as master, can be seen by his saying, "The ego... is the libido's original home, and remains to some extent its headquarters." See Sigmund Freud, *Civilization and Its Discontents*, trans. James Strachey (New York: Norton, 1961), p. 49.

4.   Samuel Beckett's archetypal old man expresses this idea of the caged beast wanting to get out from the bars of rationalism: "While within me the wild beast of earnestness padded up and down, roaring, ravening, rending." See his "Malone Dies," *Three Novels by Samuel Beckett*, trans. Patrick Bowles (New York: Grove Press, 1965), p. 194.

5.   C.G. Jung, *The Symbols of Transformation*, trans. R.F.C. Huss (Princeton: Princeton Univ. Pr., 1952), Collected Works 5, p. 25.

6.   C.G. Jung, *Mysterium Coniunctionis*, CW 14, p. 526.

7.   See C.G. Jung, *The Archetypes and the Collective Unconscious*, CW 9, pp. 177-179.

8.   *JCT Newsletter*, (May, 1981), p. 4.

9.   C.G. Jung, "Answer to Job," in *Psychology and Religion: East and West*, CW 11.

10.   *Meditate* (Albany: State University of New York Press, 1980), p. 16.

11.   I am endebted to my student Deirdre Fitzgerald for letting me use her dream.

12.   For more on seeing Out and Seeing In, read James Hillman, *Re-Visioning Psychology* (New York: Harper & Row, 1975), pp. 140-145.

13.   T.S. Eliot, "The Hollow Men," in *The Complete Poems and Plays* (New York: Harcourt, Brace and Co., 1958), line 11.

The Curriculum and the Search for Meaning:
A discussion of the Applications of Logotherapy to Education

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At last, thought Eugene, I am getting an education. This must be good writing because it seems so very dull. When it hurts, the dentist says, it does you good. Democracy must be real, because it is so very earnest. It must be a certainty, because it is so elegantly embalmed in the marble mausoleum of language.

Thomas Wolfe, Look Homeward Angel (1929)

The notion of education as a process of the type the fictional Eugene Gant endured has never been an easy thought for those in the field to confront, although the above passage has been quoted in many education texts. Educators have, in fact, rarely dealt with the issue at all. We twist it. We blame the "institution" — social, political or educational — for the paucity of our gift to the student. We re-cast the issue. We speak of the "affective domain" as a spatial entity, difficult to find in our Ponce de Leon-like quest. We lie, pretending that learning is quite a lot of fun, and the educator who adapts easily to trends can make this celebratory outlook a constant reality. In my work with young deaf adults, I frequently find my desk littered with the fall-out of someone's latest curricular chemistry. In a remarkable number of instances, I find myself confronted with visuals populated by leering, incessantly grinning animated characters who are supposedly communicating a concept in a highly amusing way. Inevitably, when I call in a couple of students from the hall to evaluate this Disney World on transparency or videotape, I find they, like Victoria, are not amused. One does not need a sophisticated knowledge of the subtleties of American Sign Language to analyze the grimaces, shrugs and upturned eyes that seem to manifest themselves across a number of ages and groups. After twelve or more years of formal schooling, these students are insulted — and why shouldn't they be? They have accepted what we refuse to admit as reality: education is a trying, often painful experience. The school is not a labyrinthine playground, but an arena where dozens of small combats are enacted each day. Unfortunately, what the students often do not realize — because they have received precious little help from us in discovering this — is that the more heart-rending aspects of an education can provide opportunities for growth and enlightenment and personal meaning. Such opportunities, moreover, need not be the outgrowth of the "dark miracle of chance" which Eugene Gant saw as the overriding factor in his life, but can be explored and discussed as fundamental elements in a bolder, perhaps more unflinching, view of curriculum.

A few brave theorists have broached the notion of education as suffering in a highly critical vein, particularly in the last two decades.[1] Perhaps the most scathing statement on the relentless oppression wrought by the roles that the system imposes on teacher and student alike can be found in Paolo Freire's Pedagogy of the Oppressed (1970). In Freire's eyes, the process of conventional education produces in the student a "dominated consciousness", bereft of the ability to trust and love the others he/she encounters. Freire speaks of the need for "conscientization" — a process of liberating one's self in the higher interests of freedom, justice and equality. Freire, however, and a number of critics[2] tend to focus on a grander political scale, which unwittingly can desensitize us to the highly personal nature of the suffering object in what Pinar (1975) calls currere: the study of the educational experience from the viewpoint of fields (phenomenology and psychoanalysis, for example) rooted in individual concerns. Pinar himself and Greene (1973, 1975) explore the nature of the spiritual disintegration permeating the classrooms and curricula of our time. Their approaches begin to examine this experience in a more highly individualistic way. I would propose that we can continue this examination and contribute to the action subsequent to and concurrent with

such examination by learning more about the premises of the often-overlooked Third Viennese School of Psychotherapy and its major spokesman, Viktor E. Frankl.[3]

In order to discuss Frankl's theories as a basis for a curriculum theory, it is first necessary to dispel some vague notions surrounding the term "suffering" — a term used quite liberally at the beginning of this essay. Suffering will, of course, vary in situation and intensity with each student and each teacher. There are, however, certain signs and symptoms which Dr. Frankl as a physician has observed in those he characterizes as sufferers (12-48) — and these symptoms have notable parallels in the educational literature which discusses the malaise and dissatisfaction wrought by modern schooling. These symptoms, in usual order of their manifestation, are shock, apathy, refusal to make decisions, denial of wants and needs, and the ultimate loss of an integrated identity.

The educational experience is replete with haunting examples of these phases. The comic visions of a Woody Allen or Bill Cosby thinly diguise the series of shocks that a child endures in schooling. We can all recall the more unnecessarily unpleasant traumas of our school days, but even pedagogically sound programs can produce shock. Bruner (1966), for example, recounts the horror-mixed-with-fascination in children's reactions to films and stories of some elements of Eskimo life. This latter type of shock can be channeled skillfully into a more positive vein, but the former gnaws until a child enters the seemingly apathetic phase. Bruner also tells the stories of two children who were categorized as slow and unresponsive. In reality, they were defending against their learning through an apathetic veneer and a refusal to risk the the punishment that comes with "being wrong".

Denial of wants and needs and loss of identity are more sophisticated, if less dramatic, symptoms. They are less dramatic because of their bland quality. But they are more insidious as they eat at the real person behind the student-mask. It is at this point that the student will "give him what he wants" or "tell the instructor what she wants to hear". Competency in "reading" the teacher replaces the personal response to meaningful material. The student seeks out organizational structures and the safety of groups and clubs to divert attention from his/her solitary person. And misery follows misery when these groups fail to accept or support the individual who needs their comfort and recognition of his/her potentialities. Anomie — the feeling of ultimate emptiness — sets in at an early age.[4]

It is quite clear, then, that such issues must be confronted in both psychological (affective) and intellectual (cognitive) areas. Relegating the nature of suffering as a significant factor in education to unconscious roots and sources may offer us some illumination, but little recourse. We need a theory on which to build a basis for reflection and action through curriculum and teaching. I believe that the fundamental theory of Frankl's work — called logotherapy — can offer this synthesis. An anecdote may be helpful.

Despair is a common reaction encountered by those of us who work with students who have been labelled "experientially deprived" or deficient. In the course of my work at the National Technical Institute for the Deaf at RIT, a young deaf woman wrote this recollection of her educational experience:

> "I was little and went to .... school. The teacher was so mean to me because I was scare easily to learn, pick on me to go to corner everydays. I gew up and went to high school. The teacher taught me how to read, sign language. I was 8th grade and met a lot friends from ....School for the Deaf. I beg my parents that I want to go to XSD. But my father slapped my face that he don't want me go to school for the deaf. I sure felt badly.
> In 1975 I tried to come here, but the Adm. turn me down 3 times. Finally I was special student. I'm successful. I said thank to Mrs. (Teacher's name) that I learned a lot to do right grammar. I'm in 3 level right now. I'm speaking that all teacher are new, please go to class to learn sign language before start to teach us."

While the student asserts "I'm successful", her tentativeness is apparent. She attributes her present relative success to a recent teacher. She fears getting a teacher with communication skills that are not well developed, inferring that her learning may be undone or impeded by this factor. Her fear is not unfounded, of course, but this woman has given over an unbalanced degree of control to others. Given her sad recollections of a teacher who may have been power-hungry and a father who may have been unaccepting toward his daughter's handicap, however, her reactions are logical. Her fears and sense of failure, however, appear not to have been dealt with honestly and openly with regard to their plausibility. The essay was unsigned, but sprinkled liberally with hints of identity. It is this sort of student - and teacher - who may benefit from a logotherapeutic orientation.

First of all, who is Viktor Frankl and how did his concept of logotherapy come about?

If any theory could be said to be "organic" it is Frankl's. Logotherapy — a method of dealing with one's suffering — was born in the most hideous human circumstance imaginable: the concentration camp at Auschwitz. Frankl was a young medical student in his twenties when he was taken there with his wife, family and first manuscript. All — excepting for one sister — were destroyed by the Nazi brutality. Turning to the dark fellowship of his companion inmates, he was struck, as a scientist, by the inexplicable selection of those who survived the harrowing experience intact as opposed to those who perished, either physically or spiritually. He began to probe the reasons for the phenomenon he witnessed, in quest of the variable that might explain the randomness of the heterogeneous group of survivors. And after hundreds of clandestine interviews and secret discussions, he believed that he had isolated the important factor: without a concrete meaning in the life task of the individual and without a focus on the future fulfillment of this task, there is no reason to exist. The individual's search for meaning is his/her primary motivation. Frankl states that this meaning "is unique and specific in that it must and can be fulfilled by (the individual) alone" (154). Physical development and various types of mental strength are secondary to the force of this motivation.

Logotherapy, then, is based on the above set of statements. The method focuses on what Frankl calls "the will to meaning" (as opposed to Freud's "will to pleasure" or Adler's "will to power"). The individual is "confronted with and reoriented toward" the meaning of his/her life (153).

Frankl, amazingly enough in the light of his own extreme suffering, did not choose to confine his theory to a special group of professional elite to use with those they would adjudge to be enduring suffering of some magnitude. Frankl saw immediate and wide-ranging applications of his ideas upon his release, hence his publication of Man's Search for Meaning (In his book he expresses some hesitation about using his name, in favor of his camp number (9). But, courageously, he overcame this discomfort in order to stand personally behind his thesis). The application of his ideas seemed appropriate from his observation of what he terms "existential frustration" (159). This frustration, permeating so much of the thought and writing of this century, creates a tension that Frankl believes must be dealt with individually and rationally. Leslie Farber (1965) once called our era "the age of disordered will" (48). Frankl believes that order and sanity can be brought to the age through the courage and honesty of individuals exploring their meanings.

He believes this because he has re-examined some of the roots of dysfunction. He admits the existence of psychogenic neuroses — those emerging from conflicts between drives and instincts. But he introduces the concept of noogenic neuroses as well. These conflicts and frustrations emanate from moral and spiritual roots, from values (160). He rejects views that harbor a wholly deterministic outlook, believing that persons can transcend suffering through self-knowledge and the striving that their existence demands. Frankl speaks frequently of the "is-ought" tension. He does not regard this as a necessarily unhealthy state of psychological imbalance as long as one has a sense of the logos of the "ought". If, for example, the educator can help give the student a concrete reason for a learning activity or process repugnant to him/her, it is likely that the student can more readily transcend the unpleasant aspects in the interest of a personal goal.

There are, in fact, many applications of Frankl's initial concepts to education as we know it. The movement toward individualized learning, however well or poorly implemented, gives some recognition to the idea that each student needs to find his/her personal meaning or response to the learning experience. The "is-ought" tension has been a mainstay of American education since its beginnings. And the ideas of existential frustration and noogenic neurosis have a number of parallels which can be drawn from critical educational literature. One cannot deny the existence of these factors in the schools described by Kozol (1967) or Silberman (1970) - and their manifestation in both the student and the teacher.

But how, one might ask, can Frankl's entire theory be re-shaped and/or redefined by the curricularist in the process of education?

The applications may not be immediately obvious, but they would, I suspect, center on the three methods on which Dr. Frankl bases the active phases of his logotherapeutic technique. According to Frankl, we discover the meaning in life in three different ways: "(1) by doing a deed; (2) by experiencing a value; and (3) by suffering." (176). The existence of these mechanisms can, of course, be crystallized in any number of educational experiences.

The first application is probably the most apparent, and infers the greatest degree of control. Doing a deed can be an act of defiance or compliance, but it is always some sort of catharsis. The educator has to be willing to tolerate — and defend— certain types of madness if he or she believes this principle. When this occurs, the classroom becomes a place to transcend conventional definitions and activities and becomes full of creative possibility (as well as tension). An educator can, through the use of theater games, journals, and humanitarian activities, help the student find a meaning — even in situations that make him/her upset or angry — and to act upon that meaning in some small way. A deaf student of mine experienced the horror of discovering she had the insidious "Usher's syndrome" during the freshman year in the RIT/NTID art program. Usher's syndrome is a combination of deafness and the visual deterioration known as retinitis pigmentosa. This meant that J.D., my student, would be totally blind as well as deaf within a few years. It became necessary for her, of course, to explore a new career direction in a different program. She did request, however, to be allowed to submit a piece of work for the student honors show in the spring quarter. Her submission was entitled "Usher's Syndrome." It was a stark black-and-white surrealistic drawing, reminiscent of Dali's early work. Jagged prison bars protruded from parts of a giant eye and ear as the mechanisms used to "buy time" for the victim — hearing aids, glasses, eye droppers — faded into a grey landscape. J.D.'s deed — a visual power act — transformed in a number of ways the viewers of her work. The educator must be sensitive to the possibilities that this young woman intuitively saw for herself, and facilitate those existential deeds.

When one speaks of "experiencing a value" in the educational setting, one is referring to one of the most common and yet most abstract and difficult curricular and instructional concerns. There has been an onslaught of "values clarification" books and techniques peddled to the schools in the last few years. The problem with some of these materials is a certain contrived quality. The most impressive value-centered activities take place in the immediacy of the moment. It is in this moment that Langer's (1948) "organic need to symbolize" will take place most truthfully. This generally cannot be done while the instructor is thumbing through a manual. Constant focus on each individual student must be maintained. This is not to say that materials do not provoke responses — the anthropology films shown by Bruner clearly show how well this can be done — but that they are merely an antecedent to, not a replacement for, praxis. (Phenix (1975) speaks of the formulation of a "natural theology". This can only happen in as natural an environment as the school and the teacher can allow. Experience must be the deep structure upon which the language of the classroom is based (Meath-Lang, 1980.).

It is the third way of finding a meaning in one's existence, suffering, that presents us with the deepest

mystery and the greatest challenge. We have traditionally preferred to think of education as an ameliorative experience. We do not like to think of education as an exacerbation of human suffering. But it is that, as well as a liberating element in life. We take children away from their homes. We put them in a more regimented and hostile environment, with authority figures and peers who can be very cruel. Their efforts at grappling with a bewildering array of concepts are frequently ridiculed or demeaned. And yet we want to deny that these traumas occur, because we are at least partly responsible for them.

One of the greatest gifts we could give our students is a simple admission of the reality of their struggle. We must cease our denial of their pain. When one reads the searing account of the ultimate teacher-student relationship, Joseph Lash's Helen and Teacher (1980), one can see the relative spiritual health of Helen Keller, who reflected upon her struggle for education in introspective writing – a hopefulness unshared by her dying, despondent teacher, who feared rejection as she put her weaknesses on paper.

As Grumet (1978) points out, the curriculum is "the world of meanings that we have devised and that as teachers and students we assume responsibility for ... and for the the action it admits" (p. 286). If this "world of meanings" has its negative aspects they should be acknowledged – not necessarily in a breast-beating fashion, but with candor and humor and thoughtfulness. This becomes a first step in a dynamic and creative sense of awareness.

Huebner (1966, 1975) rather gently notes the futile efforts of those members of the educational establishment who try to disguise the imperfections of the system under a thin layer of "pedaguese". He does not condemn the effort; he simply finds it rather sad. He speaks of a need for forgiveness – forgiveness of ourselves as imperfect educators and of our clients for the position in which they often place us. And we must communicate this desire to forgive and be forgiven, because it is only through forgiveness of the past that we can create a future. The creation of a future, moreover, is the cornerstone of logotherapy. Frankl urges reflection of the past as the reality that no one can take away, but he also emphasizes that the meaning of life is often most fruitfully explored in the potential – the work that needs to be done by the individual. The importance of this "work" can be conveyed to the student at a very early age, through a respect for the student's forms of self-expression. In child-art or writing, we encourage what Frankl calls "inner talk". By recognizing this necessity in the student, we demonstrate a consummate respect for the child's person-hood.

Several writers (Langer, 1948; Maslow, 1964; Phenix, 1964) have discussed the phenomenon of inner-speech or inner discourse; but few approach the level of emotional intensity and urgency with which Frankl regards this capability (56-61). For Frankl, intensification of an inner life transpired through an interior dialogue with his martyred wife. His ability to transcend his surroundings and commune with her spiritually led to the clarification of his personal meaning. While this is, once again, a highly dramatic and extreme situation which would not be approached in the classroom, the educator can nonetheless, begin to present forms of self-expession wherein the student can exercise his/her first tentative realization of inner freedom.

It is, after all, in the idea of inner freedom that the work of Frankl and his colleagues makes its most significant impact. Even in a death-camp, Frankl felt that there were choices to be made – if only the choice to suffer well. This notion has radical implications in a field that has operated largely on behavioristic assumptions in the last twenty years. These implications may call for some marked restructuring in the areas of curriculum and teaching as well.

Rollo May (1969) in his book Love and Will notes an observation made by Husserl that the German root words for "meaning" and "intent" are the same (p. 227). This struck me, because the same is true in the Language of Sign. If we as teachers can help our students to intentionally confront and explore meaningful realities, their movement toward inner freedom may synthesize and transform our world of meanings.

FOOTNOTES

1. See, for example, Holt, John. *How Children Fail.* New York: Pitman, 1964; Holt, John. *How Children Learn.* New York: Pitman, 1969; Holt, John. *The Underachieving School.* New York: Pitman, 1969; Kozol, Jonathan. *Death at an Early Age.* Boston: Houghton Mifflin, 1967; Silberman, Charles E. *Crisis in the Classroom.* New York: Random House, 1970; Stacy, Judith, Beraud, Susan and Daniels, Joan. *And Jill Came Tumbling After.* New York: Dell, 1974.

2. See Apple, Michael W., "The Hidden Curriculum and the Nature of Conflict," *Interchange* 2, No. 4 (1971), 27-40.

3. All citations in my text to the work of Victor Frankl are from Frankl. *Man's Search for Meaning: An Introduction to Logotherapy.* New York: Washington Square Press, 1963.

4. For a detailed discussion of anomie, see Durkheim, Emile, "Anomic Suicide" in Parsons, Shils, Naegele and Pitts (Eds.). *Theories of Society: Volume II*/New York: The Free Press, 1961.

REFERENCES

Bruner, Jerome S. *Toward a Theory of Instruction.* Cambridge, Mass.: Harvard University Press, 1966.

Camus, Albert. *The Myth of Sisyphus.* New York: Alfred H. Knopf, 1955.

Dewey, John. *Experience and Nature.* LaSalle, Illinois, Open Court, 1925, reprint ed., 1971.

Farber, Leslie. *The Ways of the Will.* New York: Basic Books, 1965.

Frankl, Viktor E. " Logotherapy and the challenge of suffering." Paper presented before the American Conference on Existential Psychotherapy. New York, 1960.

Frankl, Victor E. *Man's Search for Meaning: An Introduction to Logotherapy.* New York: Washington Square Press, 1959, 1963.

Frankl, Viktor, E. (Ed.) *Psychotherapy and Existentialism: Selected Papers on Logotherapy.* New York: Washington Square Press, 1967.

Frankl, Viktor E. "Self-transcendence as a human phenomenon." *Journal of Humanistic Psychology,* 1966, 97-106.

Freire, Paolo. *Pedagogy of the Oppressed.* New York: Herder and Herder, 1970.

Greene, Maxine, *Teacher as Stranger.* Belmont, California: Wadsworth Publishing Company, 1973.

Grumet, Madeline, R. "Songs and situations: The figure/ground relation in a case study of currere." In Willis, George (Ed.) *Qualitative Evaluation.* Berkeley: McCutchan, 1978, 176-315.

Huebner, D. "Curricular language and classroom meanings." In Pinar, William (Ed.) *Curriculum Theorizing: The Reconceptualists.* Berkeley: McCutchan, 1975, 217-236.

Langer, Suzanne K. *Philosophy in a New Key.* Cambridge, Massachusetts. Harvard University Press, 1942.

Lash, Joseph. *Helen and Teacher.* New York: Delacorte Press/Seymour Lawrence, 1980.

Maslow, Abraham H. *Religions, Values and Peak Experiences.* Columbus: Ohio State Unviersity Press, 1964.

May, Rollo. *Love and Will.* New York: Dell Publishing Company, 1969.

Meath-Lang, Bonnie. *Deaf Students' Perceptions of their English Language Learning: Rationale for an Experience-Based Curriculum Model.* Unpublished doctoral dissertation. University of Rochester, 1980.

Phenix, Philip. *Realms of Meaning.* New York: McGraw-Hill, 1964.

Phenix, Philip. "Transcendence and the curriculum." In Pinar, William (Ed.). *Curriculum Theorizing: The Reconceptualists.* Berkeley: McCutchan, 1975, 323-337.

Pinar, William F. "Currere: A case Study." In Willis, George (Ed.). *Qualitative Evaluation.* Berkeley: McCutchan, 1978, 318-324.

Pinar, William (Ed.). *Curriculum Theorizing: The Reconceptualists.* Berkeley: McCutchan, 1975.

Romey, Bill. *Consciousness and Creativity.* Canton: Ash Lad Press, 1975.

Airlie, 1981

Chestnuts lie like cannonballs against stone
Fences reminding us of history.
Granite outcroppings are lizards alone
In the sun: remains of past mystery.
Two sides of being fight within the soul:
The immanence of love relating all,
Like brown water in the black cow's sinkhose,
And perfection's whip, making big seem small.
We do love God, no lonely megalith,
Inside us and inside our book and pen.
While nature dies, the husk as well as pith,
Eternal thoughts will die and life again.
Brown thrasher, red sumac, and orange oak
Recall our culture's catastrophic joke.

"Lightfoot" Harry Lee rode Warrenton's pike,
Struck his tents and secured his liberty.
He was awakened from his sleep by mike
At lodge of the new moose fraternity.
Sadly, Harry brewed his sassafras tea
So as to open up his ducts and glands.
Banked his fire against divided highway
Sign and a raft of Budweiser beer cans.
Warrenton was invaded by monarch
Butterflies, Mercedes, and tennis slips.
Harry grabbed his cup and stuffed it in its zart,
Surveyed the ranches and the splits, took sips
Of tea, and then rode on. He could not cope.
His hill of faith was 'dozed down to a slope.

The poplar sports and flabby whips of weeds,
Pink clover, honeysuckle, and Queen Anne's lace
Now edge the road. The fields where planted seed
Once yielded bales of hay are a disgrace.
The clouds in the yellow nineteen-thirty's grain
Stain the horizon. The foot hills' shard lies
Stuffed with Scotch pine, green grass, and the past's slain.
For nature, accidents are alibis.
For man the cost of time is crystalled sap
Oozing to needled floor, pond ripples that reverse
And flow under arched stone bridge, there lap
Against the rocks, and flow back, none the worse
For higher law. The early winter blast
teaches commonalty to respect the past.

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Metaphor and Meaning in the Curriculum:
On Opening Windows on the Not Yet Seen*

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In a vigorous and enlightening treatise, The Illusion of Technique, William Barrett, a contemporary American philosopher, shows among other things, how in the Western world today, poet and technician confront each other as antithetical figures and argues that the thought of many philosophers, though that of the later Heidegger in particular, revolves around this confrontation. What is the difference between poet and technician? It is not simply that the poet seeks to give resonance to life's primal meaning, and that the technician seeks to control in measured and quantified ways how that life is lived, even to the experience of poetry itself. It is the poet's concern with the moral will and the technician's with the will to power that is the crux of the dissonance.

It is with the 'moral will' of Education that this paper is engaged; with its 'poetry'; with how Education, in particular, the curriculum, roots its meaning in our moral awareness in our beliefs about what ought to be taught; with how human beings in pursuit of a moral characterisation for an enterprise devoted to human betterment, fashion a form of words to give the endeavour meaning. It will be argued, urged and shown that it is to the metaphor that we must attend if we are to know with what Education engages itself. In particular, with what Black (1962) terms 'strong metaphors'. Metaphors, that is, which are powerfully emphatic and richly resonant and which by being so generate insights about how things are and could be in reality (1978).

An example of such a metaphor and one which will serve to set the scene, one well within common experience if not understanding, opens the Gospel According to St. John in the Authorised version of the Bible:

'In the beginning was the word. And the word was with God. And the word was God'

And it is with words that one must do battle at least initially, if the function of the metaphor is to be understood. Later the fruits of victory, plundering the rich cargo of assumptions which metaphors smuggle into seemingly innocently descriptive discourse.

What is a metaphor? A simile with like removed? An implicit analogy? A semantic transformation? The tip of a submerged model (Black op cit)? The dreamwork of language (Davidson, 1979)? Ways for seeing the world, or rather, the form in which these ways are grounded? Are fables, parables, allegories and myths metaphors?

This prime question is not easy to answer especially when so many want either to claim the metaphor for their own, or so widely generalise its meaning as to leave it floundering, a linguistic fish out of water. Every theoretical calculation becomes metaphorical; 'it may depict reality but cannot mirror it' claims Zimon in 'Reliable Knowledge' (1978).

The problem is the wish (and the need) writers have for saying something special or spectacular or for saying something in the only way writers (or talkers) possess. The first is frequently a conscious embellishment of style, a literary device. The second has little or nothing to do with literary devices through which to secure an effect, though it may be a literary delight. Rather it is a means by which to express a significant truth, based on not yet conscious assumptions, to bring into being a new awareness, to restructure the framing of a mystery, point-up the qualities of an emerging meaning or to signpost an unknown but poten-

tially knowable domain of enquiry (or to breathe new life into an old area of speculation). The metaphors of a Vico and a Freud exemplify this second form of the metaphor.

Distinguishing in practice the two forms of metaphor is another matter. Moreover, a metaphor that begins life as a literary device may 'go critical' with explosive implications without any advanced warning. Contrariwise, a metaphor that begins life with implications for some new awareness, may become sterile, frozen in time. Some metaphors, especially those which serve to guide social and moral policies and aspirations possess a finite 'half-life' and remain in 'good currency' only so long as they serve to represent what is felt to be desired (Schon, 1971). This would appear to be the case also in Education as may become evident later.

Black (op cit) calls 'live' metaphors those which are pregnant with meaning and not mere literary devices, 'emphatic metaphors'. These are metaphors which are intended to be dwelt upon for the sake of their unstated implications. 'Their producers', says Black, 'need the receiver's cooperation in perceiving what lies behind the words used.' Where emphatic metaphors support a high degree of implicative elaboration, Black refers to them as resonant.

This and much more is characteristic of the metaphor which is live with paralogical potency. No literal translation satisfies. It refuses to be particularised. It supports a high degree of semantic stress.

Metaphors cannot be accounted as true or false, right or wrong in any general sense nor are they amenable to verification. The 'live' metaphor not only enjoys semantic lawlessness, it also enjoys a glorious willfulness, at least when it is most alive.

Educational metaphors no less than metaphors of life and death, love and hate, inherit this tradition though more quietly, more soberly as fits Education's role but not less potently for the vibrancy of our awareness of the nature of human betterment, of what it is we strive to realise through the process of education; in particular in that central of all educational engagements, the curriculum.

All emphatic metaphors, curriculum ones no less, focus on the features of a primary subject, commending or condemning them, asserting or denying in some degree their value. The primary subject of curriculum metaphors may be described as:

> Child-centred
> Teacher-centred, and
> Knowlege-centred.

However, there are larger, more comprehensive educational metaphors within which particular metaphorical focuses may be located. Education as gardening or horticulture, for example, where it is the job of the teacher to nurture growth, provide the right environment, tend with water, warmth and light the young plant giving to its soil the right nutriments. It is the role of the child, passively to flourish, to develop sturdily, to flower and so complete its life-cycle. The gardener's knowledge is critical in this biologically naive metaphor on which many pioneers of early childhood education drew to sustain their beliefs that the early education of the child was for the betterment of all children and of Society. As Cheverst (1971) claims 'The metaphor tends to disguise an ideology in which children are caught up in large scale processes of maturation and ripening. It has the danger that a child's 'growing points' will be taken to be those pivotal moments at which he is deemed capable of developing into the teacher's or the State's idea of a perfect man.'

Dewey (1916) employed a more sophisticated biological metaphor in which to ground his arguments about what education should aim to do. Such terms as 'organic' 'integration' and 'functional unity' are used by Dewey to give his educational beliefs iconic signification.

Nutritional metaphors, not surprisingly in a nurturing enterprise, are also common, expressed in terms of nourishing the child, providing the right intellectual diet, diagnosing deficiencies and ensuring a balanced intake of social, intellectual and emotional fare.

With the older child come architectural and cartographic metaphors focusing on the role of knowledge: 'structure', 'arenas of study', 'depth and breadth', for example.

Philosophies of education, each have their dominant metaphors:

A Typology of Educational Metaphors

Category	Indicators	Epistemological Basis
Child-centered.	growth, harmony, unfolding, readiness, discovery, assimilation, nourishment	Insight. (Plato, Augustine) Naturalism. (Rousseau)
Teacher-centred.	guiding, shaping, moulding, directing, leading, imparting, steering giving, fostering.	Empiricism. (Locke, Herbart.)
Knowledge-centred.	store, foundation, stock, acquisition, structure, cells, bricks, map, jigsaw.	Rationalism. (Descartes) Pragmatism. (Wm. James, Dewey)

It is in the larger arena of the educational metaphor that it is possible to locate those metaphors focusing on the features of child, teacher and knowledge (or worthwhile experience) which in interaction constitute the enacted curriculum (Westbury 1971).

Child-centred metaphors differ radically depending upon whether the notion of education is derived from 'educere' or 'educare', on 'leading-out' rather than 'stamping-in'. Rousseau's (1911) Emile contains, as you would expect, an excellent example of the former:—

'Nature would have them children before they are men. If we try to invert this order we shall produce a forced fruit, immature and flavourless......Childhood has its own ways of thinking and feeling; nothing is more foolish than to try and substitute our ways.'

Teacher-centred metaphors focus on the functional aspect of the teacher's role; on teacher input aimed to 'mould' or 'shape' the child's mind and behaviour, to 'guide' or 'direct' the child's attention and 'awaken' his interests or to act, as Ezra Pound (1977) has it, in a 'sheepherding' way.

Finally, knowledge-centred metaphors tend to be based either on knowledge in terms of coherence and instrumentality or knowledge in terms of structure. The pragmatists' 'cash value' view of learning or the neo-Platonic view of learning as the initiation into public modes of thinking, for example.

It is with these basic units of curricular metaphors focusing in turn on the child, the teacher and on knowledge, with their occurrence and employment in a certain kind of educational literature and with their use and valuation by teachers that I now turn. In fact, to two empirical enquiries; the first a textual enquiry searching out the curricular metaphor as it shifts and turns, postures and pleads to give credence and meaning to educational ideas and ideals in a sample of official literature. Publications, in fact, of the central government spanning almost seventy years. The second enquiry is a study of the valuation by a sample of teachers of commonly employed curricular metaphors.

In 1905, three years after an Act of Parliament established a fully national system of education in England and Wales, the Board of Education published a handbook, Suggestions for the Considerations of Teachers and Others Concerned in the Work of the Public Elementary School. This is the first of the four texts to be studied for its metaphoric content. The analysis sought to assess the direction of the metaphor, whether it was favourable or not; the intensity of the metaphor, its strength and emphatic quality and its function, whether this was descriptive, discursive or rhetorical.

The other texts were the 1931 Hadow Report on Primary Education, the 1944 Handbook of Suggestions for Teachers and Children and their Primary Schools, the 1968 Plowden Report.

> Each text relies on a dominant or root metaphor:
> 'Childhood' asserts the 1905 Handbook of Suggestions for Teachers, 'is the period when human nature is most plastic, when good influence is most fruitful, and when teaching, if well bestowed, is most sure of a permanent result.'

Here we have Locke's 'tabula rasa', the virgin slate ready to be written upon, the clay waiting the potter's moulding fingers. It is thus not surprising to find on the frontispiece of the 1905 Suggestions the simplest of metaphors:—

> 'The most important thing that is taught is the teacher himself.'
> The root metaphor of the 1931 text shows a shift of emphasis:
> '......the curriculum is to be thought of in terms of activity and experience rather than of knowledge to be acquired and facts to be stored.'

No pump and bucket metaphor of learning here. Learning is seen as an active process with the child's experience as much as established knowledge a fit object of attention. However, the teacher's role is still dominant though he is paradoxically exhorted to direct without interfering and to drill the children securely in the 'foundations of subjects'. It is the positive imprint of the teacher on the passive child that is desired.

By 1944 the belief that self-motivation was the key to learning in childhood was gaining currency as was the idea of stages in the development of the child.

'The talents and abilities we possess' says the 1944 Handbook of Suggestions, 'make their appearance in their own time and in their own order......', and it goes on to cap this general idea with a biblical quotation which becomes the root metaphor for the Handbook's view of the nature of teaching:

' "First the blade, and then the ear; then the full corn shall appear". It is for the teacher to know the times and the seasons, and to make effective use of them'.

As Cherverst (op. cit.) points out, 'The teacher is seen as a sort of 'general practitioner' whose task is to 'steer' children into their 'full heritage', while preserving their freshness and spontaneity.'

Child-centred as the 1944 Handbook is, it falls considerably short of the almost total child-centredness of the Plowden Report of 1968. Here children are characterised as 'agents of their own learning', as 'natural explorers' with 'boundless curiosity' and 'self-absorption'. The child-centred metaphors of the Plowden report are commanding:

'At the heart of the educational process lies the child. No advances in policy, no acquisitions of equipment have their desired effect unless they are in harmony with the nature of the child, unless they are fundamentally acceptable to him.'

A quantitative content analysis of these important national pronouncements on primary education reveals an interesting trend in the use of curricular metaphors. With, as Table 1 indicates, some 55 per cent of the metaphors in the 1905 Handbook being favourable, teacher-centred metaphors, 30 per cent favourable knolwedge-centred, and 5 per cent child-centred. The remaining 10 per cent were unfavourable, child-centred metphors.

In contrast 32 per cent of those in the 1931 Hadow Report were favourable child-centred metaphors, 39 per cent favourable knowledge-centred (though there were also 14 per cent unfavourable knowledge-centred metaphors) and a mere 11 per cent favourable teacher centred metaphors.

In some respects the 1931 Report was a metaphoric pivot. Teachers still held the line, as did knowledge with the child moving centre stage. By 1968 the child was centre stage with 54 per cent of the metaphors in the Plowden Report child-centred and favourable; a mere 3.5 per cent were favourable knowledge-centred metaphors and 7 per cent were favourable teacher-centred metaphors. No unfavourable metaphor was child-centred. The 34 per cent which were, were shared equally between knowledge and teacher-centred metaphors.

Table 1
Trends in the Use of Types of Metaphor

		1905	1931	1944	1968
Child-Centred	Fav.	5.0%	32.0%	51.0%	54.0%
	Unfav.	10.0%	3.5%	0.0%	0.0%
Knowledge-Centred	Fav.	30.0%	39.0%	3.5%	3.5%
	Unfav.	0.0%	14.0%	2.8%	17.5%
Teacher-Centred	Fav.	55.0%	11.5%	17.5%	7.0%
	Unfav.	0.0%	0.0%	0.0%	17.5%

When certain of the secondary aspects of the metaphors are examined; the extent for example to which they are discursive and have an explanatory, logical intent as opposed to a rhetorical and persuasive intent. The marked shift from teacher-centred metaphors in 1905 to child-centred metaphors in 1968 is matched

by a comparable shift from discursive to rhetorical metaphors. Sixty-five per cent of the metaphors in 1905 were discursive (35 per cent rhetorical). Some sixty years later only 17 per cent were discursive and 83 per cent rhetorical.

Clearly, the writers of the Plowden Report were persuaded of the virtues of child-centredness in the curriculum and intent on strongly advocating 'progressive' education. Equally clearly they were not able to say as much about the 'how' as the 'ought' of the child-centred curriculum in practice. This was all, or nearly all, to be discovered by experience.

That this was the case should not be at all surprising. It is the role of some metaphors to 'open windows on the not yet seen' and to commend practices not yet experienced with all the moral and emotional force that the metaphor can embrace. Not only do metaphors '......stretch language beyond its elastic limits, (Ortony, 1978) they also stretch the idea of what it is humanly possible to do and what there is to be gained in doing it.

Let me turn now from the language of the official text and from how it gives force and currency to its moral assertions to the responses of a sample of 136 primary school teachers to child, teacher and knowledge-centred metaphors derived from prior and carefully structured discussions with teachers about their curricular aims and purposes. The discussions directed attention initially to the First Stages in Education, then to Progressing Toward Secondary Education and finally to the teacher' Ultimate Aims. From the discussions, naturally occurring metaphors were culled and shaped to give for each phase in the education of the primary school child paired child-centred, knowledge-centred and teacher-centred metaphors; paired to compensate for idiosyncratic responses to individual metaphors. Examples of the metaphors are:—

Child-centred — Helping the child to live in harmony with its essential nature. Giving the child a deep sense of exploration so that he will always want to find out things for himself.
Knowledge-centred — Instilling a sense of critical enquiry, so that the child has a grasp of the structure of knowledge. Imparting knowledge to the child, in such a way that the pieces of information take on the character of an organic whole.
Teacher-centred — Shaping the child into a responsible citizen and mature adult. Leading the child by stages through which mankind has developed, toward maturity and adulthood.

These six metaphors became items in an Ultimate Aims scale. Two further sets of six metaphors became items in a First Stages and Progressing Toward Secondary Education scale which the sample of 136 teachers were asked to rate for the degree to which they agreed (or disagreed) with each of the items.

Strongest agreement (i.e. with mean ratings over 4.5) was with three of the child-centred metaphors concerned with 'exploration', 'discovery' and 'growth' and with one teacher-centred metaphor, 'laying a firm foundation for the child's future development'. This last echoing the concern with the 'basics' of primary education. Of the three metaphors which teachers most rejected (i.e. mean ratings below 3.0) two were teacher-centred — 'Moulding the child's personality to fit......the ethos of the school' and '......bridling the child's impulsive and undisciplined nature' — one was knowledge-centred — 'Filling the child's mind with knowledge'; all metaphors which cast the child in a passive role.

In terms of overall mean rating, child-centred metaphors are substantially preferred to teacher and knowledge-centred metphors over which the sample of teachers show a degree of indifference (the overall, average means being child-centred 4.49, teacher-centred 3.57 and knowledge-centred 3.38).

Such collapsed data conceal the fact that younger, less experienced teachers, teachers of younger children and teachers working in open-plan classrooms endorse child-centred metaphors to a greater extent than

their counterparts. Contrariwise, older, more experienced teachers place greater emphasis on teacher-centred metaphors, with knowledge-centred metaphors receiving their strongest endorsement, though not an especially marked emphasis, by teachers of older children.

The picture conveyed by this limited empirical study suggests that the principles of child-centred education, advocated by Rousseau, Froebel, Pestalozzi, Dewey and Piaget are strongly endorsed, or were at the time of the study, by the sample of teachers responding. This general view is supported by other data based on direct experience of a wide range of primary schools by a former Chief Inspector of Schools (Blackie, 1969).

As interesting as the univariate and bivariate data arising from this study is that derived from a factor analysis of the data aimed at illuminating the underlying parameters of the teachers' rating of the metaphors. This analysis gave rise to two orthogonal dimensions: Knowledge, its nature and process, the means by which the child acquires knowledge.

At one pole of the knowledge dimension was:
F1. Knowledge as subject matter or given content, with loadings on knowledge-centred metaphors: metaphors which characterise knowledge as something made of discrete units or bricks which can 'fill' the child's mind.
and at the other:
F2. Knowledge as organic and unified with loadings on knowledge-centred metaphors suggesting the absence of barriers, of a map built on insight and cells making for an organic structure.

At one pole of the process dimension was:
F3. Process as Other Directed
as being a process of knowledge acquisition dependent on others with loadings on metaphors of guidance and direction.
At the other:
F4. Process as Inner Directed
as a process of knowledge acquisition dependent on the self with loadings on metaphors of exploration, discovery and enquiry.

No doubt this analysis oversimplifies the underlying parameters of the teachers ratings. Even so it does suggest that there may be root metaphors from which metaphoric variants can arise and to which people may return to refresh their vision of the educationally possible and the educationally desireable, as well as renew the vitality of their commitment.

The limited analyses which I have described are but preliminary. There are doubtlessly relationships between tough-mindedness and tender-mindedness and a person's subscription to and valuation of particular curricular metaphors just as there may be between these and a conservative or radical attitude to social affairs. Whatever the case, our understanding of the role of the metaphor in the curricular enterprise has hardly begun. That today's metaphors are different from yesterday's should not surpirse us nor the fact that yesterday's metaphors will return at some time to beckon us toward an old paradise.

As much as educational metaphors with their roots in a moral imperative will commit us to particular educational practices, so educationists will search for metaphors to give meaning to their visions; to awaken in us a resonance in reality by which to open for us windows on the not yet seen.

Remove the metaphor from the educational scene, as some would wish, and from the discourse of educationists, and you remove not only the ambience, the flavour of the meaning to be accorded the educational

enterprise, but also the very essence of the meaning itself; its normative properties, the heart of its significacation. But the normative and right role of the metaphor works not only to assert what ought to be but also as Hawkes (1972) suggests, to confirm what is:

> '......metaphor', he says, 'in all societies will have a 'normative' and 'reinforcing' aspect as well as an exploratory one. It will be as much concerned with what we know as it is with what we don't know; it will retrench and corroborate as much as it will expand our vision. Moreover, the notion of the metaphor as some sort of 'deviation' from the norm can hardly be allowed to stand in its simple form. In many ways, what the metaphor actually achieves will not be deviation, but confirmation. We might even conclude that if metaphors seem sometimes to shake the bars of our cage, it is often only to demonstrate how firmly, how comfortably, these are fixed.'

Be that as it may, and educational practices for good if not for logical reasons, may be unduly conservative, it is not before time in a literal age, that the role of the metaphor in educational discourse and as an agent of educational practices should be better appreciated than it is. After all, education as a moral enterprise can only be sustained by a vision of what ought and what might be. Without the metaphor, no such vision is possible, nor, moreover, can we know how things are.

* My debt to Bill Cheverst, a former graduate student of mine is considerable. His death in a mountaineering accident was a loss to educational scholarship.

REFERENCES

Barrett, W. (1979) *The Illusion of Technique*. London. William Kimber.

Black, M. (1962) *Models and Metaphors*. New York. Cornell University Press.

Black, M. (1978) "More about Metaphor" in Ortony, A. *Metaphor and Thought*. London. Cambridge University Press

Blackie, J. (1969) The character and aims of British primary education in C.R.E.D.O., *Primary Education in Britain Today*, Paris, O.E.C.D.

Board of Education (1905) *Suggestions for the Consideration of Teachers and Others concerned in the work of the Public Elementary School*. London, H.M.S.O.

Board of Education (1931) *The Primary School: the Hadow Report*. London, H.M.S.O.

Board of Education (1944) *Handbook of Suggestions*. London, H.M.S.O.

Cheverst, W.V., (1971) *An Investigation into Curricular Metaphor; with Special Reference to the Primary School*. unpublished M.Ed dissertation, University of Birmingham, England.

Davidson, D. (1979) "What Metaphors Mean" in Sacks, S. (Ed) *On Metaphor*. Chicago, University of Chicago Press.

Department of Education and Science (1968) *Children and their Primary Schools: The Plowden Report*. London, H.M.S.O.

Dewey, J. (1916) *Democracy and Education*. London. Macmillan.

Hawkes, T. (1972) *Metaphor*. London. Methuen.

Ortony, A. et al (1978) "Metaphor: Theoretical and Empirical Research." *Psychological Bulletin*. 85, 5, 919-943.

Pound, E. (1977) *Selected Poems*. London. Faber and Faber.

Rousseau, J.J. (1911) *Emile*. London. J.M. Dent.

Schon, D. (1971) *Beyond the Stable State*. London, Temple Smith.

Westbury, I. (1971) "Curriculum: a discipline in search of its problems," and Steiner, W. *School Review*. 243-267.

Ziman, J.M. (1978) *Reliable Knowledge*. London, Cambridge University Press.

Indwellings: Reconceptualizing Pan

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with notes from the journal of
Carolyn Benne

I Live My Life

I live my life in growing orbits,
which move out over the things of the world,
Perhaps I can never achieve the last,
but that will be my attempt.

I am circling around God, around the ancient tower,
and I have been circling for a thousand years.
And I still don't know if I am a falcon.
or a storm, or a great song.

Rainer Maria Rilke/1899
from Book for Hours of Prayer
translated by Robert Bly (I)

INTRODUCTION

The need for philosophy arises when unifying power has disappeared from the life of man, when contradictions have lost their living interrelation and interdependence and assume an independent form" (2). This paper continues my quest for philosophies and powers that unite us to each other and to the Earth, a search for an ethic to live, learn, and teach by in this complicated life.

Methods of currerre (3) and ethnography are used to disclose and describe the interactive lived experience. Hopefully the hermeneutic form opens the way for further interpretation by readers and myself.

The paper describes a "voyage out" (4) to Alaska during the summer of 1980 when two graduate students, Carolyn Benne, Fred Edwards, and myself once again "ran the course" to attempt to reconceptualize our person/planet ties.

I
PRELUDE

Sadness presses heavily, an ill-defined, overwhelming weight bearing down against my mind, my heart, my pen. Inertia overwhelms; now I see and feel the press in "oppression" and "depression". What was to have been a joyous unfolding, a celebration of yet another journey into Earth/Self is now a painful probe. To get at the heart of things, I must cut through the protective shield that keeps life tolerable, to the core. Let it out. The path toward growth and understanding is painful; the alternative is isolation from the world——and regression, a diminishing of human potential (5). The choice is clear. Journal at my side and pen in hand, I go back.

CRUISING

June 17

I think in depths and dimensions traveling over the prairies and plains of the midwest. Geometric cropland of Iowa and Nebraska gradually succumb to the grasslands of the sandhills and the sagebrush plains of the Wyoming spaces. Denver. The mountains abruptly rise, stand in bold relief with snow piled high. Soon the Great Valley and the Salt Lake appear. There she is, Flo, bright-eyed with excitement. My bags are heavy as we carry them to her rusting V.W. Steering wheel swinging from side to side, we drive through the disappearing salt marsh (to her home).

<div align="right">C.B. (6)</div>

June 18

<div align="right">Western Flight</div>

Carolyn arrived yesterday and spent the day preparing for our departure while I took care of last minute details at the office. We met Fred at the airport this morning. Our plans presently are for the three of us to travel together for the first ten days or so. After that, Fred will go his way to explore some areas independently, and Carolyn and I will continue on together.

After the "busyness" of preparing to leave, it is good to be with my friends on this Western Flight momentarily suspended in space. The fatigue and tension pour out of me, are replaced by excitement and anticipation. The champagne helps. We joke about the para-hospitality of the steward and stewardesses and wish Terry were here to delight us with her stewardess mime. The tedium, sameness of airline psychology works, it removes us from our present reality: we are out of our element, traveling at hundreds of miles per hour in this metal box thousands of feet above the surface of the earth. My senses dulled, I am conned into thinking that the "pleasure" of food and drink are all that matter.

As we fly near Mt. St. Helens, we all rush to windows and stare in awe at the gaping, fuming chasm, the surrounding landscape washed chalky beige with spewn ash. The words of the Navajo return, The Earth is being strained beyond its means. The words were Herb Blatchford's, one of the tribal persons invited to participate in a Circle of International and Traditional Elders, called in order that shaman of the Earth might inform world leaders. Herb Blatchford spoke quietly. The vibrant quality of his voice drew our attention out and tied it to his words...

"We should look to primitive life for a guide to nature, for the accumulated knowledge of these participants who understand their Mother, the Earth. Present persons too studious in certain aspects, have lost touch with the Maternal Earth, upon which life depends. They are more authority/power conscious than concerned with others. Confined to strict patterns of behavior, they have lost a world view. Locked in the mentality of politics, they seek the greatest good for the greatest, but they should not move until the least is cared for..Unlike tribal people, they have lost the greater perspective; their attention is drawn away from the total circle to spots on the circle, hot-spots, power spots. They have no knowledge of cyclic obedience to the Earth or of the capacity of tribal people to possess their own autonomy while respecting others...We had to inform the international community that grave violence is being done to the Earth...Industry uses up not only their own resources but others. It has no right to do this. Sacred places, where spiritual powers converge, are being desecrated...The Earth is being strained beyond its means..." (7).

The scars on the Planet below are probably related to something I buy. What ultimate impact does my coming have upon the land resources and planet? What are the costs?

As I begin this journey, my mind is like a ball of tangled string. This is my own private search for understanding my independence, my loving.

<div align="right">C.B.</div>

THE ISLAND

June 19, 1980   St. Paul, The Pribilofs

Despite the long hours of daylight, there isn't enough time to experience this beauty. We fall into bed late each night only when our legs refuse to carry us one step further.

Strong winds prevented our getting here yesterday. After a terrifying landing, we waited out the gale-force winds at Cold Bay, an old military base, with a runway that, unlike the others in the Aleutian chain, can accomodate aircraft landings in adverse conditions. As we emerged from the plane we were literally picked up by the winds and slammed into the Quonset hut terminal that shuddered in the wake of the fierce winds. We spent the next five hours watching other wayfarers blown in and out of the terminal: oceanographic researchers headed for Dutch Harbor, employees of a fish processing vessel, other travelers headed for St. Paul. We observed "what the wind has blown in", interview terminal personnel, and try to keep warm.

Carolyn speaks seriously to the son and daughter of government employees who live here; they mirror the values of their parents. They have a frontier, conquer the wilderness attitude similar to the small western boomtown "mentality" in the "lower 48": fish, hunt, weather the storm, organize the schools and community, kill that last bear. Carolyn listens, showing neither approval nor disapproval, her blue eyes like mirrors.

Our flight cancelled, we prepare to return to Anchorage. No x-ray machines here. We must reveal the contents of our bags, withstand the inspection of the detector. The son stands proudly viewing the authority of his father, the "security" inspector.

The three of us occupy separate seats, our foreheads pressed to the windows, the better to sense the earth processes revealed so vividly in a kaleidoscope of topography. Snowfalls, glaciers, dentdritic drainage, tidal flats muskes, volcanic cones. Living geology.

> Native man, oblivious of the sight outside the window, what pictures are in your mind? Do you see your people? Yearn for their sound, their touch? You smoke. Where have you been?
>
> C.B.

Back in Anchorage, we decide to sleep the night in the airport since we depart once more for St. Paul early next morning. Judging from the atmosphere of the airport, such "camping in" is permissible. We find benches, throw out our bags and turn in. I sleep the night peacefully, only vaguely aware of glaring lights, flight announcements and occasional rushes of departures and arrivals.

The flight here this morning was smooth, uneventful. The second attempt was a charm, more accurately, a miracle. We dropped out of the mist and separated by seconds from the cold Bering Sea, somehow hit the lava cinder runway. Here at last!

Since my last journey here, St. Paul has dwelled within me, the intensity and clarity of the experience beyond comprehension but not beyond the understandings of my heart. I love this Island and all that resides here. The Aleuts, the crying seals, the pelagic birds, the mists rolling over tundra. The Island is a tiny microcosm of interrelatedness shaped by the past constantly recreating its authenticity.

With limited experience and research, we come here with fresh and open minds to learn from the people and their environment. There are no hypotheses to null, no precise data to collect or categories to shape our perceptions. We are open to the meaning here and the formaion of a more integrated view. A joyous reflective venture. What more can a human ask than to probe questions particularly significant to the living

of one's life? What greater satisfaction can a human hope to achieve than this "voyage out"? (8)

June 21

The Solstice! My original plans were to spend the entire day and night in celebration. But now I'm too weary. For two days we have continuously hiked the beaches and wind-swept cliffs. Our warm clothing insulates us from the cold and rain. Likewise the hotel where we stay and the bus we ride to the "far reaches" of the Island insulate us from the tribal life here. Fred in the informal atmostphere of the pub makes more contacts than Carolyn or I. It is partly a matter of choice. The richness of the natural environment is compelling. We try hard to experience it all.

Since my last visit four years ago, St. Paul has grown considerably. A multi-colored housing development, contrasting sharply with the white frame government houses on this side, has sprung up at the edge of the village near the cemeteries. There are still two, one for the Russian Orthodox and one for others, including bodies that wash ashore. The white picket fence and wooden markers are the same, weathered. The church, with its steeple and contrasting yellow color still dominates the village scene. But the beautifully hand-sewn baidarka has been replaced by several machine-sewn versions. Woody, an anglo woman, manages the cafeteria efficiently satisfying the tastes of the international tourist clientele. Although the island is only 45 miles in circumference with limited roads, most families own automobiles, motorcycles, and snowmobiles. The bright blue hotel is being remodeled to accomodate more tourists. St. Paul is growing.

But where is the art, the intricate designs that persist on some of the Islands on the chain? Does not the beauty of this place inspire creation?? Or is it too painful to bring that beauty to expression? To remember? Perhaps here one can only take in, absorb.

The aboriginal culture of the Aleuts no longer exists, I am told.

> "The Czarist Russian conquest of the proud, independent sea hunters was so devastatingly thorough," wrote linguist Richard Geoghegan, "that tribal traditions, even tribal memories, were almost obliterated. The slaughter of the majority of an adult generation was sufficient to destroy the continuity of tribal knowledge which was dependent upon oral transmission" (9).

But does not place as much as person shape culture? Perhaps the culture of people conceived, born, raised, loving, dying on this island will arise again out of the devastation of genocide displacement, despair wrought by Russians and Americans alike.

> Out of order and disorder
>   perpetually clashing and reclashing
> come the world (10).

Perhaps self-determination and the freedom to recreate will be forces that solidify the strands that tie these people to this volcanic heap, to the sea mammals and pelagic birds that converge on this dot in the Berin Sea where storms are born. Hopefully the first sketches of the "new" culture will be manifested in art form.

I watch Carolyn on the long hikes we take on beach and seacliff. There is a transcendent quality about her, an aura, I cannot, will not penetrate. We walk separately. She stands for hours on the beach staring into the crashing waves.

In the days on the Pribilofs, millenia have passed. I have a new perspective of time, place, and planet... I hope to be wiser when I return. I am looking for humor and wisdom, color and design, music and love...

C.B.

We spend the days hiking the beaches and seacliffs. The seabirds are nesting by the thousands; the seals are coming ashore. Their cries build each day, carried on the foggy air that engulfs us. We stand watching the drama unfold, a cosmo of reproduction.

The huge beach masters have set up their territories in strategic spots and fight viciously and agressively for females to join their harems. One sits offshore on a black lava boulder, nursing a deep gash in his side. They sometimes kill each other. These dominant males are the first to arrive on the Island, sometime in April. They will find no peace here until September when they will ease back into the oblivion of the icy waters to rest and build strength once more. Until that time, they will neither eat nor sleep soundly. Victims of the earth cycle that feeds their aggression, they must obey. Attack, endure, attack. Perched on black lava pedestals that blend perfectly with their sleek coats, they themselves look rock-like. They have no choice. They must be on top. Dominance is a burden they cannot reject.

In the few days we have watched this scene, the harems have been steadily building. One can see seals riding the crest of waves, diving silently into the troughs. They are females coming to the shore where they themselves were born; young bachelor males, psychologically castrated and cast out from the group by the beach masters, trying to come ashore to create their place in this hierarchy.

Imbedded in the black lava boulders are pods of pups, clustered together for security while their mothers go to sea for several days at a time to feed. When they return, there is immediate recognition and the young gorge on the rich milk only to be abandoned again.

There are females birthing and newly born pups with red afterbirth clinging. The female who has just pupped ovulates immediately and is aggressively pursued by the beach master. Copulation is intense and long, and sometimes leaves the new pup crushed. Although fertilized, the egg does not implant in the bifurcated uterus; implantation is delayed for several months. Gestation lasts nine months and the following year at almost the identical time and place, a new pup is born, a new union occurs, a new egg is fertilized.

The gulls and arctic foxes are the benefactors of this drama. The adult foxes scurry among boulders as their young play on the hillsides. They eat the remains of afterbirth, dead pups, and dead beach masters. The gulls thrive.

A female ready to give birth, a tenth the size of her master, tries to escape to join another. He blocks her way with body, snarls, and sharp teeth. She persists. Finally, impatient, he sets his sharp teeth into the skin on her back, lifts her off the ground, shakes her and drops her at his side. The little female lies whimpering, helpless. My anthropocentric view vanishes as do the borders that separate me from this sea mammal. She looks up at the beach master with large brown eyes reflecting emotions I can identify: fear, anger, pain.

There is no equlity here. Power makes right. Dominance insures survival. It is the way of the world. What if she were to grow ten times his size? What then? Would she then become the aggressor? Or is it the natural plight of those that birth, nurture to be dominated? Can dominance and nurturance be combined? Suddenly I fell defeated, doubtful of my own survival in this world of control and power. I walk away fearful, subdued.

Nick Stepten, Nicholas the great as Carolyn calls him, an Aleut who conducts tours for Alaska Marketing Tours, becomes our friend. We talk to him about his life and the future of the Aleuts. The tribe has not yet received payment from the Native Claims Settlement Act. He approaches the delay with aloofness. Perhaps. We'll see. The U.S. Government's commitment to agreements with Indians in the past does nothing to nurture trust that the payments will be made. How should the funds be distributed? Nick's reply is emphatic. The funds should be divided equally among Aleuts whether they live on the Island or not. Those on the Island really do not need the payment; they have most everything they need. His sister in Seattle can use the money more than he. His existential attachment to the present is reflected in his objection to management and investment of the funds by the tribal corporation. The people who have worked for the funds should get it now when they are still able to use and enjoy it. What would you do with the money? He smiles. He has always wanted to go salmon fishing on the mainland.

> Nicholas the Great: "We kinda got stuck with Russian names. I don't know what my grandfather's name was. He probably was a number."
>
> C.B.

We have made another good friend, Helen G., Australian, Ageless and tenacious, she is assertive and aggressive. She works for six months as a cook for the sheep shearers, then travels for six months. She has followed this routine for ten years. I ask her if there is any place on Earth she has not been. She says if she thinks hard there might be a couple of places?; most places she has visited twice. When Carolyn asks her what she thinks of people in general, she replies, They are Savages. Unable to accept that answer, Carolyn probes. Helen backs down a bit and says: I'm civilized when I'm with the likes of you but when I'm otherwise, I'm savage too.

> Helen, grizzled old "savage" in your green knit sweater and sagging knobby mottled pants. Oh, "silly negative", you are keenly alert. Nine years on the City Council, you give it up when your travels begin. "Quite civilized? Anyone mooching about? What did you have for dinner?" "Pinching" bread for your morning tea.
>
> C.B.

Helen provides a striking contrast to the other visitors from around the world, mostly photographers who seem to care less about the tribal people and their problems than the birds and seals. But there are others to watch and talk to:

> The wife of the plumber who is renovating the old hotel, plays solitare or watches TV all day. She wants to go out and get drunk tonight, is ready to go home. Curly black dyed hair, lipstick, tight low-cut sweater.
>
> Last night I spoke to the young German professor a member of the "The Greens" a conservation party in Germany. He spoke with disgust of our gas-guzzling station wagons. He is concerned with tiny habitats fed by natural springs where a diversity of plants can be found.
>
> The young Aleut I've seen drive by in the little yellow Chevy pickup with wife and child, drops by the store to buy $17.00 worth of Pampers, Coke, and cigarettes.
>
> C.B.

June 24

We are waiting for the plane to depart St. Paul. Helen is at the front of the bus and, as usual, will be first in line. My hopes that weather would prevent a landing have dissipated with the fog. We leave today.

"Nicholas the Great" was able to secure permission for us to stay in a small for hunters' cabin at Tsammana Point on the north side of the Island last night. He dropped us off four miles from the cabin at the southwest point yesterday afternoon. This morning we hiked seven miles back to the Zapachi Rookery, where we met Nick and the bus, came back to the hotel, showered, packed, and are now waiting departure.

When we left with our packs yesterday, a gentleman tourist questioned our sanity. Why would you want to spend the night in a cabin without water or room service? Our motive was to escape room service and the elitist confines of tourism. Our trek to Tsammana shines through:

TSAMMANA

The fog blows in from the Bering Sea
blanketing the tundra in a cloud of mist.
The solid, salty wind, a wall of air,
muffles the cries of kittiwakes,
the growl of murres.

Foxes slither over the cliffs to capture kittiwakes
or steal the pear-shaped eggs of murres.
They disappear as we approach
into dark, damp dens
where they crunch bird bones
and listen for our fading footsteps.

their musk tells us where they've been.
It blends with the scent of reindeer,
Their signs are everywhere,
shed hair, track, browsed plants,
bleached white skulls and antlers
adorned with velvet moss.

Rafts of auks rise off the sea surface
and light on the cliffs.
Kittiwakes in flocks fly to and fro
from sea cliff to water hole
gathering mud for nests.
They face the wind, stall, land backwards
on the cliff, pushed to nest
by the fierce seawind.

Carolyn sits on the edge of the cliff
facing north.
Mime-faced puffins stare at her
wonderingly.
I walk on by to the cabin.

The cabin sits on the edge of a small pennisula,
its back, to the wind and sea.
It's door faces a small fresh lake.
Volcanic cones, decapitated by clouds, stand guard.
Carolyn joins me.
We sit on the doorstep, eat dinner.
Then go in.

A must smell and a dead bird
splayed on the porch meet us.
Driftwood piled under a shelf to dry
and coal in a bin provide the basics
for a fire that crackles,
drives out the must, brings warmth within.

We light candles.
Icons flicker on the walls.
Generations of fox hunters join us.
We sit around minature tables
covered with red oiled-cloth.
They tell their stories, laugh,
drink strong Russian tea.

The draft set, I crawl into my bag
on the top bunk, fall asleep
to the sound of Carolyn reading,
rosey finches running on the roof,
the wind howling.

In the morning, we wake to the bark of foxes,
replace the firewood,
close the door and head back.

TRANSITION

June 24   Anchorage

The plane from the Pribilofs landed this evening in a rainy Anchorage. We decide rather than going into town we will spend one more night in the airport. We find a carpeted area downstairs where we can place our sleeping bags and hope that the policeman on duty doesn't ask us what time our plane leaves.

Earlier we checked on rented cars and decided that in the morning we will "Rent-a-Wreck", an "Ugly Duckling". The advertisement reads: Rent-a-Wreck cars are for tranportaion, not ego trips. That settled, we now take off our boots, lie on our bags, and settle down to journal writing or reading.

> We're like three beach masters lying here on the airport floor, each with our own space waiting for things to come.
> God, this hideous airport music. I hear Alaska rain beating against the window, a rhythm quite apart from the trash that seems to come from everywhere and nowhere. I wish I could find the switch to turn it off.
> I feel I've been Skinnerized. Four days in airports is like Walden II revisited. The confinement reminds me of a prison.
> The vibrations of this terminal never cease, a facade for the energy coursing through its bowels. A gate, a starting out and returning place. I'm a refugee.
> Lots of women in lovely dresses and high heels teetering by after men carrying heavy bags. Men in business suits. Financial strategies worry me. What are the costs? Lifetimes of making deals and spending money.
> The natives, their culture, like the land, birds and animals are commodities. Your features are mimicked in images for sale to well-intentioned sentimentalists. Empathy - Sympathy. While your people drink liquor in the cities.

C.B.

June 25   **Homer**

We picked up the "wreck" early this morning. The claim is correct. This car is not for ego trips. It is a tiny chartreuse Le Car with a license that reads "UGLY". We somehow pack all of our gear into the back and head south on the Kenai Penninsula.

The drive is beautiful. Lupine flank the road, and snowcapped peaks shine in the distance. Wildlife is plentiful. Dozens of bald eagles feed on the mud-flats of Turnabout Arm. We drive by a cow moose and her calf and stop to watch Dall's sheep on the mountain. Where the Russian River joins the milky blue Kenai, the banks are lined with fishermen.

Although the quarters are cramped, I enjoy the confinement with Fred and Carolyn. We go over our notes and observations, share perceptions. We discuss in length the problems of studying others, the nature of empathy. We discuss the processes of our study, trying to conceptualize our method and motives.

June 26   **Homer**

I am sitting on the deck of the Land's End Restaurant, thinking of my daughter. It is her birthday today and I wish she were here. A pale moon, nearly full, rises over mountains stratified with mist. Good folk music comes to us from the trio playing in the bar. The shoreline below is lined with fishermen.

We washed clothes, shopped and sent home extra clothes today to lighten our loads. I have more trouble than Carolyn detaching myself from the things I "might need". The result is that her pack swings on easily; mine is still cumbersome and heavy.

Then we walked the Homer Spit, watching birds and people. Life is easy here: the climate is mild. Fish and shellfish (clams, shrimp, salmon, halibut, etc) are abundant. Camping is unrestricted on the spit and utilized by employed and unemployed fishermen. Firewood is plentiful. The beach is lined with unique temporary shelters, a combination of colorful plastic and driftwood. Over the entrance to one is a sign, "The Homer Hilton". Members of the counter-culture are here in mass creatively disintegrating the norms of materialistic society. (11) But up on the hillside, condominiums rise and land is being "developed", disrupted.

We go inside to the bar and listen to music till late then walk back down the beach to where we set up our tent. Offshore the breakers crash all night.

Tomorrow the three of us will separate. Carolyn and I will catch the train and ferry to Valdez. Fred will head north to McKinley. I hate to see Fred leave, enjoy his quiet thoughtful conversation. Hopefully we will meet again.

July 1   **Anchorage**

Although Anchorage holds no particular appeal for either of us, we are back again, this time waiting for the train to McKinley stations. All roads seem to lead here and converge on Fourth Street.

During our first night in Anchorage some two weeks ago, the clerk at the hotel warned us to avoid Fourth Street. There are a lot of drunk natives and free-loaders there.

She was right. They were gathered in little pods or lying helplessly on the sidewalk. Next morning on a street corner, a young native woman staggered up to us, put out her hand and asked, "Sisters? Sisters?" in a barely discernible slur. We nodded. She put her arms around us; we responded in turn. And for a brief moment the three of us stood together swaying in the morning light.

Now with a few minutes to spare Carolyn asks me if I want to walk up Fourth. I decline, want to avoid the pain. She goes alone and comes back puzzled by a scene: An elderly man, seemingly a mentor or shaman, sits on a bench consoling and reprimanding the others as they come weeping and staggering to him. It is puzzling? Too late, I am sorry I was not there.

> Anchorage is a hideous place. Tourists shop for jade, ivory, furs on one side of the street.
> On the other side, natives hold each other, destitute and drunk.   C.R.

We had hoped to be in Fairbanks by now, but our only recourse was to come back here. Henceforth we'll plan more carefully.

Our first experience with the Alaska Marine Highway past Columbia Glacier and on to Valdez was extremely enjoyable. We stood on deck for hours watching the spectacle before us: the foggy, blue-grey day, the killer whales cutting the air with black fins; the glacier calving into the bay, harbor and fur seals floating by on blue ice.

When we arrive in Valdez, the giant storage tanks that line the shore seem out of place. This is the end of THE pipeline, the great ecological controversy that came to be.

It is late. We pitch our tent along the road. In the morning, we discover there are no buses out of Valdez. We position ourselves at a junction and prepare to hitch-hike when a large van stops. It is a local bus that has just started services and is headed for Glen Allen where the driver assures us we can catch a bus for Fairbanks.

Wally is the driver. Teddy, his wife, has joined him today on her day off so that they can "be together for a change". Teddy does most of the talking.

They came here a couple of years before pipeline construction began and then worked for Alyeska. They made big money, but expenses were so high it was impossible to save money. Utilities are still so high they can afford little else. As a result, they still live in a trailer.

Teddy is now a bank clerk and has great hopes that Valdez will become a "rich" city with its own industries to support the pipeline people who stayed behind and made Valdez their home. She refers to Alyeska as an entity and gets angry as she remembers when "Alyeska" killed a mother bear and her cubs because the crew watched them too much and "lost time". She seems to see no connection between the pipeline, the killing of the bears, and her never-ending struggle against expenses.

They drop us off at Glen Allen where unable to catch a bus or get a ride to Fairbanks, we hitch a ride to Anchorage with an Alyeska petroleum engineer and his wife. She is quiet while he interprets geology. At one point she expresses concern for the Natives that freeze to death on the streets of Anchorage in the winter. Carolyn speaks to them with interest, but I find it impossible to relate. They are nonetheless accommodating and drop us off at the hostel. We remove our packs from the trunk careful not to crush the dried flower bouquet Mrs. R. has collected.

THE INTERIOR

Carolyn and I have developed patterns of interaction that suit our temperament's and ways of learning. Each morning we set out separately to explore our own questions and pursue our own interests.

We meet back in the long hours of twilight for dinner and share the events of the day. It is a time for

communion. There is a lot of "going back into" and "working through" our pasts.

We trace our origins: hers, from Denmark to the Midwest prairies; mine, from the Italian Alps to the mountains of the West. Family members, like priceless procelain dolls, are traced delicately, tenderly.

We discuss person/planet/professional problems that concern us both. Carolyn repeats what she has often said before: She is not certain how much longer she can continue with this "education business".

We ask questions that need to be asked, confront when necessary. When I try to get sympathy concerning a love that has faded she replies emphatically: Things do not have to last forever, Flo.

There is a strong impulse between us to let be — to accept the other; there is no need to manipulate or change. We listen carefully and take great care not to interrupt the other person's dialogue with herself.

July 2   Mt. McKinley National Park

I am sharing a bench with a fellow traveler/photographer. We have been hiking some of the trails around the Visitor's Center. Later this afternoon Carolyn and I will catch the train for Fairbanks and then continue south through the interior by bus.

We were surprised and delighted to meet Fred when we arrived. He was prepared to leave, somewhat disappointed that since his arrival the weather had been rainy and Denali in clouds. But he decides that the weather is clearing and he will stay one more day with us.

We ride a crowded bus provided by the Park Service and enjoy the contact with others from different parts of the world. My seat mate is an eight year old from California. She informs me that she is Jewish and then asks my faith. I hedge, saying that I have faith but don't belong to a church. But you believe in God don't you? After all, we had to come from somewhere, you know. We couldn't just drop out of the sky! I agree that we couldn't drop out of the sky and divert her attention to the grizzlies along the road.

They are golden in the sun that has just broken through, their size phenomenal. After two weeks of rain, all forms of wildlife come out to enjoy the sun: caribou, moose, sheep, rodents, birds. The air is clear and pure, the vistas uplifting, cleansing, freeing. We keep checking on Denali, "the great one". Slowly the clouds dissipate and she is revealed in all her beauty. Satisfied, Fred heads south.

Beaver Creek, AL

Despite our efforts to get closer to native Alaskans via public land transport, we find ourselves once again closer to well-heeled retired Americans on vacation. We are riding south from Fairbanks to Haines on what appears to be a tour bus. Only five of us are not of this tour, a fire-fighter from Idaho, another "backpacker", a man who seems to be sleeping off a hangover in the rear of the bus, Carolyn and myself.

The bus ride is pacifying for me, the body, mind, emotions are all resting. I alternate sleeping, reading, writing, and watching the changing landscape. The interior country is beautiful. Everywhere there are signs of permafrost: muskeg, lakes and stunted trees in the distance. Ranges of mountains melt into other ranges.

Unlike me, Carolyn suffers through this leg of the journey. She cannot abide the mindless conversation of tourists, the canned monologue of the tour bus driver. If I were not along, she would probably get off the bus and hitch-hike.

Bus driver, who sold you your bill of goods? Don't you question? Don't you wonder? All I wanted was a ride not your interpretation. You innocently/intentionally divert our attention from the issues of survival. No thank you, I don't want your Santa Claus buttons.

Tourists, Middle-aged Americans in your polyester suits, tennis shoes, baseball caps with your bulging bellies and mouths to feed. Don't you see what's dragging behind you? Highways, Burger Kings, Motels...   C.B.

Passing by the most scenic areas, the bus stops occasionally at ugly "rest" stops for picture taking, shopping, or food. Watching the tourists take pictures, I try to imagine the visual images of Alaska they carry home to friends. To ease her pain, I try to humor Carolyn into posing for a "typical tourist shot". But the comedy is difficult for her to see; only the tragedy of mindless souls is evident. (12) She continues to frown.

We stop at a monstrous "tourist trap" filled with skins of bear, ermine, fox and wolf, antlers, mounted heads, stuffed animals, and knives. The message is clear: This is hunting country.

Wholesale production of crafts, now meaningless, to decorate coffee tables of travelers. Plastic lilacs hang from moose antlers nailed to the fence. Inside, ermine weasels hang along the walls with thunb tacks through their heads.   C.B.

While the tour group shops for bargains, we go next door to chat with a woman in a tiny crafts shop. She admits, somewhat proudly that she is a "wolf lover", and that she is striving to protect the wolves against indiscriminate hunting by "protectors of caribou" in snowmobiles and planes. As we leave, she asks if I can recommend a good book on wolves; I suggest Of Wolves and Men, by Barry Lopez. (13) Carolyn jots the name in her journal.

The "wolf woman" asserted dogmatically (as is the way of most Alaskan women) that she is not against hunting, but will not eat a young animal, e.g., a veal. The trophy hunter in the Pribilofs insisted that he hunted for "heads," not "meat," but refused to kill an immature animal. Each of us chooses an ethic to live by that gets us through the day to day process of eating and reproducing with as little guilt as possible. But our plight is that fundamentally we are eaters, and in order to subsist we must devour some other part of our living community.

But for most of us there is more to hunting than subsistence. Cultural implications cannot be overlooked. Each year, we don red garb and move out of our city and country places to marshes, open lands, and forests to hunt. Why are we there and what are we hunting? Dominance, control, superiority over the other animals? Recreation? What is it we are re-creating?

Among tribal people, when starvation was frequent, killing another animal was nonetheless a serious matter and the implications clearly understood. The people presented offerings in ritualized form with the intent of giving back what was taken.

"The Offering" is no longer seen as a giving in return for what is taken, but a thanksgiving for the bounties that come to us. The responsibility of killing is removed. The Earth becomes a cornucopia infinitely overflowing with gifts for our pleasure.

Anything that interferes with that flow of gifts becomes an enemy. Thus the wolf, the ultimate predator, is hunted relentlessly. The caribou/wolf, the ultimate predator, is hunted relentlessly. The caribou/wolf controversy hits this deep chord. The "bounty" offered to predator killers is indeed a precious reward for the gift of the wolf.

And we have forgotten what the ancients knew about the agreement, the agreement between the prey and the predator regarding life and death. (13) We no longer ask permission. They no longer give it. And so, the hunt continues, violent, thoughtless. Removed from our proximity, it becomes more lethal and violent.

Scheffer closes his book, Adventures of a Zoologist, (which more aptly should have been called "Confession of a Naturalist") with a chapter entitled "A Moral Ending." It is clear he sees the implications of his fifty years devoted to "resource management."

> I am unable to understand myself to the point of knowing why, in later life, I seem to be spending more and more time pleading the cause of animal rights. Certainly I recall no turning point in my path, no conversation along the road to Damascus. I should like to think that the change represents a normal maturing process similar, perhaps, to that which leads the old hunter to put away his guns in favor of binoculars and camera. At any rate, the process represents the domination of conscience over one's need to conform...
>
> I believe that, in the future, the priorities with respect to killing wild animals will be in descending order: for subsistence, for essential and benign research, for protection against animal pests; for sport; and for luxury markets such as the fur trade. Although I have become a nonhunter I have not become an antihunter. I believe simply that sport hunting is unimaginative and is too often a mark of machismo or of personal immaturity. When my sport-hunting friends insist that killing is not the point of the game, I am skeptical, for they are unwilling to stop short of killing (14).

July 4   Haines, Fourth of July

As we approach Haines on the unpaved Alkan, the topography gives way to high glacially carved mountains, stands of trees carpeted under the verdant equisetum, occasional clumps of cottonwoods. The sky is clearing. Once more I anticipate the ocean.

> Coming down over the pass
> into Haines
> you can see aqua blue water
> outlined with forest green and
> glacial ice,
> harbor and houses washed clean.
> Peaceful, white,
> old Ft. Seward glistens in the sun.
> Bald eagles soar over the harbor
> cocking their heads,
> checking on things.
> Ravine sit in discourse on empty
> clam pots.
> Wooden fences that once marked
> territories of the dead
> lie randomly strewn among
> gravestones.
> At $100 per foot they carve
> totem poles.
> From the ears of tourists dangle
> silver lovebirds.
> Coming down over the pass
> into Haines,
> you can see aqua blue water.

As we descend, the sky is clear. The harbor and houses sparkle blue-white in the sun. A soft, refreshing breeze blows over this town, marvelously quiet for the Fourth of July.

We find a place in a campground near a rustic hotel and the buildings of old Fort Seward. We wash clothes, shower, eat dinner, then head down to the waterfront to photograph and watch people.

We meet K.C., the man who was sleeping in the back of the bus. He is an articulate fisherman/logger/construction worker. We spend the evening with him.

He has been separated from his Tlinget wife for about a year, but is still nursing a broken heart. They lived in an Indian Village on an island and were active tribal members. He was perfectly happy with subsisting, but, he says, she wanted to get away from it. They smoked salmon and seals (each native is allowed to kill three), hunted deer, had their own clam pots, ate all the shrimp they wanted, gathered firewood. A few staples and some vegetables were all they had to buy. They carved totem poles and worked to bring the village to self sufficiency. But Rosie wanted to leave (he hints that he mistreated her). She is now a bartender in Ketchikan. He is returning from a spell of salmon fishing to St. Petersburg, his home. As K.C. talks, he reveals his bitterness and bias:

> The birthrate is high in Alaska (the winters are long). The natives love children. It's too bad that they don't treat them better. The natives weren't civilized until the turn of the century, if you want to call them civilized now. I should get off my duff and make something of myself but life is too easy this way. Work a little, play a little. Alaskans hate Carter for tying up so much land. They burnt him in effigy in several places. In one place, they hung him, burnt him, then threw him in the harbor. They hate Sierra Clubbers too. I like the bumper sticker "Sierra Club, take a hike," but my favorite is "Sierra Club, kiss my axe." I have it on my pickup truck.

He insists that Alaska cannot be harmed by development. My ire raised, I argue that very little of the land is truly "tied up". I remind him that two centruies ago most of the land in the U.S. was pristine. A century ago, the land west of the Mississippi was relatively untrammeled. If development is allowed to continue unchecked, what beauty will remain in Alaska a century from now? Will there be any natural beauty left on Earth? He chooses not to reply, shows amusement at my anger and emotion. But his eyes tell me he understands the queston.

It is sunset, eleven o'clock. We walk together on the beach as the fireworks go off.

> The eagle flies over the waterfront
> where we all collect for fireworks.
> It starts, wheels, looks down on us.
> Multicolor sprays explode around it.
> Ravens scold, pick at each other.
> People talk.
> Children throw rocks into the harbor.
> Teens drink beer, act tough, flirt
> Fourth of July in Haines, Alaska —
> God Bless America, wherever you are!

July 5

Firmly resolved never to ride on another "tour bus", Carolyn set out early to hike the seven miles to the ferry terminal For the past few days, she has been buried in the Alaska Marine Highway Ferry Schedule.

The process is extremely challenging to her, a real "formal operation". Occasionally, she emerges to ask my opinion, then goes back to charting various routes. We intend visiting the places accessible to the ferry and want to spend some time at the end in a Tlinget Indian village. We are not sure yet which it will be.

I spend the afternoon in the museum talking to an elderly woman who at one time ran the trading post in Haines. Beautiful Chilkat blankets, dancing fringes, are on display. Unlike the Navajo, the Tlingit used no looms or tools, only their hands to weave the blanket and "spin" the wool. The latter, provided by the men from hunted mountain goats, was combed with the fingers and spun by the women into yarn by rolling it with cedar bark strips across their thighs. The men constructed a pattern board showing half of the symmetrical design and a cross-bar from which the warp was hung. Spruce or hemlock roots provided a black dye; copper boiled in urine, blue-green; and wolf moss, the yellow. Along with white, these were the basic colors used.

Mrs. H. explains the significance of the love birds, the Raven, and the Eagle, the major clans. (15) Although the tradition has been broken somewhat in recent years, members should not marry within their clan. Eagles should marry Ravens. There are houses or tribes under each major clan, the whale, coho, and frog under the Raven; the killer whale, the bear, and the wolf under the Eagle. As with the Navajo, clans are matrilinear. Women are protected by ownership since if they lose their spouse, they are less likely than men to remarry and cannot (could not) fend for themselves.

Tlingets do not believe they arose from Athbascans, but came from Polynesia. Some anthropologists believe that they did arise from Athbascans, but only after they had migrated down to South America and then back up along the West Coast. Mrs. H. feels that their features and strong body structure are similar to the Polynesians. I thank her for the time spent with me, and head for the bus and the terminal.

PASSAGES

From Haines we head south on the ferries of the Alaska Marine Highway. A round trip ticket provides unrestricted layovers as long as a boarding pass is presented to the stern purser.

Although berths are available, many people sleep in reclining chairs or throw out their sleeping bags on the floor of the observation car or on the open decks under the "solarium" where cots, heat lamps, and cover from the rain are provided.

Our schedule is complicated but well-planned by Carolyn. We board and depart at odd hours and have lay-overs ranging from two to eight hours. We sleep sporadically. The fog horn and throb of the engine become a part of our lives.

At the watery interface of two worlds, we are never out of sight of land, with its mountains, fiords, and glaciers, emptying into the sea. As evening approaches, the sparkling whites, forest greens, and aqua blues capture the long rays of twilight and tint the landscape with pinks, purples, and lavenders. Colors continue to darken till for a few hours around midnight all is shrouded in a misty cloak of whites, grays, and blacks. Then the colors begin to return.

The ferries work their way slowly through passages among islands. Some are large luxury liners with many amenities for tourists. The smaller ones that visit the Indian villages are more interesting to us. There are usually more tribal people aboard. The families are large, interaction between members interesting. Children are active; parents, patient but firm. A tender scene.

July 6   Sunday Morning in Juneau

We walk the streets at 3:00 a.m., up the steep steps and paths to houses clinging to the cliff, past the governor's mansion, back downtown along the waterfront. The bars are just closing. People are heading home after a night in celebration. Some are street people. Where do they go when dawn comes?

Alcohol removes barriers; feelings, interactions are direct and explicit. In these early morning encounters, the human condition with all of its beauty, pain, hope and despair is laid bare. Couples stagger home, quarreling, making love, clinging to each other in care and dependency.

As the bars close and the night people disappear, the shops open for tourists. If I hadn't watched the transition myself, I'd swear this was another city. The whole scene is changed.

> The bars close at 5 a.m. in Juneau in time to clear the streets for the tourists to begin their trips through shops. They fondle each piece oblivious of the lives around them. Red lips and fingernails, beauty shop hair, cigarette coughs, puffy faces.
> A "well-groomed" woman has just spent three weeks in Alaska. "I would have enjoyed it but it rained every day except two." She bought an umbrella (her hair looks glued in place) and $25 worth of booze in little bottles...She empties a carton of cigarettes of its last three packs, places them in the booze bag, sits back, crosses her legs, and lights up a 5" Merit Filter.
> C.B.

July 7   Tall Totems in Sitka

We docked this morning at 3:00 a.m. and after a bus ride into town, hiked the trails of the National Historical Park where the towering totems tell their tales. Raven, frog, bear, salmon, whale, wolf, intertwined in powerful, clear animistic forms depicting human striving for self-expression and understanding. We walked through the park, enjoying the quiet spirituality of the place. Huge Sitka spruce dripped condensed mist on the carpet of vegetation. Giant black and green slugs left mucous tracks on the chipped wood trails.

I am very tired today and seem to fall asleep whenever I stand or sit — a new feeling, this walking in sleep. Carolyn and I sat in the diner last night and talked until midnight. It was a "going-back" time for her into youth and family: growing up on the farm in Nebraska, her college days, her trip to Europe and Denmark to visit relatives, her courtship and marriage. I feel I now know each person in her family so well that should we meet, out of the strangers on the street, I would recognize them as sisters and brothers.

Later I threw my bag out on the floor of the observation car and fell asleep, the engine pulsing in my body. At three, I awoke. The ferry was barely moving, very close to shore. The land, forested and steep, was reflected absolutely flawlessly in the water. One of the crew in rain gear was on "watch," guiding the vessel through Peril Straits.

After a brief nap on a park bench, I can now stay awake. I am sitting in the lobby of the drab and worn Sitka Hotel waiting for the bus back to the ferry. The people who stay here are struggling, working poor. They bear no semblance to the tourists with their quick trips through museums, wash and wear slacks, instamatic cameras, plastic raincoats, tote bags stuffed with bargains, intent on three meals a day. A lot is included in Middle Class America.

July 7   Midnight in Wrangle

> Shimmering in the midnight rain,
> Wrangle is silent,
> the days labor reflected in the water.
> We walk toward the sawmill
> plume dominating the scene.
> A stream of waste gushes forth.

Men in hard hats, hickory shirts,
black Lee pants and red suspenders
go quietly on night shift
carrying lunch buckets.
Past Shaky's tribal house, out on the docks
a fisherman checks his nets.
He removes one last fish, holds it
in his hands, looks at it
wistfully. Drops it in the water.

We follow music to a bar.
I buy a sandwich and a beer
watch itinerant workers
dance to hard rock.
Bearded men, long-haired women
dance hard. Spirits full of
life and lust, moving to the music.

The ferry sounds off shore.
Two of the women walk away
toward the ferry, combing and braiding their waist-length hair.
"They're hiring in St. Petersburg."
Love can wait.

July 9   St. Petersburg, Little Norway
   The smell of the cannery blows over the point where eagles perch. We stop to breakfast on sweet salmon berries ripening along the road. The people of St. Petersburg pretend we don't exist. Rosy-cheeked, industrious, aloof, they do not cater to the tourists, want to retain the homogeneity of this Nordic village. A sign outside the ferry terminal reads, "No camping within 23½ miles of the terminal."

   I buy a shower in a local hotel and then join Carolyn who is browsing in a shop filled with "winter" clothes. She is considering buying a pair of marvelous "Woolrich" pants for winter hiking and fishing trips.

   Now that we are headed home, she talks more and more about the place where she lives, convinced it is "one of the most beautiful spots on earth." She looks forward to the fishing trips to South Dakota in the fall. On clear nights in the tiny boat surrounded by stars about and below perfectly reflected in the quiet waters, she feels absolutely at the center of the universe. She buys the pants and has them sent home.

   Last night a dozen killer whales were feeding near the ship. These amazing creatures fascinate everyone. When they appear, we all rush to the side to view them. As they breach, they reveal their white undersides. The singular black fins break the water for the sleek black backs. They are visible only momentarily and then slip back down into blue black waters. I stand a long time on deck, anticipating their return. When they don't, I go to the bar to take off the chill with an Irish coffee.

   I sit next to Gloria J., a native woman returning to Angoon from Kake after a reconciliation with her husband. The meeting was good, after a two-year separation. She smiles, remembering. She thinks they can make it now.

   As I nurse my Irish coffee along, she drinks six beers. She admits she drinks too much, yet is appalled at the drinking in Juneau.

Her husband has been a logger for 12 years. He works the season from March till November, and is off the rest of the year. The season is short, but the pay is good. It is a good life, better than fishing, she thinks.

She is impatient with the natives of Angoon who, unlike the Kake natives, have refused to sell their forests to lumber companies, mostly Japanese. They fear that the destruction of the forests will bring destruction to their deer herds which they rely on for subsistence. Gloria feels the timber should be sold, and like Nick, feels that the money should be distributed to the people.

July 11   Hoonah, Home of the Eagles and Ravens

We came ashore late last evening to this village where the Eagles and Ravens dwell. We shall stay here several days before we head home. We walked the dirt road through the village to the Totem Lodge, owned and built by the tribal corporation. After eating a good salmon dinner, we inquire about the camp ground. The manager convinces us that we should not sleep out. The bears are too dangerous. Instead he offers us the "Forest Service Room" for $5.00 per night. Delighted we drop our packs off at the room, stripped of all furniture to provide room on the floor for the sleeping bags of forest service crews that visit Hoonah occasionally. We throw out our bags and then go out to explore the village of Hoonah.

The houses are peaceful and quiet. The children are asleep. Down the road near the waterfront, music pours from a juke box. We meet three young men who ask us if we are "Fish and Game". We walk the streets until 1:00 a.m., then return to our room.

In the unaccustomed privacy of this room, we sleep until 10:00 a.m., then head out to study the village. I wander down along the beach where smoke rises form a small wooden building. Mrs. S., wife of a tribal council member, is smoking salmon. The natives cooperatively fish for their allotment of salmon and then distribute them to the people of the village.

Mrs. S. talks to me as she slices through the large pink-meated fish which hung in the smoke house all night firming up. She brushes away flies that come to the fish from a "fresh" seal skin drying on a log nearby. When she completes her filleting, the fish is one continuous sheet of pink meat which she drapes over racks in the smoke house. She places alder leaves in the "tin stove" and detaches the stove pipe. The little house fills with smoke that seeps out through cracks. In twelve hours, when the fish are thoroughly smoked, she will replace the pipe and continue feeding the fire with branches for twelve or more hours until the fish are thoroughly dry. Then the fish will be stored or frozen for chowder during the winter.

Mrs. S. has only recently learned to smoke fish. Now in her retired years, she is returning to the way of her people. Until this time and even now, she has been a busy community leader, completely involved in tribal and village matters. Her husband has served in the State Legislature and is presently a member of the Tribal Council.

Unlike the other natives I have spoken to, Mrs. S. believes that some of the money from Native Claims should be returned to the corporation for the future good of the people. The Hoonah tribe is doing this. But, she says, there is opposition. Most natives are too impatient, want immediate payoff.

She somewhat defensively states that the land is rightfully theirs. When homesteading was taking place, the Indians did not file. They assumed that the land that was their father's was also theirs. Now there is great pressure from the people to sell the land, but, she says, most corporations are looking to the future. They are selling the timber in small parcels that are clear-cut and rotated. I wonder if she realizes that on such a rotation plan, managed in these parts on a 100-year rotation, the regrowth must be carefully managed. After the initial growth, trees must be thinned to 14' apart to prevent thick stands of spindly and stunted trees.

I leave her to her work and walk on up to the cultural center, opened first in 1978. Sharon S. tells me that at first the elders would not place their treasures here. They were afraid that the tourists would take their things and sell them for a profit. They had no trust. The memory of exploitation understandably persists.

The Seal of Hoonah is painted on one wall. It is dominated on either side by Raven and Eagle. I ask what the animals are at the top and bottom. At the top,she says is Mt. Fairweather. At the bottom are the glaciers. What I thought were animals are a mountain and a glacier! In the center is Kasteen, the young woman who stayed behind and sacrificed her life when the tribal people fled the advancing glaciers of Glacier Bay and migrated south to occupy this land. The seal depicts clearly the common spirituality of mountain, ice, bird, and person as well as the historical ties. To this day, the natives return to their original home in Glacier Bay for hunting and fishing.

Later I meet Carolyn. We sit on the steps of the White Russian Orthodox Church high on the hill overlooking the bay and share lunch. The church is locked. There presently is no priest living in the village.

We walk down to visit "Mrs. Joe", wife of the chief of the Eagle tribe. Her Husband is 86 and crippled. He sits by the window that overlooks "Main Street" and the harbor.

Mrs. Joe, a Raven, is one of the few to carry on the crafts in this village. She does bead work, mocassins, gloves, and baskets. She leads us into her living room where we sit around a large table. She takes pieces from a large basket and sets them on the table.

The room is filled with mementos of her life history. Family portraits, a shrine, remembrances. We fondle the mocassins, supple white moose skin, soft seal fur, as she speaks of her life. For brief moments, great sadness engulfs her. She brushes the pathos away with humor and wit.

Her entire family (father, mother, six children, and three relatives) capsized in a fishing boat and drowned. When she lost her family, she became so ill she thought she too would die. Since that time she has survived the death of six of her eight children and two husbands.

She is 76 and quite beautiful, respected in the community and called on because of her wisdom. She regrets the loss of tradition. People are too busy. No one wants to learn the crafts. She doubts that she can continue making baskets since there is no one to help her gather and prepare spruce roots. She has cataracts and fears blindness, but, because of surgery last year, cannot afford to have them removed.

Our conversation is interrupted by children bringing her a plastic bag filled with salmon heads. I ask her how she'll prepare them. She says she will either bake them or cook them in a chowder.

I buy a beaded Raven necklace and seal skin mocassins, and leave Mrs. Joe reluctantly. I fantasize a return to this village when I will help her gather spruce roots and bask in her wisdom.

In late afternoon, Carolyn and I hike past the village toward the old cannery four miles down the road. Fortunately most people walk rather than drive cars here. The village is now familiar to us as are the faces: the children playing in the streets, the women walking to market, the anglo fishermen.

The latter seem to be of the same mold as the mountain men that first came west, tough, grizzled, antisocial. We watch them in the evening at the Totem Lodge. The young ones come straight from their fishing boats. They take off their boots, eat hearty, drink heavy, and dance till late with native waitresses. The older ones are there also. After running a rough and stormy course, they come to shore late in life, limping and greying, find a young native woman to nurse them through their final years.

The road we hike hugs the shoreline. In the distance beyond the water is Mt. Fairweather and Glacier Bay. Wooded slopes rise steeply on our right. An old black Labrador, limping, joins me. We walk past a boat, charred black, burnt in dry dock. A cabin, with weathered rope for hitching crumbles moss-covered at the side of the road.

The docks and buildings of the old cannery, closed in 1954, are beautifully weathered and worn. No longer in operation, it now serves as a repair shop for fishing vessels and nets. We peer in the doors, watch the men working. Outside the benches are worn smooth from sitting, the edges carved and whittled.

A barn swallow, apparently tamed, sits quietly as I photograph it. The young native worker watches, asks, "Did you get a good close-up?" I nod. "What a beautiful bird," he says. "It has no shame."

We head back toward the village. I sit at the edge of the water watching the dog salmon jump off shore. Flocks of ravens land on pilings and feed their over-grown young. The old dog with breath of dead fish licks my cheek.

Members of Jack Diamond's rock band, from Santa Barbara, who play at the Totem Lodge each night, out for an afternoon hike, walk by. Music blares from a cassette recorder. They stop to throw rocks at the ravens. High above in a spruce an eagle screams.

On bears.
  This moring as I walked out of the back entrance of the Lodge, I startled a man at work. Oh, he said, I thought you were a bear.
  Are there really bears here?
  Sharen (housewife) I never go picking berries unless my husband goes along with a gun.
  Marvin (lodge manager) Yes! It isn't safe! We saw one across there last night.
  A guide. They only come out at night after seven. If you see one just take it easy. Don't run or holler or throw things. Let them know you are there, but don't frighten them. Just move away slowly.
  Roxanne (second grader) Yes! And I'm afraid of them. But I never see them.
  The waitress. I won't hike any of the trails without someone with a gun.
  Mrs. S. My husband and I went to the dump last night and bears were there. There were tracks at the first fork of the road at the entrance to the village this morning.

But where are you, bear? You have stalked me since I arrived in Alaska. You follow me on the trails, hide in the shadows at night. I am always watching for you, fearful. But where are you? Do you really exist?

One last night in Hoonah, we sit till late eating, talking, listening to the music, watching the fishermen dance. At breaks, Jack Diamond, the band leader, joins us. He has no idea why his agent booked him here. No one knows Hoonah exists. Tourists do not stay over. Next time he will know better!
                                                                * * *
We are now aboard the ferry heading back to Juneau. Tomorrow we return home. Unable to let go, we have had a long visit with Herb S., a young police officer from Hoonan. He is on his way to Juneau for special training. He is a sensitive and sincere man, open yet humble. Like The man Who Killed the Deer, (16) he is creating a new culture in Hoonah.

He is becoming a carver. But before he carves, he checks with the elders to be sure his representations are accurate. He is reflective about his life but seems absolutely unconscious of his strengths and uniqueness. Like the bird, "he has no shame," no self-consciousness, no awareness of his perfection.

The young man from Hoonah — he has tremendous feeling for the land, the fish, the mammals. He loves the seawind. Knows each bay, each inlet He calls the sea lions, watches the whales. He seems more self-sufficient and whole than any person we have met in Alaska.

<div align="right">C.B.</div>

July 13 <div align="right">Mendenhall Glacier, Meeting of the Ways</div>

We arrived from Hoonah and spent the afternoon at Mendenhall Glacier, hiking the loop trail that took us high above the glacier and then down Steep Creek. I stopped at an overlook to enjoy the colors intensified by the rain. Two couples came stumbling, puffing through the brush, red-faced, wiping away the beads of perspiration.

How did you get here?
The same way you did.
We have to go back the same way we came?
No, this is the scenic overlook. The trail continues on to the left on down the side of the glacier.
Is that the shortest way dowwn?
I don't know.
This I could have done without!
Well, take a picture as long as we're here.
Look at the blue ice.

Gone, they leave me with the icy blue ribbon crawling to meet its milky melt. Mist rises over the outwash, drifts in silence. Black schist cradles tanny acid pools splashed with raindrops. Layers of feathery mosses and lichen soften the splatter of drops from straight Sitka Spruce and droopy-topped Hemlock. Delicate shy maidens, flanked by rows of pink pyrola, bow their dewey heads. Cradled in the roots of black alder are burnt orange mushrooms and red broom rape.

The salmon are spawning in Steep Creek. Blood-red, they make a final dash for life, leap out of the water against the rocks, swish pebbles for nests, lay eggs, spread sperm. Their lives end in a glorious, frenzied race. Tomorrow the infamous bears will feast.

I walk on down the path in the tourists' tracks, my toe in their heels.

July 14 <div align="right">Juneau</div>

We are now waiting for the flight that will carry us home. Since leaving Hoonah, Carolyn has been single-mindedly anticipating her reunion with Larry. Throughout she has missed him and suffered intermittent bouts of homesickness. But now meeting him in Salt Lake City seems to be her only motive.

Last night I assured Carolyn I would wake up on time, but out of fear of sleeping in and missing the plane, she misread her watch and got us out of bed at 12:30 this morning rather than 5:30. The clerk at the hostel asked "Where are you going?" and stared after us in disbelief as we left only two hours after we arrived. At the airport, we stared through the locked doors at the clock on the wall. Carolyn checked her watch. After a moment of laughter, bordering on hysteria, we decided to spend the night here, she in the atrium of the airport, I in the car we rented "to get us to the airport on time."

I have been teasing her about her error, but she, like the bird, has no shame, no apologies. She just laughs, totally amused with the absurdity of it all.

July 14 <div align="right">Seattle to San Francisco</div>

Carolyn and I sit separately, lost in thought and reminiscence. We are flying from Seattle to San Francisco.

It is clear and I can see below me. Roads race round mountains like contour lines. The natural flow of land is interrupted by strip-mined squares, straight as an arrow power and pipe lines and patches of clear cut-vegetation. Dendritic flows of earth bleed from a ridge-top scar. The valley floors are carpeted with angular pieces of vegetation and developed housing. A scalloped roadcut encircles a muddy blue-brown lake. Crazy quilt of multiple use. Mother Earth, have mercy on us and forgive us our devel/development.

The steward and stewardess continue the ritual. They push the cart, open bottles, pour, ask the same questions, look at us with the same impersonal stare. In the distance, Mt. St. Helens continues to belch.

We are approaching San Francisco. A mosaic of houses are arranged haphazardly as if children created a collage without purpose or design, each person arranging his/her part without knowledge of what the others were doing.

A great colliseum sits festering, green at the center, ringed with red bleachers and white concrete. Nausea wells up. I swallow hard to keep down the standard dinner served with coffee, tea, champagne, orange juice, wine or milk.

> San Francisco from the air looks as if it has been purged of life-giving support systems. No green hills. Multi-colored chemical dumps, concrete. Petro planes as large as buildings. Tiny remnants of green resemble cellophane-topped tooth picks. My eyes burn. The piped-in music, roar of engines. The air reeks of cigarette smoke. The water tastes of chlorine. Cement tears support the human multitudes in their youthful facade of luster and vitality.   C.B.

We land. I stand and look back at Carolyn. Our eyes meet in dismay and disbelief.

> I have traveled and looked at the world, and loved it.
> Now I don't want to look at the world anymore,
> There seems nothing there.
> In not looking, and in not seeing
> Comes a new strength
> and undeniable new gods share their life with us,
> and we cease to see (17).

On to Salt Lake City. As we deplane, we agree things are beginning to look a little better.

Larry is there to meet her. My daughter arrives. We pick up our packs and Carolyn and I head our separate ways.

Next day she stops by to return a few things. A brief hug, a thank you, a promise to transcribe her journal jottings. There'll be a paper, she says. As usual, she wastes no time in good-byes.

II
THE SHIP OF DEATH

> ...And the woman was herself, never to be duplicated,
>   a goddess there
> gleaming her hour in life as she now gleams in death
> and departing inviolate, nothing can lay hand on her,
> she who at her best hours was herself, warm, flickering,
>   herself, therefore a goddess,
> and who now draws slowly away, cold, the wistful
>   goddesss receding (18).

being with a finely tuned instrument. She would point or motion to me to listen. Other times she would stop for long moments in silence and stare into the waves, clouds, glaciers. At those times when she seemed to transcend immediacy and sublimate into the surroundings, I would stand back and wait for her return.

We first met about ten years ago in the Wind River Mountains of Wyoming when she attended an ecology camp where I taught. Since that time we hiked many trails together. She joined me each summer for "environmental field studies".

Assured that I would not waste her time on irrelevant issues or activities, she allowed me to sponsor her graduate program and become her mentor. She always came pencil and notebook in hand. She listened with intensity to all that was said but said very little. Words were not her way (21). It was as if the language did not suffice to express what she felt. She would often respond with expressions of emotion rather than words: frowns, smiles, gestures, little sounds emanating from the heart.

Special memories return. One night sitting on a ridge top at sunset, she pointed to a tree where she had focused on something with her binoculars. I followed her example and found the drop of resin dripping from the ponderosa pine. For one brief radiant moment in its ultimate journey to earth, it had captured all of the energy of the setting sun and was shining like a star.

At another time when we were hiking with a group out of a hot desert canyon, we came across a tiny emerald pool in a sandstone basin. The group, intent on "getting out" did not want to stop. Carolyn stood by the pool. Under her breath I heard her say, I don't think I can leave. I convinced the group that we would only be a minute and would meet them on up the trail. The four of us who stayed behind stripped off our clothes and ran into the shallow icy pool, laughing and splashing like children. The contrast with the desert heat was shocking. I insisted we all become "completely immersed". As we dried and dressed quickly, Carolyn said, You know why this is so wonderful? Because at this moment I know exactly how each of you feels."

Her quest in life was for this oneness; common experiences that joined her to the outside world. But she was discriminating in how and with whom she spent her time. Expending energy on mindless people or a heavy pack were one and the same for her. Time was precious, not to be wasted. At times when she disagreed, she set her jaw firmly and walked away. She understood this selectivity that bordered on intolerance.

Hiking on the beach one day, she picked up a mussel and tried to pry it open. It wouldn't budge. She looked up at me and said, I really understand now what 'clamming up' means. I need to be more open. We looked at each other and smiled knowing that, "To be really free is to have no choice at all" (22). She would continue to be as she was. Like the cormorant in tune with the wind, like the bird with "no shame," she had no choice.

***

The plane lands in Sioux City at my favorite time. The setting sun creates incredible textured patterns against the fields of corn tassles. I see the wooded Loess Hills along the Little Sioux River. I know her home must be nestled somewhere there.

Larry, Steve and Paul meet me. Although we have met only briefly before, we join now in grief. I go first to view her body to check. She really is dead; I stay only a moment. Then we head home to the family who waits. I know them all, mother, sisters, and brothers, for we have met before — in Alaska. Together we plan the memorial service that will take place next day.

Afterwards we sit in the living room and look at her Alaska slides. I add my slides to hers and explain where we were, what we were doing. I read passages from Carolyn's letters and papers. Just as I know

them they know me. But similarly we know very little of the ordinary events that transpired between Carolyn and ourselves. She rarely spoke of such things. When she spoke, she talked of people and relationships.

At midnight, the others leave. Larry, Wilma (his mother), Steve, and Paul and I are left alone. I ask to sleep in the living room, where she loved to spend long winter evenings by the wood burning stove. Paul brings me the sleeping bag she bought for our first field studies in Southern Utah. I lie there in the darkness, uncomprehending. Then Larry, Steve, and Paul one at a time come back. We sit talking until a trace of dawn begins to break.

August 21

The burial takes place at ten. Larry has chosen a plot on the crest of a knoll at the edge of the Loess Hills she loved. The ceremony is appropriately simple. At the end, a few drops of rain fall. We stand together, not wanting to leave. Larry remarks that he must identify the prairie grasses here and perhaps plant more. Don't worry about the prairie grasses, Larry. She won't be contained here.

The minister comes up to me and whispers: Are these the Loess Hills? Quietly, I explain the formation from wind-blown glacial sediments, the ecological significance of these hills she fought to preserve. Don't laugh, Carolyn, a little geology never hurt anyone. Who knows, perhaps we have a convert to your 'civil religion; those celebrations of life you created here in your Loess Hills Seminars. (23)

I go with Marsha, a close friend and co-worker, to Carolyn's office where I look for something she wrote. The halls of this state education agency are lined with beautiful enlargements of pictures she took of children in nature, that reflect the "sense of wonder" she shared with them. (24)

Filed meticulously are resources beyond belief. One contains all of her ten years of "Utah" notes. The one marked "Curriculum and Consciousness" (25) reminds me of the summer seminar spent examining the writings of the Reconceptualists. Later she told me it was a turning point in her career.

But where is the Summer of '78, our studies in Dark Canyon? I pick up an unmarked file, open it, and there it is, the statement she wrote that summer on the quality of her life. My final tribute to her will be to read her own words.

The memorial service is simple and beautiful. Friends present tributes to her dedication to children, womanhood, environmental awareness, conservation work. Steve stands tall reading a beautiful message sent by Sylvan Runkell, the retired naturalist who worked closely with Carolyn throughout the years. In closing, I read excerpts from her own work, reflections on her life.

> I gave of myself, frankly and honestly. I tried to be in touch with my feelings and intellect and act accordingly. I accepted from others: took the love they were willing to share; took of their time, their wisdom, their excitement, their values; the help they were willing to give; pondered with them our questions — and breathed a thank you. I gave and accepted their feedback.

> Giving and taking has meaning for me. Sometimes I feel I have little to give but my friends tell me I give much, and by accepting, I acknowledge and recognize the existence and importance of what they give to me. I am always struck by the underestimates we have of ourselves — people not realizing their potential, not understanding the value of the tremendous gifts they have given.
>
> C.B.

The Quality of My Life

Stability, gravity, uplifts
lives and landforms are
momentary holding places,
each a vantage point —
a resting spot.

I am what I am —
ancestor of my ancestors
of the earth and spirit.

Nurtured by the wind and prairie —
seeing through the eyes
of my grandmothers,
nourished by my mother —
following my father's steps.

The waiting trees
complete without adornment
are my mentors.
Completely cyclic
nourishing and being nourished.

Adolescent feet upon the continents
awakened by surprises
life-blood, energy
emerging
my mind and body one
gift of the universe
rebirth.

Loving shared
beyond my understanding —
duck-blind in wintry dawn,
oil on canvas, paintings in caves
to contemplate
talking under starry skies
in summer breezes
beside him on the river bank
playing, laughing, becoming
we are.

Paul and Steve
born to us in cities
"I'm different, Mom."
nurtured by communities
the big city
the atomic bombs we're going to drop
the plastics!

holding humanity in our arms
you walk away
we watch you grow
witnessing surely
evolution of the mind and spirit
toward perfection.

Eating broccoli
I feel the sand
between my teeth
remember its origin
akin to my own.

Hey, woman. Hey, man.
ponder with me
the journey's map
about humanity
The universe and our connectedness.

I, like the canyonlands,
ageless process
of quiet, continual change
source of energy
to enhance or defile

Relationships
so much a part of me
in stratified layers
and boulders strewn
shaping

Seeing more perspectives
with a purpose
overcoming the forces
that thrust me into
indifference and inertia

sharing wisdom
I must care.

                    C.B.

A string quartet plays a spirited melody that stirs our hearts and brings hope. Hundreds of us filter into the reception hall where Marsha has set up two projectors showing continuous slides. On one side of children — on the other of Alaska. Again amidst her slides I have interspersed my slides of her. Displayed on a table are drawings by Paul, recently framed and Barry Lopez' Of Wolves and Men the last and one of the "most important books" she had read. (26)

Afterwards the family gathers. The adults visit, the children "rough-house" on the lawn with "encounter bats". Steve asks me if I want to walk down to the woodshed. I decline and instead walk up the hill in the woods behind the house and sit alone.

***

Later, Larry and I open hundreds of letters and contributions. Perhaps now the nature trail and guide book she created will become a reality.

The family has gone home and the house is quiet. I lie here lost in the sounds of summer as they filter through the open windows. I hear for the first time in my life the evening sound she loved so well, the call of the whip-poor-will...Then Paul comes in and sits in the rocker. I'd like to talk to you. The Carolyn you spoke of last night was not the Mom I know. Flo, let me tell you about Mom...

Next morning Larry calls me to the window to view the doe and her fawn at the edge of the clearing, a sight so precious to her. I agree, Carolyn, my dear, this is "one of the most beautiful places on Earth".

I prepare to leave. On the way down the road, I ask Larry to stop by the woodshed. Stacked neatly are the huge cut logs she and her family salvaged where a wooded area was destroyed to make room for development. How hard they had worked to salvage the trees. Since then, the wood had provided fuel for their wood-burning stove. The neatly stacked wood was symbolic of Carolyn's devotion to things of consequence. In the wake of destruction, she would not allow the trees to be wasted During the cold winter months, she relished the warmth each piece brought there, like the friendship of a dying friend.

On the plane heading back to Salt Lake City, I take out the little green journal she carried in her pouch on her belt. Larry offered it to me so that I might trace her footsteps, compare them with mine. They are bits and pieces, some out of sequence. Juxtaposed with my own observations, her perceptions are both congruent and incongruent.

When I first learned of her death, I found it difficult not to read premonition into the transcendence I observed. But now reading her journal, I am sure no such feeling existed in Carolyn.

On one of our field studies, she spoke to a member who was admittedly fearful of dying, and shared this saying with her:

Today is a good day to die for all of the things of my life are here.

These were not mere words to Carolyn but a creed to live by. She approached life and death full force each day knowing that both were possibilities. She prepared well her ship of death. And yet she is gone.

She is not seen, for there is nothing to see her by.
She is gone! gone! and yet
somewhere she is there.
Nowhere!....

...It is the end, it is oblivion...

...And yet out of eternity, a thread
separates itself on the blackness...

...It is illusion? or does the pallor fume
a little higher?
Ah wait, wait, for there's the dawn,
the cruel dawn of coming back to life
out of oblivion

Wait, wait, the little ship
drifting, beneath the deathly ashy grey
of a flood-dawn.

Wait, Wait! even so, a flush of yellow
and strangely, O chilled wan soul, a flush of rose.

Carolyn is gone. Yet she walks beside me as she does with Larry in Iowa and on the plains of Nebraska. Dispersed, nonetheless, she speaks to me, dwells in my heart and mind. The "authentic" person, true to the Earth, true to her Being, true to Relations, she forces me to reconceptualize my "being in place".

A flush of rose, and the whole thing starts again (28).

III
INDWELLINGS

Are you willing to be sponged out, erased, cancelled,
made nothing?
Are you willing to be made nothing?
dipped into oblivion?

If not, you will never really change.

The phoenix renews her youth
only when she is burnt, burnt alive, burnt down
to hot and flocculent ash.
The small stirring of a new small bud in the nest
with strands of down like floating ash
Shows that she is renewing her youth like the eagle
Immortal bird (29).

The metaphor of the Pheonix is clear. We must be reborn. But renewal cannot occur without death and oblivion. Before we can reconceptualize a new form, we must put to death old ways of knowing. Before putting to death the old ways, we must be clear about what they are and "wide-awake" to where we are (30). Although we turn away, hide from the realities of where and who we are, as cyclic as seasons with death and regeneration following endlessly, we must burn and unfold, burn and unfold, if we are to become more perfectly human.

Simply stated the unfolding may occur in three interrelated realms: Earth, Self and Other. Growth outward into these realms is elaborated through dialogue, Self with Earth, Self with Self, Self with Others. Dialogue, like perception, occurs between you and me, but is neither in me or in you. It is a unity that occurs outside of us and because of us. This relation, neither within you or me, is the thread that transcends our beings and unites us to Each Other, to our Inner Selves, and to the Earth. The language of the Earth is quite different from the words we speak. Notes from our Inner Selves are distorted and difficult to read. The messages are there, nonetheless, and reveal themselves when we actively initiate dialogue, listen, and reflect.

Dialogue with the Earth is most difficult for us for it goes against our Western Tradition. Such dialogue was interrupted early in the evolution of Western Culture when the Great God Pan...father of fairies and nymphs, satyrs and aryads and naiads in his unified human/nature was put to death. (31) Primitive philosophy and Greek mythology were discounted as pre-scientific, superstitious, childlike. Converts to the new faith were cautioned against pantheistic tendencies and directed to seek the hereafter, a goal apart from their daily lives. Earth rituals, whereby demons were put to death, were prohibited. And the demons, smiling, took up their abode in our hearts.

When Pan was put to death, so was harmony with the Earth. MAN henceforth had more important matters on his mind, namely, the manipulation and exploitation of the Earth's resources, human and non-human. An understanding of the parallel relationship between treatment of Earth and treatment of the Other was lost as was circular, holistic aboriginal thought exemplified as follows:

> If you abuse your wife, you will die in a short time. Our grandmother Earth is a woman and in abusing your wife you will also be abusing her. Since it is she who takes care of us, by your actions you will practically be killing yourself (32).

Without the connection to Earth, self-limiting controls were severed. The rape of the Earth began and continues to this day. Lack of consciousness of the reciprocal consequences of our actions with the Earth persists as evidenced by a recent statement by a candidate for public office which contrasts strikingly with aboriginal thought:

> We were put on Earth to subdue it, not to allow it to remain unspoiled, virgin land (33).

As we reconceptualize our human/nature form, we must reinhabit our place or find a sacred place to dwell. (34) But in so doing, we must not isolate ourselves from social needs or assume an apolitical stance. The social and cultural content of our actions and thoughts are a given, a must. We live our lives, not in isolation, but in "growing orbits" that integrate more and more of the external realm into our immanent being.

Although we strive for universal principles, most of us are incapable of comprehending the immensity of "one world". Ethical principles are put to practice in the conduct of our daily lives. We salvage wood in Iowa, protect the Hudson River, fight the developers in Georgia, make baskets from spruce roots in Alaska. We strive to preserve species as well as remnants of aboriginal cultures for their own sake and for what they represent, vestiges of the past abiding in the present.

The political stance of grass-roots groups seems more vital and viable than contemporary structured political ideologies or social theories in which the natural world is discounted. Althouth "natural history", "natural" and "nature" are acknowedged as givens in Habermas' critical social theory, e.g., the achievements of the transcendental subject have their basis in the natural history of the human species (35), reference seems to be to genetic/biological patterning in humans and nothing more. An anthropocentric view is taken; the aim is not to understand our human nature but to overcome it.

Capitalism in its blatant rape of the Earth offers no hope; Marxism offers little more:

> Like other major ideologies of their time, Marx and Engels were intensified city minds, intent on rescuing the population from 'the idiocy of rural life...' As for 'nature' — the word appears in the Marxist corpus only as an abstraction meaning economic necessity of material reality..there is no way to treat the planet and the non-human things upon it as our disenfranchised proletariat without perpetuating the exploited human proletariat as well (36).
> The true vision of Marx is blurred because of his primary emphasis on the society of 'producers'...Marxists have merely interpreted Marxism in various ways; the point, however, is to change it (37).

Habermas asserts that we are no longer "merely survival-oriented" and that our "knowledge — constitutive interests" are mediated through "work, language and power". (38) But are we not still dependent on the Earth for our survival? In a sense are we not "gluttons and libertines", seeking food and reproducing ourselves? Isn't our work a form of reproduction and the products of our work (our homes, manuscripts, curriculums) likenesses of ourselves?

Of course, there is something more that drives us beyond "mere" survival. Our views of the Earth are obstructed by materials we collect, structures we build, manifestations of our quest for power, buying power, power over and against others. Without dialogue with the Earth and our Inner Selves we become

inauthentic powerless persons like Howard Hughes, futilely walling ourselves off from "authentic" living (39) or nations building obscene MX defenses against the enemy.

Our quest for power results from our lack of personal potency. We expect wealth or social systems to free us. Emancipation as social knowledge is demonstrated in reform and revolution in collaboration with others. But the social order can fight domination only to the extent that individuals are liberated from their own repressions. Emancipation results from the reflective process by which we free ourselves from the constraints of our own "internal foreign territory". (40) Otherwise ideologies for emancipation are transformed through structures of certainty into other forms of domination, e.g., the oppressed become oppressors. (41)

Personal power is dissipated in masses without "roots". "Cultivate your own garden" is not a plea for isolationism or provincialism; until we see our place as "one of the most beautiful on Earth," no other will bring us repose, nor will we be capable of reconceptualizing a new form in harmony with the Earth and its creatures.

Our task is not to raise ourselves out of nature but to inter-penetrate it. Coexistence and coevolution with other life forms on earth make us partners of an egalitarian community. (42) Either development for material gains or preservation of the earth for future benefits for ourselves and posterity place utilitarian constraints on a community where all parts are equally valuable and have equal rights.

In our daily undertakings, we must become more sentient, communicate more directly with the Earth. There are drums on the jogging trails in Rochester; birds are singing in Central Park. We must build a new commitment to make our cities more habitable where children and elderly may establish or reconceptualize a "sense of wonder". (43) We must draw in our boundaries, leaving the open spaces for the other life forms of this Earth community. (44) And like Carolyn, we must care, especially "for the children". Our Earth poets hint at what lies ahead.

For the Children

The rising hills, the slopes,
of statistics
lie before us.
The steep climb of everything, going up,
up, as we all go down.

In the next century
or the one beyond that,
they say,
are valleys, pastures,
we can meet there in peace
if we make it.

To climb these coming crests
one word to you, to
you and your children:

stay together
learn the flowers
go light   (45).

FOOTNOTES

1. Robert Bly, *News of the Universe: Poems of a Twofold Consciousness* (San Francisco: Sierra Club Books, 1980).

2. G.W.F. Hegel quoted by Jurgen Habermas in "On Social Identity" (*Telos*, No. 19, Spring, 1974) p. 95.

3. William F. Pinar and Madeline Grumet, *Toward a Poor Curriculum* (Dubuque: Kendall/Hunt publishing Company, 1976) pp. vii-x, 51-65.

4. William F. Pinar, "The Voyage Out: Curriculum as the Relation Between the Knower and the Known" in *The Journal of Curriculum Theorizing* (Rochester, University of Rochester, 2:1, Winter, 1980).

5. Lois V. Erickson, in a conversation (Salt Lake City, Utah Winter 1980) Professor Erickson is in the Department of Psycho-educational Studies at the University of Minnesota, Minneapolis Minnesota.

6. Carolyn Benne, Journal Notes (Alaska, 1980) Excerpts form the journal of Carolyn Benne will be included throughout and identified by the initials, C.B.

7. Herb Blatchford, in a panel on "Native American Lands and Energy Development: Southwestern Cultural and Spiritual Perspectives" (Albuquerque: The Ninth Annual Conference of the National Association for Environmental Education, May 23-27, 1980).

8. William F. Pinar, *op cit.* 1980.

9. "Aleut", *Alaska's Native People* (Anchorage: Alaska Geographic Society, Vol. 6, No. 3, 1979) p. 57.

10. Loren Eiseley, "Notes of an Alchemist" in *Notes of an Alchemist* (New York: Charles Scribner's Sons, 1972) p. 17.

11. Theodore Roszak, *Person/Planet* (New York: Anchor Books, 1979).

12. Joseph W. Meeker, *The Comedy of Survival* (Los Angeles: The Guild of Tutor Press, 1980) In the preface to his book, Joseph W. Meeker says: Tragic periods try to do good and save the world; comic periods try to do well and to encourage the conditions supportive of life. In the tragedy we learn to hate the evils of life; in comedy we seek joy from its goods, scarce though they may be. The time may be riper now than it was a decade ago to listen to the messages that comedy offers p. 9.

13. The notion that there is an agreement between the prey and the predator has been held by aboriginal cultures. The theme is seen in the works of many contemporary writers.

14. Victor Scheffer, *Adventures of a Zoologist* (New York: Charles Scribner's Sons, 1980) pg 176-186.

15. Most people we encountered referred to "Eagles and Ravens" as major clans but "Wolves and Ravens" was also used. We found many inconsistencies among native persons and museums regarding interpretations of clans, tribes, and houses.

16. Frank Waters, *The Man Who Killed the Deer* (Chicago: Swallow Press, 1942).

17. D.H. Lawrence, *The Body of God* (Brushford Dulverton Sumerset England, The Ark Press, 1970) p. 7.

18. *Ibid,* p. 35.

19. Barry Holstun Lopez in correspondence, August 1980.

10. Paul Sheppard, *Thinking Animals* (New York, Viking Press, 1978) pg 4-11.

21. Ladd Holt

22. Joel Kramer in *Yoga Workshop* (Vancouver: Cold Mountain Center, August, 1971) quoted by LaChapelle, op. cit., p. 81.

23. J. Ronald Engels, "Sacred Sand Dunes: The Civil Religion of the Indiana Dunes". A paper presented at Earth Day X, a colloquium of scholars on the Humanities and Ecological Consciousness (Denver, April 1980) In this paper Professor Engels points out that "sacred places" are being identified through the collective consciousness of grass-roots movements.

24. Rachel Carson, *The Sense of Wonder* (New York: Harper and Row, 1956).

25. Maxine Greene,"Curriculum and Consciousness", *Curriculum Theorizing, The Reconceptualists* (Berkeley: McCutchan Publishing Corporation, 1975).

26. Barry Holstun Lopez, *Of Wolves and Men* (New York, Charles Scribner's Sons, 1979).

27. Lawrence, *op. cit.* p. 42-43.

28. *Ibid.,* p. 43.

29. *Ibid.,* p. 37.

30. Maxine Greene,"Wide-Awakeness and the Moral Life" *Landscapes of Learning* (New York: Teachers College Press, 1978) p. 42.

31. D.H. Lawrence. "Pan in America" *Phoenix* (New York; Viking Press 1936) p. 22.

32. Paul Radin, *Primitive Man as Philosopher* (New York: Dover Publications, Ind., revised edition 1957) p. 67.

33. Mearle C. Marsh, Jr. quoted in "Write-in Candidate Has Unique Philosophies", *The Daily Utah Chronicle* (Salt Lake City: The University of Utah, vol. 90 No. 33, October 22, 1980) p. 1 Mr. Marsh is a write-in candidate for governor in the 1980 elections.

34. La Chapelle, *op. cit.*

35. Jurgan Habermas, *Knowledge and Human Interests* (Boston: Beacon Press, 1968) p. 312.

36. Roszak, *op. cit*, p. 289-317.

37. Karl Popper quoted by Hwa Yol Jung and Petee Young in "Toward a New Humanism: The Politics of Civility in a No-Growth Society", *Man and World* Vol. 9 1976 p. 298.

38. Habermas, *op. cit.*

39. La Chapelle, *op. cit.* p. 81.

40. Habermas, *op. cit.* p. 218.

41. Paulo Freire, *Pedogogy of the Oppressed* (New York, Herder and Herder, 1976).

42. Anne Naess, "The Shallow and the Deep, Long-Range Ecology Movement. A Summary", *Inquiry* (Vol. 258, No.2, Summer 1973 p. 95-100.

43. Carson, *op. cit.*

44. Paul Shepard, "Hunting for a Better Ecology" *The North American Review*, Summer 1973, p. 12-15.

45. Gary Snyder, "For the Children", *Turtle Island,* (New York: A New Directions Book, 1974) p. 86.

A Demonstration of Making Existence Explicit
and Simultaneously Monitoring It

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Introduction

This writing attempts to demonstrate Leroy Troutner's and Soren Kierkegaard's idea of catching ourselves in the act while we are acting, and then describing that activity as it presents itself, and only insofar as it presents itself. The purpose of such activity is to search for a model of being human that will illuminate how we can gain control over our own education by gaining control over our own self-becoming.

The search is a search for increased free, responsible choice. Increased free, responsible choice includes increased contact with people, things and events as well as increased contact with oneself. To get increased contact we need increased action. To arrive at increased action, we need increased energy. To have increased energy, we need increased awareness. The explicit model promotes increased awareness because expression of what one is experiencing can help one be more aware of what he is experiencing. The expressing of what is experienced as it is being experienced is a describing of a catching oneself in the act while he is acting.

Troutner is calling for educators to help their students become self-directing. Many educators have called themselves to this task long ago. What is unique in Troutner's model that varies noticeably from a model that is and has been predominant in Western society for the past twenty-three to twenty-four centuries. This predominant model has served us well in the past. It is now time to seriously consider the

The Troutner model is rooted in Kierkegaard's notions which make free, responsible choice the means and the end of education and living. Troutner finds the roots of Ivan Illich's notion of De-schooling society in Kierkegaard's thought, but Troutner adds an elaboration on the conditions necessary for us to re-educate ourselves.

This paper attempts to demonstrate the model of explicitness that Troutner juxtaposes with the predominant implicit model. Comments elaborating on the demonstration are given in the conclusion. A playlet is used to introduce the demonstration.

A Brief Playlet

Picture this scene. You are standing in the hall of a large university Education Building. You see a professor storm from his office and quickly move into a colleague's office across the hall. You overhear the following conversation begun by the storming Professor A who is addressing Professor B.

"Professor C must be a complete ass, or a misguided zealot for espousing the cause of complete objectivity, and if he's the latter, he's an ass anyway."

Professor B: "What has you so riled;"

Professor A: "C's unfair criticism, C's misinterpretation of comments, the downright possibility of malicious distortion directed at keeping him from some dissonant feelings that may be necessary before a new idea emerges within his thick skull."

Professor B: "It seems that you're feeling quite bewildered storming in here as you did. Could it be that your outburst is your attempt to prevent a new idea from emerging within you; An idea that is at variance with what you believe."

Professor A: "I admit that I am somewhat less than perfectly clear about how to solve the dilemma of how I might convince others that my basic beliefs are powerful not only for myself but for others, too."

Professor B: "Well, if convincing others without evidence is your goal, you're more of a scoundrel than I."

Professor A: "No, I have evidence, it's just that what is evident to me is not as evident to others and, the real dilemma that I'm confronted with is that I believe that the whole of my basic belief structure is more than the sum of the parts that comprise my basic belief structure, and when I attempt to explicate my evidence I must break this whole into parts, dole it out in parts, expect the parts to be understood, and then I find that my whole basic belief structure is not said because, with Polanyi, I believe that I can know more than I can tell."

Professor B: "How do you know that?"

Professor A: "That's the problem. I do know that but I can't fully describe or explain that in detail. Giving you a part of it would be just that; a part something less than I know."

Professor B: "Now, don't simply restate Polanyi's notion that we can tell when somebody has a puzzled expression yet we are not able to describe or explain in detail the facial configurations that go into making up the puzzled expression. I want to know, what particular idea or belief of yours can't you explain or describe in detail."

Professor A: "Well, it's Troutner's and Kierkegaard's notion that for us to re-educate ourselves 'we must make our existence explicit and then learn how to monitor it from within the activity itself. We must learn how to monitor it from within the activity itself. We must learn how to split the ego; to catch ourselves in the act while we are acting and then describe that activity as it presents itself and only insofar as it presents itself.'[1]"

Professor B: "That sounds like an immense 'must'. Can you do all that yourself?"

Professor A: "Sometimes."

Professor B: "Are you willing to show me how or demonstrate to me that you're doing all that?"

Professor A: "I'll try."

(short pause)

A demonstration

"I find myself wondering what I'll do and, do I want to really try to do it, and if I'm trying——no if——I am trying and the trying is not the doing. (pause) I'm noticing that I've just closed my eyes and I'm wondering how you're reacting to me. I'm wanting to make sense and stop the ongoingness of catching myself monitoring myself. I notice I'm pausing and again wondering if you are thinking I'm an idiot. I'm now saying that it's okay for me to be an idiot sometimes, but not too much for too long. I'm now imagining myself standing on one leg with my arms in the air curved forward and a bit over my head, and I'm whinneying like a horse and trying to move higher while still on one leg. That is how I would approach being an idiot. Now I'm experiencing some thoughts about whether or not I'm really being an imbecile and whether I'm carrying this, what now sounds like rambling, too far. I'm noticing that I want to stick with it partly to demonstrate; no, not just demonstrate, convince, convince you that it can be done, and that it's worth doing, and if you're doing it too, it will be easier for me to do it. I'm noticing that I'm wanting this experience to be easy. I'm fearing that it's hard. I'm saying to myself, 'Am I doing it: Shit, am I doing it;' wanting to make sense and knowing I'm not and that it's okay not to make sense all of the time, and, if I give myself the freedom to not make sense, I'm saying that I'll make more sense in the long run. Now I'm wondering if I'm doing this for the future and isn't that what excessive analytic thought is for; for the future. I'm thinking that continuous analysis is a stopping of the present experience; no longer monitoring what is going on like what I've just started to do. (pause) I'm getting blanks like what should I be thinking, doing or saying. Am I monitoring myself; My attention just switched to a muscle tension in my lower back. What does that mean, I'm saying to myself. I notice that my experience is always stopped in order for me to make explicit to myself what I am experiencing. I'm puzzled and now it's okay to be puzzled, and now

I'm puzzled about it really being okay. I'm wanting to make sense and find that I'm not. Monitor, monitor, monitor. I'm wondering about monitoring my monitoring. Verifiability comes to mind. I'm now visualizing you looking at me, and I'm projecting on to you that you're wondering about what the hell is going on in me; and in reality, I'm wondering what the hell is going on——wanting to not loose control yet at the same time knowing that I won't lose control. Control of what? Control of me. I now notice that I'm talking to myself and saying, 'Is the funny farm the next stop for me?' (pause) I'm thinking that I want to come back to reality and stop this monitoring and yet I find it interesting, and I'm hoping you're finding it interesting and what the hell. I know I'm interested yet I'm a social being and I find I'm tuning you out. I'm wanting a response from you about what I'm doing and I'm wanting to continue with it and to wait for a response. I'm hoping for a favorable response like 'boy, was that ever a good demonstration. Here's a gold star for you.' Shit! Now I'm wondering if that is what I really want and is it all that is important. I'm feeling afraid of being an ass in your eyes and even more importantly, in my eyes. I'm thinking that I don't want to be an ass in my eyes. I'm saying I should expect myself to be an ass sometimes so why not this time. But this time I'm choosing what I'm doing and that makes me either a super-ass or a re-educated person——no in-betweens? I'm asking myself, 'What am I doing?' I wish I knew. Is this intelligent? Yes, says Troutner and Kierkegaard. I notice I'm not sure. What if I'm not doing this right and Troutner would see me and say, here's what you're doing wrong, blah, blah, blah, and here's how to do it right, blah, blah, blah. I'm wanting to say 'Screw you, Troutner, I am doing it right.' I'm now thinking that Troutner would be proud of me if he were here. I'm noticing that I'm wanting him to be proud of me. I'm now doubting my pride in myself. The worst of all doubts since all this monitoring began. I believe that we, not just me, are to re-educate ourselves vis-a-vis our self image. I notice that's a Troutner quote without quotation marks. I'm almost really doing this. I'm almost out of the role of A and it's getting a bit scarier. Now I'm really wondering how this is being accepted and the guise of using a dialogue between unreal characters is evident so that I can no longer feign doing it. Doing it, doing it, what the hell is 'it?' Thoughts are coming faster than I can report. I'm knowing more than I can tell. If I could write as fast as these thoughts come to me, then what? I'm saying I'm a social being. I have some responsibility to come out of the clouds. Goodbye clouds. It was nice for a while and now it's nice to be coming out.

I'm back here with you now. No more dialogue. Not to make some sense. No more hoping to make sense. Just making sense, but slowly.

Making Sense

I haven't read James Joyce for quite a while yet he came to mind during the above experience. My not mentioning James Joyce is some evidence that my attempt at monitoring my existence while making it explicit was only partially successful since I didn't make that awareness explicit.

I notice that I said, "I'm thinking that I want to come back to reality and stop this monitoring..." During the demonstration of my making my experience (existence) explicit, I thought what I was doing was unreal. It was unreal in terms of the implicit model. I now think it was real in terms of the explicit model.

In order to make some sense out of that experience, I'll ask and answer a few questions. Then I'll draw some conclusions related to the process of education. The first question is: "Did I make my existence explicit?" I began to as the dialogue was ending. Prior to that I was writing about a fictitious Professor A. That was my projection which I wasn't willing to admit to until I identified with the role.

The next question is connected to several questions: "Did I or have I learned to monitor my experience (my existence) from within the activity of experiencing (my existing)?" Answer: Yes. What I was saying was, in large part, what I was experiencing as I was experiencing it. Could I be lying about that? Yes. Was I? No. Can that be verified? Attach me to a polygraph and ask me.

Did I "split my ego" and catch myself in the act while I was acting and then describe that activity as it presented itself? I thought I did. You would, however, only be able to verify whether or not I thought I did. You may arrive at a different kind of verification by trying this experience and noticing for yourself. A major requirement for your doing this kind of experiment is that you believe in the possibility of your demonstrating it to yourself. Pre-judging this experience to failure will prevent you from having the experience. A pre-judging to failure on your part will cause you to have the experience implicitly and not explicitly.

The "splitting of the ego" is akin to splitting the personality. The nonsense and rambling that I did was similar to what some types of psychotics might do. The difference lies in the fact that I was aware of what I was doing and that I was choosing to do it. This kind of splitting is the giving of oneself permission to be what he is at any given moment.

Some of the disjointedness of what I did, arises from describing the experience only insofar as it presents itself. Lev Vygotsky makes a distinction between inner speech and external speech.[2] Inner speech appears disjointed says Vygotsky. One's making his existence explicit and monitoring it from within the activity itself is similar to externalizing inner speech. My conclusion is that Vygotsky's "external speech" would not include the almost simultaneous monitoring from within the activity itself.

With Troutner I agree that we have free choice within the parameters of our determiners. No amount of human arm flapping is going to move us to fly without the aid of machines. That does not mean that we are not free to choose who we are and who we are becoming. Such choosing is what knowledge of oneself is for. Troutner's arguments regarding this go beyond the free will-determination controversy. Troutner argues that making our existence explicit and monitoring it from within the activity itself is a route to self knowledge.[3] He further argues that while knowing about the pre-dominant self-image of our culture is helpful in our becoming self-educated, self knowledge is essential in that becoming. Essential for what? Essential for choosing oneself; essential for taking responsibility for what one does and what one is; essential for one's directing the course of his future experience.

Troutner in his combining the thought of Illich and Kierkegaard believes that unless "we re-educate ourselves to the belief that we can choose and that our choices do make a difference, we can't escape the trap of mere implicitness."[4] Troutner doesn't mention it but I'm guessing that he would agree with the idea that when one is trapped, he is permitting himself to be trapped. In effect, he is trapping himself. The trapping is often done by not catching ourselves in the act while we are acting and by not describing the activity as it presents itself, and only insofar as it presents itself.

This particular trap of implicitness is tantamount to excessive reflection without action. The trap closes when we continuously stop our existing by rationalizing about it. Continuous rationalizing is the continuous thinking about lived reality which can be qualitatively and chronologically different from reality lived.[6] When we choose to reason ,rather than being obligated to always reason, we can then choose not to reason. The catching of ourselves in the act while we are acting and then describing that activity as it presents itself and only insofar as it presents itself, seems to require that we rationally give ourselves permission to allow irrational experience to present itself. Rationalizing can be done shortly after the experience if we choose to rationalize about the experience. Continuous rationalizing implies that we simply live our lives implicitly. As Troutner says: "If we are to re-educate ourselves vis-a-vis our self image we can no longer continue to just live our lives implicitly."

It seems that this explicit living implies that we reduce the frequency of making our present bad so that the future can be brighter. As Yaker, Cheek and Osmond say in The Future of Time, "Paradoxically, how to live in the future may in the last analysis be a function of living in the present."[7] Not only can we make

our existence explicit and simultaneously monitor it, without doing so we may only be living in the past. This living in the past creates the paradox of living now in the not now. The implication is that we don't educate ourselves because we are being now in the then. That takes more energy than we have. The explicit model provides us with the energy to intensify finishing our tasks of re-educating ourselves so that what we do and what we are do make a difference.

The behavioral model seems to be the final logical extension of the implicit model. In the behavioral model what we do doesn't make a difference because what we do results from forces in our environment over which we have no control It is a determined environment. There is no choice because living in the past is not living. Living goes on in the present and we can only make choices in the present. In the behavioral model we have no choice. "Nothing ever happened in the past and nothing will ever happen in the future. Everything that happens, happens now or happens not at all."[8] Our self-educating and self-becoming are not sufficiently happening because we are not sufficiently happening when we are mainly concerned with what happened.

This explicit model does not imply that we are to always say everything that we are experiencing. It does imply that we do so some of the time. If we don't do it at all, we won't know that we can do it. If we don't know that we can do it, we can't choose to do it. If we can't choose to do it, we are doomed to the trap of implicitness which implies that we are not in charge of our own education or our self-becoming.

Troutner's model is a professing of his belief, supported by arguments, that we need to try this catching ourselves in the act while we are acting, and then describing that activity as it presents itself and only insofar as it presents itself. I also believe that each of us needs to be in charge of our own education and our own self-becoming. I, too, think that this explicit model seems to be the most direct route to our individual and group self-directedness.

A stumbling block to our implementing the explicit model is our left-brained cognitive training. We have been monitoring our existence without making it explicit because we don't find reasons for allowing ourselves to possibly be unreasonable. Some of our existence happens to be beyond reason. Our untrained right hemisphere which seems to us to house a black horse of passion seems that way mainly because we have believed in our left-brained reason as our controller and savior. The explicit model doesn't do away with reason. It does, however, make it coordinate with, rather than superordinate to, our right-brained feeling side.

Our more traditional implicit model has lead to imbalanced human development. As a result of years of neglect to our right-brained intuitive-creative side, we are less whole than if balanced development had been our goal. Our creativity and intuition remain seriously underdeveloped. The overdevelopment of our left-brain has led us away from our whole selves so we don't consider our whole selves as data. When we don't take our whole selves as data, we don't make our whole selves explicit. The explicating of what our left-brain processes can be useful in right-brain/left-brain integration. This integration is the continuous creation of a self. When left-brain activity is the predominant mode of schooling and human functioning we fail to make explicit half of our selves.

Half-functioning educators arrange conditions that lead to half-functioning learners. In this half-functioning environment, we find much fantasy and mythmaking. What is sad is that we aren't aware that the fantasy and myth are fantasy and myth. We see fantasy and myth as reality so that the constructs become more real than the constructors as Camus has said. As a result, we wage war, kill peple, destroy creative minds and burn ourselves out.

These conclusions are based on the existential assumptions that once free, responsible choice is what

gives meaning to our living. Awareness, furthermore, is the key to learning to freely and responsibly choose. These existential assumptions include the notion that there are only three zones of awareness. Zone one is what we sense with our five senses (those things outside of us). Zone two is what we notice on the inside of ourselves such as tension, pain, etc. Zone three includes all that we remember, all that we imagine, all ideas, concepts, rules, theories, laws, principles. Some existential writers refer to this zone of awareness as fantasy.

The curricula of most schools is heavily fortified with those experiences which lead to the practice of zone three. The curriculum, the running of a course, has been designed to avoid running. The excessive intellectualizing of left-brain curricula seems to be more concerned with that which has been run (a runned) rather than a running. The runned has been. The running continues to be. The explicit model is more of a running. The implicit model is more concerned with that which has been. The explicit model is more concerned with what is; more specifically with what is the self that is presently learning about selves through learning about herself or himself.

When we are concerned with what is, we are concerned about present experience. I learn more of what I am experiencing when I express what I am experiencing and I expect that is true for others. I assume that most of us are concerned with the learners continuous reconstruction of experience. It is the learner's experience that we want him to reconstruct. He can't reconstruct it if he hasn't constructed it. He can't construct it if he is not aware of his experience.

Educators can provide conditions that are conducive to a learner's becoming aware of his experience. There is much more to it than planning for unplanned times yet the planning for unplanned times is a start. We can "deschool" within schools by helping to make it safe for learners to explore their limits. I expect that it is only from our limits that we grow and learn. I further expect that many mistakes will be made by learners along the way. The biggest mistake of all may be our trying too hard to avoid mistakes.

We have been avoiding mistakes by monitoring our experience in an excessively left-brained manner. Excessive left-brain functioning leads to excessive control through excessive prediction. We pre-judge experiences before we have them. Some of this pre-judging is useful. It is the excessive pre-judging that I am concerned with. We have experiences in our heads that prevent contact with people and things in our environment.

For the past couple of years, I have been asking my students to list the six most powerful learning experiences they have had in their lives. I then ask them to note the conditions and events that surrounded these powerful learning experiences. It is interesting and perhaps informative to note that less than five per cent of these powerful learning experiences took place in schools. It is my guess that many, many teachers and perhaps many of us here do not expect to have powerful experiences take place in our classrooms. If my guess is accurate, I suggest that it is due to our pre-judging of what will probably go on in our classrooms. We don't expect to have high degrees of excitement and fascination in ourselves and our students because excessive left-brain functioning is not highly exciting or fascinating.

Allowing our right-brains to function with our left-brains can bring higher degrees of fascination and excitement. With these can come additional power to our students learning. We can move toward this additional power to our students learning. We can move toward this additional power by catching ourselves in the act while we are acting and then describing that activity as it presents itself and only insofar as it presents itself.

FOOTNOTES

1.   Leroy F. Troutner, "Illich and Kierkegaard Combined: A Response To the Trap," *Philosophy of Education 197*
Champaign, Illinois: Philosophy of Education Society, University of Illinois, 1979, p. 402.

2.   *Ibid.,* p. 398.

3.   *Ibid.,* p. 402.

4.   *Ibid.,* p. 408.

5.   *Ibid.,* p. 403.

6.   Van Cleve, Morris, "Detente," *Philosophy of Education,* Presidential Address, 1965.

7.   Francis Cheek, Humphry Osmond, and Henri Yaker, *The Future of Time,* Garden City, New York: Doubleday an
Co., Inc., 1972, p. 512.

8.   Keith Floyd, "Of Time and The Mind," *Fields within fields within fields....,* World Institute Council, 1973, p. 4

BIBLIOGRAPHY

Cheek, Frances; Osmond, Humphry; and Yaker, Henri, *The Future of Time,* Garden City, New York: Doubleday and Co
   Inc., 1972.

Floyd, Keith, "Of Time and The Mind," *Fields within fields within fields...* World Institute Council, 1973.

Morris, Van Cleve, "Detente," *Philosophy of Education,* Presidential Address, 1965.

Polanyi, Michael. *The Tacit Dimension,* Garden City, New York: Doubleday, 1966.

Troutner, Leroy F., "Illich and Kierkegaard Combined: A Response To The Trap," *Philosophy of Education 1978,* Cham
   paign, Illinois: Philosophy of Education Society, University of Illinois, 1979.

PRETEXT: Curriculum as Cult.   An Essay Review of TOWARD WHOLENESS: RUDOLF STEINER EDUCATION IN AMERICA, M.C. Richards.

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The book, Toward Wholeness: Rudolf Steiner Education in America, by M.C. Richards[1] is an example of looking to the past for the direction of the future.   It is common for curriculum developers to borrow, often unknowingly, curriculum development techniques from the past.   The competency based curriculum, for example, which finds the goals of education in the activities of adults, closely resembles the work of John Franklin Bobbitt published in the 1920's.[2]   In the case of the Waldorf schools based on the teachings of Rudolf Steiner, both the content and the pedagogy are borrowed from the past.

Toward Wholeness includes an introduction to the philosophy and educational theories of Rudolf Steiner who was born in 1861 in central Europe and who died in 1925.   Steiner founded the first Waldorf School in Germany in 1919, and this initial venture grew into an international network of schools.   Richards discusses the Waldorf Schools in the United States; she presents accounts of classroom events, an overview of the curriculum, and a description of the teacher education program.   Richards also describes the Camphill Movement whose members create rural communities for children and adults with special needs.   Toward Wholeness ends with a directory of Waldorf Schools in this country, a chronology of Steiner's life, and a bibliography.

Richards does not present a systematic account of Steiner's philosophy; rather, a small number of Steiner's major ideas is presented and others are mentioned briefly.   Steiner, as depicted by Richards, emerges as a charismatic Christian mystic.   He is described as an artist, a scientist, a teacher, and a seer who was "endowed from birth with unusual powers..." (8)   Steiner's philosophy unifies science, art, and religion in recognition of the common elements in all physical and spiritual matter.   The connections between human beings and the rest of the universe reveal a quality of wholeness; it then becomes possible to see the whole in every part and to recover the sacred in all areas of human endeavor.

The religious life is central to Steiner's teaching, and the figure of Christ is central to Steiner's religious impulse.   Steiner believed that Christ's blood entered the earth at the crucifixion, thus uniting Christ's body and the earth's body. (125)   According to Steiner this event marked a turning point in time and the evolution of man.   While Richards points out that persons of all religions are welcome to participate in Steiner schools, a belief in the healing force of Jesus and a receptivity to the "new mysteries of Christ" (1962) are fundamental to Steiner's teachings and curriculum.   At the Camphill communities, for example, there are weekly Bible evenings at which the Gospels are read and each person's personal relationship to the cosmic Christ is emphasized. (143)

Steiner's philosophy and spiritual practice form the substance of the education of teachers for the Waldorf schools.   Waldorf teachers study Steiner's works together and strive to create a strong sense of community among the faculty members.   "The way of the Waldorf teacher is a life way."   There is a "feeling of quest, of task, of devotion" and "of being pioneers in a new consciousness and social order." (175)   The teachers lead a meditative way of life which combines idealism, purpose, and practical actions in the real world.

The core of teachers who make a commitment (the exact nature of their commitment is not clear) to the school in which they teach, govern the school with regard to its educational policy and daily activities. It is an essential condition of Waldorf schools that they be free of state control so that the teachers may

govern in accordance with the teachings of Rudolf Steiner.

The aim of education is to awaken in the children a sense of their connectedness to everything else in the universe. Steiner's teachings form part of the curricular content and the teachers and children recite from Steiner's work daily. The religious aspects of Steiner's beliefs are emphasized by the observance of Christian holidays and rituals, particularly Christmas, Michaelmas, Easter, and St. John's Day.

The curriculum at the Waldorf schools has been developed in response to Steiner's theory of child development published in 1909. Steiner believed that children develop in seven year cycles. In each of the first four seven-year periods a new body is born; these are, in order, the physical body, the etheric body, the astral body, and the human ego. Steiner believed that each child's development thus recapitulates the evolution of human consciousness.

The curriculum is designed to provide materials appropriate for children at a particular stage of development. For example, second grade children read fables and legends because thay are in a state of mythic consciousness. Older children read Bible stories and Greek myths. Seventh graders who are entering the period of rebellion read about and study historic revolutions. The curriculum, then, follows the history of human consciousness as the children recapitulate that history in their personal development.

Richards does not question or explore any of the possibly controversial issues she raises. In a brief phrase she alludes to possible "shortcomings" in Waldorf education (79), but she has no specific examples or further discussion to offer.

Richard's admiration for Steiner's philosophy, the Waldorf schools, and the Camphill communities seems more a product of her deep belief in Steiner's ideas than a result of an exposition and analysis of those ideas. It is clear from the autobiographical portions of Toward Wholeness that Richards believes that she was fated to find in Steiner's work the answers to her personal search for meaning. Richards was involved in a number of teaching experiences before her involvement with the Waldorf schools. Most important, perhaps, were her experiences on the faculty of Black Mountain College, and her disppointment in the college's failure. Turning from a search for community in political, secular groups, Richards continued personal quest in spiritual communities founded on Steiner's theories. This sequence does not seem untypical of many who turned from political causes to spiritual communities in the 1960's and 1970's.

Richards recommends that the reader adopt an acritical receptivity to the ideas presented in Toward Wholeness. This places the burden of being convinced on the reader's willingness and ability to suspend judgement rather than on the ideas themselves to be sufficiently compelling to withstand analysis and critique.

Richards, then, is a true believer and her claims for Steiner's philosophy are indicative of the intensity of her attachment. For example, Richards claims that Steiner's work is independent of cultural bias (182) and is, in fact, not a cultural product. (144) Such a claim to universality seems ethnocentric and naive, but serves to place Steiner and his teachings above culture in an evolving consciousness (144) which becomes an aspect of destiny rather than a part of history.

Richards also claims that it is destiny that links Rudolf Steiner to America. (17) The spirit of Steiner's vision is said to be in keeping with modern consciousness; Richards believes that "the archetype of wholeness is rising prophetically in the psyche of contemporary people." (180) She offers no evidence for such a claim, but asserts it repeatedly throughout her book. Steiner's teachings, then, hold the answer to the future renewal of society. This is to be achieved by changing each individual's perception of the world

so that the new social order will be created by responsive, loving people.

There is a messianic fervor to Richards' presentation of Steiner's ideas. Those who follow Steiner believe that they are building the new age with their hands (185) and thus responding to the "task and challenge of our epoch." (179) This is particularly true in Richards' discussion of the Waldorf schools. Richards states that there is a growing readiness for Steiner's educational ideas (11), though, typically, she offers no evidence. The Waldorf schools are said to be the "seedbeds" of a new age (36) and those involved in Steiner education are pioneers in "frontier efforts." (178)

Richards claims that Steiner's teachings stand outside the mainstream in theories of human development and represent the next developmental step in the evolution of education. This assertion is made in ignorance of the history of curricular practice thus far. Steiner's theories of child development sound remarkably similar to the cultural epoch theory of Ziller, a disciple of Johann Herbart. The curriculum developed in response closely resembles that developed by the Herbartians in this country some twenty years before Steiner opened the first Waldorf school.

Richards' wonder at educational practices she observed at the Waldorf schools also seems the result of her naivete in that the practices she cites do not seem remarkable. The Waldorf teachers who teach with grace and artistry exemplify caring teachers everywhere. The kindergarten she describes includes materials typically found in kindergarten classrooms. (3) Public school teachers also make knitting needles out of wooden dowels (97); Montessori teachers greet children individually by name; these methods are varieties of good practice everywhere and may owe less to Steiner's philosophy than Richards may realize.

Toward Wholeness is a book which may be successful in attracting the receptive to the ranks of the faithful. Richards' quest for membership in a secure spiritual community ended successfully in the Waldorf schools and Camphill communities. If one can, as Richards could, suspend judgement and accept Steiner's vision acritically, his teachings provide both the individual and the community with stability, purpose, and direction.

For other readers who choose not to quiet their critical cognitive capacities, Richards' work has many problems. Far from being above history, Steiner fits into the historical context in which he lived, and the turning to Steiner at this time fits into the historical context of the 1970's. However, a movement which includes a charismatic leader whose teachings are accepted on faith and whose words are above criticism, a curriculum based on a strictly recapitulative theory of child development, and a school year punctuated by observance of Christian rituals seems an unlikely place to look for the key to the future of education. In a country with a population of diverse religious affiliation and a system of schools run by the government, it is particularly difficult to find guidance in Steiner's philosophy for those who will create the future.

PRETEXT: Program Evaluation in Transition. An Essay Review of Ernest R. House, EVALUATING WITH VALIDITY. Beverly Hills: Sage Publications, 1980. (295 pages). Lee Cronbach and Associates, TOWARD REFORM OF PROGRAM EVALUATION. San Francisco: Jossey-Bass, 1980. (438 pages).

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The field of program evaluation has expanded rapidly over the past two decades. Currently an increasing share of the public and private commitment to social research is focused on evaluation activities. It has been considered by many to be one of the more exciting frontiers in educational inquiry, with the aim of increasing the possibility for more realistic demands for educational services, more stable policies, and services that merit the trust placed in them. The ammunition for this expansion of activities has been the dominance of systems analysis and objective-based evaluation models, social science, and the application of quantitative methodological strategies. This expansion has not been without its critics, many of whom are active contributors to this journal. These critics range from those who feel a greater range of evaluative tools are necessary to those who feel most applications of traditional quantitative tools are morally reprehensible. Although the specific criticisms are many, there is some consensus that most evaluative efforts, particularly those supported by government sources, are insensitive in their attempts to capture characteristics of educational programs. The techniques and procedures utilized are biased and are selected more for their control than their relevance. The results are evaluation efforts that are deemed too narrow and do injustice to all parties involved.

This review centers on two examples from the evaluation mainstream that represent some of the serious soul searching that is currently going on regarding the quality and the consequences of past evaluative efforts. I believe the field is in a time of healthy transition, one which recognizes past failures and plots a future course that should be more responsive to the needs of the educational community. The tensions that have initiated this transition come not from isolated critics looking in from the outside, but from leading figures within the professional evaluation community, i.e., Ernest House and Lee Cronbach. The audience for their work will be substantial, particularly for Cronbach, and their messages will be reflected on and discussed widely. It is my opinion that they will receive far more attention than other recent criticisms of the field such as Elliot Eisner's, in spite of the often comparable substance, because they are confessions from within the mainstream reference group.

What is it about the current times and context that produced these rather critical statements regarding the state of the art of program evaluation? The cynic might suggest that it is the curtailment of funding from government sources that now allows for criticism from within: i.e., one is more likely to bite rather than lick the hand when funding is withdrawn. It is more likely that any careful analysis of the past two decades should make any evaluator very humble about his craft. Most of the massive curriculum evaluations had severe limitations and rarely aided in the improvement of practice. Even the most optimistic conclude that the best we can hope for are good, sensitive, local evaluations. Part of the reason for this failure is that most efforts were geared towards the decision makers' needs, whereas any effort to have real change must involve many parties and a change process that is gradual. Furthermore the evaluative process was dominated by a concern for the technical, with little realization that the process is as much, if not more, one of politics and persuasion, concerns which the majority of the evaluation profession does not begin to understand. What follows are some notes on both the House and Cronbach books, works with very similar themes yet quite distinct in their style and in the framing of their arguments.

Ernest House's book is a surprisingly well-organized and understandable presentation of current major approaches to evaluation, the pros and cons of each, and the fundmental principles and assumptions of the

field in general. It is surprising because the book is essentially a compilation of his recent articles. The one drawback of this design is that he is very repetitive, making constant use of practical examples and philosophical analogies, very useful for the naive reader but excessive for someone more experienced in the field.

He is persuasive because he seems so conscientious in his explanation of each approach, issue, or argument. Fairness is an explicit primary principle in his values about evaluation. It is also implicit in the way he treats other evaluation theorists in his writing. I was impressed by his effort to frame each of eight approaches, ranging from systems analysis to case study efforts, in at least one context that would reflect favorably on that approach——by demonstrating the appropriateness of the approach in at least one situation. I have always been impressed by the diverse approaches present in House's own evaluation work and by his ability to apply that method which will be most sensitive to the problem at hand.

The same rigor is evident in his consideration of underlying social issues and assumptions. House is careful in the distinctions he makes, drawing careful differentiations between objectivity and intersubjectivity, between reliability of an instrument and its accuracy, and between reliability and relevance.

Finally, he's persuasive because of the attractiveness of his espoused ideals: truth, beauty, and justice in every stage of evaluation. Again, he becomes more convincing because these ideals are all implicit in his own evaluation of evaluation. House strikes an effective balance between impartiality and advocacy of those stances and values he respects.

Although House presents many issues of concern for the evaluation community, two are particularly important. The first is his discussion of justice in evaluation. Evaluation is by its nature a political activity, for it often results in the allocation of educational resources. House distinguishes three types of justice: utilitarian, which has as its goal the greatest net balance of satisfaction and often ends up favoring higher social classes at the expense of lower; pluralist, in which principles must be weighed against each other by asking which balance of the principles is most just and then leaving the evaluative subject to whatever principles and priorities the judges happen to employ; and House's notion of justice-as-fairness, inspired by Rawls (1971). This principle states that each person has the right to basic liberties but precludes imposing disadvantages on the few for the advantages of many. House analyzes recent evaluation history to demonstrate the neglect of the justice-as-fairness position. His critique of federal evaluative efforts., e.g., Project Follow-Through, clearly points to our need to consider this perspective.

I feel the justice-as-fairness position would move the field of evaluation towards a more respectable position in our society, one more firmly rooted on ethical and moral principles. Too often the evaluator as pawn to the decision maker or the broker of information has participated in the trade-off of basic liberties for the social and economic benefits of society. The evaluator needs to become more responsible for those parties who for whatever reason find it difficult to have their say. It is a position for which we should all have sympathy and it is the most powerful message in the House work.

A second premise of the House book is that an evaluation should tell a good story; it must be able to persuade and educate the reader. Although House states that good stories are not limited to qualitative methodologies, he clearly is very sympathetic to such methodologies and believes they are particularly well suited for typically context-bound and audience-specific evaluations. Most quantitative procedures avoid personal responsibility and represent the most distal kind of knowing and communication. Given this bias for the qualitative, the reader senses that the selection of method and rhetorical style is still very much dependent on the evaluative question and audience. In fact, his analysis of the Outward-Bound evaluation is interesting in that two analysis strategies——one qualitative and one quantitative——attempt

to tell one story. Where possible, multiple strategies aimed at telling one coherent story is the ideal for which evaluators should strive; for it provides not only coherence but also credibility. Unfortunately little help is provided to determine under what conditions different strategies are appropriate.

The Cronbach and Associates work is provocative reading for anyone interested in evaluative concerns who has some knowledge of recent evaluation history. Although many issues described by House are also included in the Cronbach volume, the presentation is quite different and more effective. Cronbach is clearer, more precise, and more convincing than House. This is said not to be overly critical of House, because I feel that Cronbach's contribution is one of the most important books in the field of evaluation in the last twenty years. Like House, it is wide-ranging in its critique of evaluation research and practice. Although time is equally divided between discussion of evaluation techniques and the role of evaluation in policy development, it is the latter that is handled most convincingly. That is not to say that his handling of methodological topics (design, sampling, comparison) will not make even the most arrogant empiricists feel humble and rather sober regarding their potential contribution.

The book is described as the product of the Stanford Evaluation Consortium and seven active associates are listed as co-authors. It is obvious that the work of the Consortium is wide-ranging when one reads the first pages describing the "ninety-five theses" of the book, a technique which is congruent with the call for needed debate from the evaluation profession's religious leader. Like it or not, when L.J. Cronbach speaks— people listen. He has been without peer within the field of educational psychology and quantitative inquiry, starting with his participation in the Eight-Year Study of Progressive Education and continuing until his "retirement" years at Stanford. Two issues will serve as samples from a volume rich in material.

Quite consistent with House's perspective, Cronbach is highly critical of the utilitarian and conservative position of past efforts in which the evaluator was considered the expert and his audience was limited to key decision makers. He believes that this has resulted in very little real improvement in our educational institutions and it has in fact resulted in the reification of the status quo. He believes this emphasis on the elite and a context of command must be replaced by evaluation emphasizing participation and a context of accomodation. This shift should result in more significant and creative work as well as allowing for real change, change that is often more gradual than radical. In the context of accomodation there is no need to stress consensus and the "rhetoric of goal attainment," which he believes significantly biases an evaluation towards a management perspective.

It is his distinction between accountability, a retrogressive search for individual victims who did not meet management goals, and evaluation, which serves a more democratic ideal and is aimed at future improvement of the institution that calls to point a second theme of Cronbach's. Again consistent with House, there is a focus on the role of evaluator as persuader, but also on the evaluator as educator. His goal is to liberate the clients to make intelligent choices. This suggestion might be difficult for many professional evaluators to accept because the net result is less power. What are the characteristics of an evaluator as educator? Cronbach would have the evaluator frequent the setting, raise questions, describe findings at various levels of detail, attempt to see the program as the participants see it, and be brief in reporting results. Obviously this educative role makes more sense at the local level, and to fill it adequately is no mean ambition, an ambition that the evaluation community has for too long ignored.

This review has stressed the similarity of basic themes between the House and Cronbach volumes. Both should lead to new directions in educational evaluation. These changes will not be radical in nature but hopefully will result in more sensitive interpretation and meaningful improvement in educational settings. Cronbach suggests that evaluators should be more modest regarding their powers, yet if power is equated

with information, in some respects power is still very much part of the evaluator's role. If there exists a difference between the two works it is in their notions of justice in evaluation. Cronbach is leading the field from a more utilitarian base to one of pluralism. House believes in his theory of justice-as-fairness that we need to go beyond pluralism-liberalism to a higher order of justice. The evaluation community has much to learn from these two works and hopefully selected messages will be internalized and lead to some positive growth in this distinctly practical art.

PRETEXT: Althusser in Angleterre. An Essay Review of E.P. Thompson, THE POVERTY OF THEORY AND OTHER ESSAYS (New York: Monthly Review Press, 1978) 404 + v pp. Perry Anderson, ARGU-MENTS WITHIN ENGLISH MARXISM (London: NLB, 1980). 218pp. Anthony Cutler, Barry Hindess, Paul Hirst and Athar Hussain, MARX'S 'CAPITAL' AND CAPITALISM TODAY (London: Routledge & Kegan Paul, 1977, 1978) vol I: 331pp; vol. II: 307pp.

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I

By now it is commonplace that there is a crisis of historical materialism in the West. Most simply, the crisis is one of definition and efficacy. On the one hand, the widely held assumption that the horrors of Stalinism are bonded to marxism undermines the Leninist conception of the fusion of revolutionary theory and organization. On the other hand, the acceleration of the division of mental and manual labor as well as the extreme specialization of tasks within an increasingly bureaucratized knowledge complex have threat-ened a deadening social stasis by functionalizing and technicizing virtually all social relations having a potentially public character. The point has been reached where there is considerable doubt as to the effi-cacy of sustained systemic crises in laying the groundwork for active participation in social transformation, since the implication of the developments mentioned above is the elimination of both leaders and followers in the revolutionary project. Not that class conflict has ceased; nor yet that totalizing visions of this con-flict are absent; no, something much more subversive has occurred. Marxism's loss of authority is linked to the apparent irrelevance of its central categories in making sense out of the disappearance of the real base for its claims about historical change in the capitalist epoch.

In this respect, the lightning-rod for critical theoretical discussion is political economy and the main issue is whether political economy or even its critique is obsolete in its role as the central pillar of histor-ical materialism. Whatever its ultimate consequences, the theoretical intervention of Louis Althusser has served to sharpen debate over this basic issue. Perhaps this has been nowhere so true as in Great Britain over the past decade, where the Althusserian oeuvre has been assimilated and rejected in varying degrees. The three works under review here signal the imprint of Althusser's reading of Marx in the land of Darwin and Spencer as well as Russell and (intellectually, at least) Wittgenstein.

It is well known that Althusser, (prior to the tragic events of November, 1980, professor at the Ecole Normal Superieur and member of the Parti Communiste Francaise), conceived his project as an attempt to find a theoretical basis for the authority of marxism in the wake of the tumult in the international com-munist movement caused by Khruschev's secret speech on the Stalinist period at the XXII Congress of the CPSU. For Althusser, de-Stalinization meant eroding the authority of PCF leaders from within by way of tying party strategy to theory and establishing the scientificity of that theory. Scientific marxism was supposed to be prophylaxsis against both Stalinist dogmatism and opportunistic weakening of the resolve of the Party in over-reacting to Stalinism. Scientific marxism would serve these purposes by virtue of the openness of scientific debate itself on the one hand, and the sense of certainty it could provide, on the other. Party authority would be established on a rational foundation through the reconciliation of open discussion and party discipline.

In For Marx (1963) and Reading Capital (1965) Althusser devoted himself to demonstrating how Marx, groping towards a scientific theory of capitalist society, precipitated a breakthrough of epic proportions—opening the continent of history to science as the Greeks had opened the continent of mathematics and Newton, the continent of physics. This breakthrough was never definitively explicated, however, and only a 'symptomatic reading' of the texts would reveal the extent of the discovery and the path to be followed to rationalize it in thought——a task of philosophy. Hence, Marx's really important contribution lay not in

any particular empirical statement, but rather in pointing to a wholly novel theoretical framework to understand history. Marx's central contribution was the theoretical specification of historical materialism which had not yet informed his early works, tainted not so much by Hegelianism as by the philosophic anthropology of mechanical materialism. The rational kernel of Hegel's dialectic came to the fore in Marx's mature works, developed most fully in Capital. At the center of Marx's epistemological break with mechanical materialism was the discovery of a materialist notion of the totality, a totality which was characterized by complex determinations, processes with no fixed content: hence, history as a process without a subject. The job of historical materialism was to identify these processes by their effects. So a mode of production or a social formation are not things, but continual transformations in three domains: economic (transformation of nature), political (transformation of social relations), and ideological (transformation of ideas). However, the effects at issue for historical materialism are not given directly but rather are the product of theory or prescientific ideology. Theory (science) is not a practice like the others, since its only object is, strictu sensu , itself. What, therefore, counts for theory are its knowledge effects:

> It has been possible to apply Marx's theory with success because it is true; it is not true because it has been applied with success... Later historical practice cannot give the knowledge that Marx produced its status as knowledge: the criterion of the truth of the knowledges produced by Marx's theoretical practice is provided by his theoretical practice itself, i.e., by the proof-value, by the scientific status of the forms which ensured the production of those knowledges. (R.C., p. 59)

Now, Marx assigned a strategic determinative significance to the economic domain. That domain was to be determinant in the last instance, but for Althusser the last instance never arrives. The significance of this stipulation is that it allows the other domains their own relatively autonomous effectivities so that the analysis of any concrete situation (say Russia in 1917) demands attention to a chorus of determinations. Historical ruptures are then explained by the 'heaping up' of contradictions in the different domains— they are overdetermined.

Althusser's aim in developing this aspect of Marx's thought is to avoid the ideological cousin of marxist humanism, namely, the economism of Stalinism. It is Althusser's main contention that humanism and economism are related by their attitude towards theory—namely the historicist assumption of a historical subject: for humanism, 'man' (species being); for economism, The Proletariat. In this way, marxist humanism which was the theory of de-Stalinization was actually merely the obverse side of Stalinism.

II

There is good reason for Edward Thompson to warn the reader of the 200 page-long title essay in The Poverty of Theory that "this essay is a polemical political intervention and not an academic exercise." For Thompson's intervention is an ornery, biting, intemperate, witty, absolutely captivating and perversely ingenious interlocking set of eighteen sorties over the terrain of Althusser's theory and practice. Nor is Thompson's motivation difficult to discern, since he lets us know in the first sentence of the book that he began to think in his thirty-third year, 1956, the moment de-Stalinization began, and we know that his trajectory out of the British CP was guided by something very close to the marxist humanism that Althusser attacks. This trajectory took Thompson through the New Left Review to a period of relative political isolation in the 1960's, a period punctuated by the importation of French marxist ideas via NLR and a general widening of the scope of English engagement with continental intellectual currents. What consternation he must have experienced at the large Althusserian following in Angleterre, a following whose temerity was finally epitomized by the thesis that history itself did not exist except as an ideological category. One can understand why, by 1977, a year after the appearance of this strange doctrine, E.P. Thompson had had enough.

To Thompson, Althusser's marxism represents a 'war against reason,' and far from certifying his attempt to come up with an un-Stalinist politics within the PCF, Thompson levels both barrels at Althusser: "Althusserianism is Stalinism reduced to the paradigm of theory. It is Stalinism, at last, theorized as ideology." (PT 182) Its Stalinism is its self-enclosed, theological character. Thompson's substantive case against Althusser emerges from between the quills of this porcupine of an essay and in calmer passages the author even outlines his own theory of historical materialism. Let's consider the bad news first.

The theoretical closure so distressing to Thompson has a double determination in Althusser's system. Althusser's notion of theoretical practice fails to connect with real being at all. A science founded on rootless contemplation of its own ideas is a sham. If science has any claim on us at all, it must derive from a dialogue between concept and experience, from a continuous and open-ended interrogation of evidence trained by hypotheses and premises tentatively held. Science demands respect for traditional interrogative methods, as those methods are themselves hard-won prizes. Furthermore, one must proceed on the assumption that these forms of interrogation are conditioned by the structure of reality itself. Althusser, in a Spinozist reverie of pure thought, arrogantly dismisses the bits of knowledge we have won in prefering a single, higher truth. His dismissal of historical understanding comes from a lamentable confusion of empirical work with empiricism.

At least as objectionable as Althusser's philosophy is his concept of totality. Thompson is most put off by Althusser's rigor in decentering the subject—the individual subject—as the focus of historical enquiry. The practice of a marxist historian is to demonstrate precisely how human individuals produce their own history. The task is to 'reconvene' moments of that operation, condensing it in the lived experience of actually extant people. Althusser's deracination of history, his 'process without a subject', shows active complicity in the domination of structure over people. And on this account, Thompson grudgingly admits sanction for this view in Marx's texts, especially Capital. Thompson agrees with Althusser about the ambiguity of that text—neither history nor yet theory. But for Thompson Capital is really only a diversion from the critical work Marx set about in 1844, stemming from an unfortunate, almost morbid fascination with the eternally fixed categories of bourgeois economics. In seeking to critique political economy from 'within', Marx lost his way with the result that historical materialism was never completed. Althusser's structural causality is really nothing more than a celebration of Marx's failure on this reading.

Thompson asks us to join him in further developing historical materialism, even cautioning us to forget thinking about marxism as a science—"the authentic trade-mark of obscurantism." (168) Science is something people do; it does not have an existence independent of them. To carry the historical materialism further is to operate in a certain tradition. We can add to it by positing a bridging concept between individuals and structures which could restore a conditional subjectivity in history. Thompson will provide a way of getting at the genetics of history analogous to the formal completion of Darwin's theory of natural selection by Mendel. Here, indeed, is a real 'silence' in Marx, a silence Thompson fills with the term, 'human experience'. Without it, we can neither show the choices that actually existed for people as they made their history, nor in denying the effectiveness of human agency, can we even speak of the content of the future. We need, in short, a language of choice, a marxist morality. Here, Thompson sadly admits, Althusser is correct in establishing the irreducibility of utopian thinking to marxism. Thus is Althusserianism an 'ideological police action on the behalf of Stalinism.' (173)

If Thompson sets up Althusser as a structuralist, we may hear in his diagnosis of structuralism's historical reappearance the echo of C. Wright Mills' critical blast aimed at American academic sociology nearly a quarter of a century ago. (note: The Sociological Imagination NY: Oxford UP, 1959) Their common root, aside from declarations of direct inspiration, is the sorry station of academia in today's world:

...in general it may be said that there has never been a generation of socialist intellectuals in the West with less experience of practical struggle, with less sense of initiatives thrown up in mass movements, with less sense of what the intellectual can learn from men and women of practical experience, and of the proper dues of humility which the intellect must owe to this. (184)

In this recognition Thompson does better than other detractors of Althusser who content themselves with an immanent critique of the Althusserian project thereby implicating themselves in Thompson's critique. (note: See Simon Clarke, "Althusserian Marxism" in Simon Clarke, et al., One-Dimensional Marxism: Althusser and the Politics of Culture London: Allison & Busby Ltd., 1980). One cannot help but think that the ultimate destination of those disenchanted with the master will turn away from the marxian project of social transformation altogether. After all, the so-called nouveau philosophes, abandoned that ship after the PCF debacle of May '68:

...Marxism has become a kind of encyclopedia; but what absence of thought, what conceptual poverty! Yes, it is the "general theory" of our world; but this world, in its theory, appears entirely made up of banality, a pure and simple reproduction of the technocratic universe. I know very well that there was Althusser, who was certainly much more distinguished and who carried theoretical rigor to a very high level. But Althusserism died out with the Maoist explosion in France...Theorize, it said: The revolution comes at that price. As for me, at any rate, I come very close to owing him everything. (note: Bernard Henri Levy, Barbarism with a Human Face (NY: Harper & Row, 1979) p.185.)

But Edward Thompson felt responsible for England and was probably more concerned about the actual popularity and probable destination of her own young Althusserians.

III

At least for some British sociologists and economists, the problem with Althusser is that he didn't take himself seriously enough. Barry Hindess and Paul Hirst, later joined by Tony Cutler and Athar Hussain, began completing the Althusserian revolution with the journal Theoretical Practice in 1971. Following the demise of Theoretical Practice and their movement through its successor, Economy and Society, Hindess and Hirst began a series of collaborations that were to eventuate in Marx's Capital and Capitalism Today (1977, 1978).

Hindess and Hirst first attempt to extend Althusser's theoretical reconstruction of Capital by sighting in on Marx's passing references to pre-capitalist modes of production in their 1975 book by that title. (note: Routledge & Kegan Paul, Henly upon Thames, 1975) Their objective was to evaluate the pre-capitalist modes mentioned——primitive communism, ancient mode, slavery, asiatic mode, and feudal mode——in terms of their conceptual conditions of existence: i.e., by their 'fit' in the marxist problematic. In doing this, the authors effectively outflank the authors of Reading Capital by rejecting the possibility of a general theory of modes of production and their transformation of one into another. This they do by calling attention to the essentialist features of the Althusserian notion of history. One can excuse E.P. Thompson for giving Hindess and Hirst short shrift in Poverty of Theory after the latter conclude that far from being the uniting sum of human behavior whose ontological status does not change just because it is in the past, neither historical logic nor history itself exists:

"Marxism, as a theoretical and a political practice, gains nothing from its association with historical writing and historical research. The study of history is not only scientifically but also politically valueless. The object of history, the past, no matter how it is conceived, cannot

affect present conditions. Historical events do not exist and can have no material effectivity in the present. (312)

The problem is that Althusser's notion of history turns out, on inspection by Hindess and Hirst, to be teleological. They maintain theory can only be about the present, since economic, political and ideological practices of any given mode of production cannot be said to produce their own conditions of existence. The present ("current situation") is only and always an effect of "the balance of forces in the class struggle," not of some structural essence. Structure, itself, cannot create the medium through which it is realized. In asserting this through the vehicle of structural causality, Althusser negates the very complexity it was his merit to seek to introduce into marxist theory. Expelling 'history' in its Hegelian guise, Althusser reintroduces it through the back door in describing the Marxist totality as a Spinozist eternity.

Hindess's and Hirst's purpose in performing this theoretical practice in Pre-Capitalist Modes of Production is ultimately to construct a notion of mode of production adequate to the task of informing marxist politics whose object, "the current situation", is also, ex definitione, the only possible object for Marxist theory. Marxist theory is precisely for political intervention and nothing else. This, then, is Hindess's and Hirst's explication of the Marxian unity of theory and practice——Althusser's project carried to its logical conclusion.

Hindness and Hirst see two compelling tasks of Marxist theory at present: "the development of a concept of capitalism dominated by finance capital, a concept which builds on and goes beyond Marx's concept of the Capitalist Mode of Production in which industrial capital is dominant, and the development of a rigorous concept of the socialist mode of production." (322) The connection between the two is presumed to be obvious, as is the ultimate objective of these concepts: to clarify the 'current situation' in order to delimit goals and strategy for the socialist movement. The hyper-rationalism of this agenda needs no elaboration.

In a short epilogue to PCMP published in 1977 (note: Mode of Production and Social Formation: An Autocritique London: RDP, 1977) the authors finally break with Althusser and thereby clear the ground for Marx's Capital & Capitalism Today. Recognizing the privileged ontological status accorded to the concept of relations of production in PCMP which is a theoretical effect of their assertion of the primacy of the class struggle, the authors proceed to abandon the Althusserian project altogether by (1) rejecting the concept of mode of production and (2) abandoning the epistemological discourse on which it was elaborated. By abandoning epistemological discourse, the authors mean to suppress the postulate of correspondence between theory and an independently existing real world. The aim here is to supercede the rationalism of Althusser's position as well as the unresolvable problem of 'determination in the last or any instance' by 'the economic.' It is clear that in doing so, the authors immediately cancel the distinction between ideology and science so central to Althusser's thought. Theory is no longer science: rather, "theories only exist as discourses." in dethroning the concept of mode of production, the authors complete their critique of the Althusserian notion of the auto-effectivity of the totality. Mode of production is culpable because it implies evolution to some other social system. In the absence of such a development the status of causal claims are undermined. This is a round-about way of saying that there is no developmental automaticity corresponding to the concepts: the fate of a social system cannot be dependent upon anything but the actual practices of people. Since a political project is posited as the whole raison d'etre of marxist theory, some conceptual basis for orienting action is required. Rejecting theoretical separation of the forces from the relations of production, the authors substitute a simpler distinction based upon whether the agents possess the means of production or not. Since politics is always situational, the conceptual field pertinent to marxist theory is the social formation.

The break with marxist structuralism is further refined in Marx's Capital and Capitalism Today and the results are surprising. In theorising the social formation as "consisting of a definite set of relations of production together with the economic, legal, political, and cultural forms in which their conditions of existence are satisfied," the authors' judgement about Capital bears a striking resemblance to that of Thompson. Noting sanction for their theoretical departure in Marx's 1857 Introduction to the Critique of Political Economy and in the Grundrisse, they interpret Capital as something of a regression into the realm of political economy. In particular, the entire value problematic is discarded as an unwarranted intrusion of preoccupation with exchange relations into what is more properly a theory of the distribution of economic agents into definite classes. Quite naturally, this line of reasoning leads directly to an attack on the notion of social capital and the attendant laws of tendency (e.g., the declining rate of profit). The authors' argument resists the supposition that the fact of economic exchange rests on the foundation of transactions of equivalent values. The novelty of MCCT is its denial of this assumption. It bases this denial—a radical step in any marxist understanding of capitalism—on the authors' insistence on the discursive effectivity of legal, political, and cultural practices. This in turn means that these practices, while necessary for the sustenance of the central production relation, cannot be viewed as the reflection of this relation, with the further result that the socialist project becomes radically disaggregated and stripped of etatist focus. By implication capitalism cannot, in princple, be understood as an economy in the strict sense. Yet, this politicist reading gives no theory of capitalism—nor is it designed to. The only theory that can be given is a theory of the social formation, by which the authors mean the national social formation, since that entity condenses the specific effectivities of the different practices in ways which differ from one social formation to another. What can be theorized, therefore, are the plurality of capitalisms, not capitalism, per se.

Volume II of MCCT gets more specific about the practices which undermine the very possibility of a Marxist economics. The argument is based on the nature of money and financial institutions and the functioning of capitalist calculation. The authors deny the classical theory of money adopted virtually unchanged by Marx. Money does not simply facilitate exchange, and financial institutions do not simply intermediate between borrowers and lenders unproblematically. Money is the sinew between different economic operations by distinct and in most cases dissimilar economic agents—"a repository of purchasing power whose possession does not imply any restriction on the exercise of that power." (II, p.75) The rise of public spending and consumer spending has given financial capital indeterminate economic interests with respect to industrial concerns. Financial firms acquire industrial firms for a variety of reasons bearing no determinate relation to production, in clear contradiction to Hilferding's theory of finance capital. The authors conclude that no systematic link to the distribution of labor-time is possible. In fact there is not such thing as socially necessary labor time in this view.

Hindess et al. devote a major section of MCCT to demonstrating the untenability of Marx's theory of the capitalist firm which is based on the notion of capitalist calculation. If firms are not treated as mere fragments of social capital, a general theory of capitalist calculation is impossible. Differing organizational forms and conditions of operation give rise to differing principles of calculation as do the intervention of national fiscal systems, company law and state policy. Production methods, themselves affected by such things as statutory working hours (a consequence of the constitution of a legal subjectivity), also affect firm calculation. "Enterprise calculation is in no way reducible to technical determinants..." (188) All in all, there is just no case for treating the enterprise as a universal calculating subject.

The authors advance an unabashed left-wing social-democratic reformism, consistent with their theoretical project. Rejecting the economism of all major Second International figures, they reject their apocalyptic visions of necessary generalised capitalist crisis and etatist, jacobin political orientations. For Cutler, Hindess, Hirst and Hussain, the whole point of theory is to incite to action. "Marxist science" with its

historical "guarantees" led only to passivity and political impotence. Engagement demands an orienta-
tion based upon appeals which speak directly to the perceived needs of many, heterogenous constituencies.
"The key question of the issues from which socialist politics can be made is whether they further the strug-
gle for non-commodity, cooperative, popular, and planned forms of production and administration."
The whole distinction between a revolutionary or a reformist position is, therefore, superceded.

There is great irony in this outcome. It strikes this reviewer that an almost complete transmutation in
the relative positions of E.P. Thompson and Hindess et al. has occurred. Name-calling aside (humanist!,
idealist!), our authors——save Althusser——have arrived at the identical political destination. Under cover of
a hyper-theoreticism in the case of Hindess et al. we arrive at an essentially pluralist notion of politics and
a nominalist notion of theory while behind all the rhetoric of marxist morality in the case of Thompson
the intellectual accessibility of a situation through the notion of the 'logic of process' peaks out. Aside
from the issue of problematising the subject, I cannot see a significant difference between the incorrigible
historian and the post-Althusserians at the level of drawing up a research agenda or a political program.

Is there an Althusserian in the house?

IV

Of course, the organization of this discourse demands an affirmative answer. Perry Anderson's Argu-
ments Within British Marxism is an attempt to separate the wheat from the Althusserian chaff, a task which
the author carries out not by positing either — a synthesis or a third, superior position, but by showing how
the contributions of Thompson and Althusser have enriched Marxism each in its own way. Proceeding in
this way, Anderson strives to refute Thompson's charge of intellectual fadism lodged against New Left
Review by demonstrating the selectiveness of the appropriation of Althusser's thought. Armed with what
he considers to be tenable Althusserian insights, Anderson turns them on Thompson's substantive works
(note: The Making of the English Working Class (1963); William Morris (1955); and Whigs and Hunters
(1975) in order to explore their strengths and weaknesses.

Anderson's conditional defense of Althusser preoccupies the author for four chapters. In the opening
chapter on historiography he sides with Thompson against Althusser and the Althusserians on the issue of
evidence, but demurs from Thompson's notion of the object of history and its general knowledge status.
Theory must refer to the empirical but it is a science——no need to be squeemish about this——whose object
is more than Thompson's "unitary sum of human behavior." The Althusserian contribution in this area has
been to widen the scope of determinations admissible in a Marxist explanation.

Anderson's chapter on "Agency" is the most fruitful in the book. The concept of agency is the founda-
tion upon which Thompson argues for the reality of individual human subjects whose subjectivity arises out
of their experience, an experience which gives a real, although ambivalent, human presence in history.
Anderson criticizes Thompson for the vagueness of his assertion and its complete neglect of the cognitive
(scientific) elements of human action. Action occurs at vastly different levels; it can be directed at purely
local matters, or it can be directed epochal transformations (as in revolutionary action). The latter sort of
action can only be accounted for in terms of the intervention of a theoretical understanding of society.
'Experience' pure and simple is a vacuous concept because it does not distinguish between what is valid ex-
perience and what is not, with respect to revolutionary aims. These points are turned towards an insight-
ful critique of Thompson's Making of the English Working Class which challenges Thompson's systematic
neglect of the structural referents of working class consciousness (the structure of industry, the interna-
tional situation) which led him to the thesis of 'closure,' that the English working class was in some sense
'made' by the 1930's. Far from being made, its development was very discontinuous, a matter only com-
prehensible, Anderson argues, on the basis of processes which by their nature were supra-experiential, i.e.,

structural. In the end, Anderson criticizes both Thompson's 'unmastered human practice' and Althusser's 'process without a subject' for their a-historicism:

> Of two unbalanced sets of generalizations, Althusser's inclines better towards history, Thompson's towards politics. The classical equipoise of the founders of historical materialism is some distance from both. (p.57)

Anderson's positions in his chapter on Marxism are prepared in the previous chapter on agency when, against Thompson, he insists that a cognitive solution to the problem of social order cannot be found at the level of volition, valuation or intention. The fundamental unity of a social formation must rather derive from the dominance of a mode of production. Moreover, against the British Althusserians, "classes are constituted by modes of production and not vice versa." Hence, it comes as no surprise that Anderson finds in Capital not a diversion but a fulfillment of the work Marx and Engels began in the 1840's. "Marx's essential movement after 1848...was not 'away' from history, but deeper into it." (p.63) Development of the central historical concepts of social relations and forces of production, first appearing in the Grundrisse, economy. And it is precisely the notion of mode of production, implicit in Capital, which, contrary to economy. And is precisely the notion of mode of production, implicit in Capital, which, contrary to Thompson's assertion, "marks a decisive exit from the world of political economy; with it he embarked on a new kind of history." (p.64) Far from being reductionist, the concepts of mode of production and social formation, singled out by Althusser, enabled comprehension of the complexity and manifold determinations of societies. Anderson takes a stand against both the reduction of historical materialism to a 'sociology of revolution' and what he considers to be Thompson's alternative, a "pattern book of moral examples" in reaffirming that historical materialism is, more than a study of the past, that it is scientific socialism, i.e., the provision of "causal knowledge of historical processes capable of furnishing the basis for an adequate political practice in the present." (85) Such causal knowledge cannot derive from Thompson's largely metaphoric suggestion calling for a "genetics" of history focusing on investigation of how people 'handled' or 'processed' 'experience.'

The political implications of Anderson's position emerge in the chapters in which he takes up Thompson's charge of Stalinism against Althusser, as well as in the chapters on "internationalism" and those which analyze Thompson's William Morris. Basically, Anderson fights to maintain the distinction between reformist and revolutionary postures. In the chapter on Stalinism, Anderson chastizes Thompson for his ad hominem attacks on Althusser, noting that in the wake of 1956, "the risk of a collapse to the right was no figment of the imagination." Althusser is criticized for overstating the case against socialist humanism, but is ultimately vindicated: "the net weight of his political intervention over 15 years was on the side of a more democratic communism and a more militant internationalism." (112) This is a symptomatic judgement for Anderson, since he justifies NLR politics with reference to a marxist tradition virtually ignored by Thompson, Trotskyism——a tradition much more prevalent in Britain than Althusser's marxism. Thompson's focus on Britain, his neglect of the international dimension, shows up in the reformist reconstruction of the life of William Morris. Anderson shows the political militance of the author of News from Nowhere, opening that Thompson's neglect of this aspect of his life corresponded to the nationally focused reformism of the Communist Party of Great Britain, to which Thompson belonged when he wrote the biography. The more recently written Whigs and Hunters comes under attack for its hypostatization of law in attempting to provide moorings against the perceived advent of a Leviathan state. Against Thompson, Anderson ascribes mounting restrictions on civil rights in Britain not to an arbitrary bureaucracy, but to the growing defensiveness of the British ruling class due to the progressive crises of British capitalism since World War II. Once again, the structural elements of a situation (not 'individual versus the state' but class struggle) provides the best frame of reference for the current situation.

That Anderson is less than unequivocal about the monovalence of historical materialism is demonstrated in his critical celebration of Thompson's advocacy of launching discourse on the substance of socialism through utopian thought. Nevertheless, the major thrust of Anderson's response to Thompson is directed at demonstrating that the conceptual distinctions introduced by Althusser, Poulantzas and others are very fecund even at the empirical level (even in evaluating Thompson's texts). In this regard, Anderson successfully separates Althusser from the British Althusserians.

V

Despite the charming eclecticism which Anderson displays in his valiant attempt to reconcile E.P. Thompson's 'action-orienting historiography' with Althusser's structuralism, the work is open to the criticism that its guiding aim is simply wrong-headed. Perhaps I am naive, but I cannot find a reason for supposing that history and science should be conflated into a single practice. Suspicious would be the premises that demanded a unitarian solution, since the objectives of each discourse can simply be different, and hopefully mutually invigorating. The polemics under review here are successful in pointing out the weakness of positions advanced by both sides, but they ultimately fail to come to terms with the project Althusser actually defined.

Ultimately, it seems most appropriate to judge Althusser's work on its own ground. Here I can do no more than summarize in abbreviated form arguments advanced by the philosopher Andrew Levine in a recent article. (note: "Althusser's Marxism" Economy & Society vol. 10/3 August 1981) Althusser's project was to sustain and develop a philosophy of Marxist social science. Having no object other than itself, the main task of philosophy is to rationalize scientific revolutions. Hence to be 'for Marx' is to be 'for science.' Levine appeals to us to view Althusser's discussion of the epistemological break not as a thesis about texts but rather about the problematic of Marx's texts. The scientificity of Marxism is not 'proven'; it is assumed so that the task of philosophy——developing a theory of historical materialism——can proceed. Nor does there need be any consensus among Marxists prior to the development of this theory: "the epistemological break Althusser imputes to Marx is more programmatic than actual; more a hopeful prescription than an account of ongoing scientific practice." (Levine, p. 263) On this account, the notion of 'structural causality' cannot but be underdeveloped——"entirely programmatic and unsubstantiated"—— for the simple reason that a sufficient amount of work with this science has not been yet advanced to make a philosophy of it yet possible.

These are points that do not seem to have been understood by Thompson or Anderson. On this account one is compelled to agree with Levine that the real evaluation of Althusser's work is only just beginning.

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