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METALEARNING: SOCIAL INTERACTION AND LEARNING

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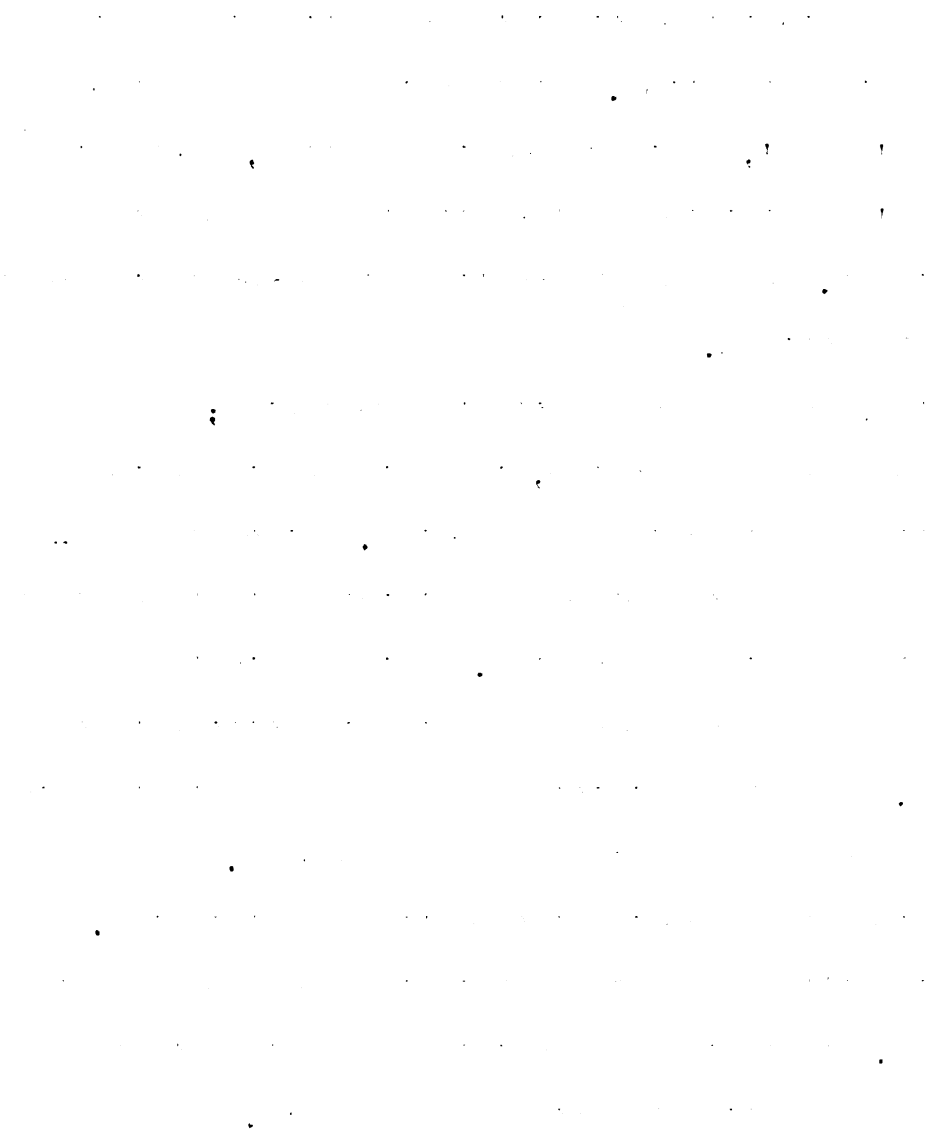
The symbolic interactionist perspective is applied to the learning situation. Metalearning refers to the unattended 'frame', derived from interaction, that sets the student's definition of the situation and of his or her role in it. Based on observations in several different educational settings.

Chapters are concerned with the following; The Social Psychology of learning, including a discussion of Socialization and theories of learning. Unintended consequences for some student self definitions that may derive from certain teaching strategies. Typical private worlds and how they function for the learning identities that may emerge. The self definitional consequences that derive from the way time and media may be approached. The relationship between social interaction and thinking. Learning identity as a self fullfilling prophecy over the life course. Strategies for avoiding situations that may lead to self defeating learning consequences.



METALEARNING: SOCIAL INTERACTION AND LEARNING

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INTRODUCTION

In the pages that follow I explore some important aspects of the relationship between social interaction and learning. The central theme that I develop is based upon the observation that each learner makes assumptions about the learning situation and about his or her role in it. It is suggested that what the learner assumes is derived in part from interacting with other persons in the setting, and that these assumptions are important in terms of what is learned in that situation, as well as how subsequent learning situations are approached.

Anyone who has tried to teach another person even the most rudimentary skill should find this theme familiar. Yet, even though these issues are obvious, these essential aspects of the phenomena are often overlooked in theorizing about learning. We often conceptualize learning as if it were a phenomenon that exists in a vacuum. Usually we do not conceive of it as a consequence of meaningful social interaction. My principal purpose then is to discuss learning not as an isolated phenomenon, but as a function of social interaction.

This discussion is directed at two general audiences: persons involved in educating others and social scientists interested in the sociology of thinking and learning. Hopefully this dual focus will contribute to narrowing the gap between current theory and praxis. For those who are involved in teaching, the pedagogical relevence of the concepts I explore should become fairly clear from a reading of the chapters that follow. Wherever possible I have tried

to state in explicit terms the educational advantages that accrues if one takes these concepts into account.

The relevence of the material presented for social science theory is less clearly develped in the text. As a consequence I would like to briefly discuss several relevant sociological notions so that the theoretically inclined reader may have some sense of the conceptual context within which the material I present may be located.

Modern learning theory has developed largely within the context of research carried out by experimental psychologists. Many of the pioneer theorists whose views have formed the basis for current conceptions: men like Pavlov, Guthrie, Hull, Tolman, etc. assume a model of learning that is essentially psychological. While there has been some sociological research that bears directly on learning, in general the research that has been done is not comparable in depth and scope to the pioneering effort in psychology. A recent statement on the subject puts the case quite succinctly: "The sociology of education badly needs definition, structure and purpose."[1]

Yet, the sociological response to the broad problem of how ideas arise (a central concern for sociological theory) does provide a framework within which a prliminary sociology of learning may be considered. In modern times the general sociological approach to individual consciousness can be traced to Marx. Greatly oversimplified, the Marxian view is that ideas are a function of one's position in society, that consciousness is shaped in significant ways by class.

Althoug Mannheim emphasized the difference between his notion of the sociology of knowledge and the Marxian view,

there is considerable agreement between these two formative theorists on basic assumptions about the way ideas are formed. Mannheim states:

> Thus it is not men in general who think, or even isolated individuals who do the thinking, but men in certain groups who have developed a particular style of thought in an endless series of responses to certain typical situations characterizing their common position.

This notion, that social groupings are essential elements in the process of thinking and that they influence throught in important ways forms the basis for any sociological approach to learning. In a number of studies made by sociologists this assumption can be identified. For example, the role that socio-economic class plays in how students perform and what they learn has been explicated in a number of studies dating from the 1940's to the present. A. B. Hollingshead's Elmtown's Youth and Coleman and Campbell et. al., Equality of Educational Opportunity are two prime examples. Similarly the student peer group has also been a major focus as an important influence on individual perceptions and behavior. James S. Coleman's The Adolescent Society is a prototype for this kind of analysis. There have also been a number of studies that attempt to relate leadership or other classroom role factors to learning and achievement.[3]

As this brief survey suggests, even though the specific focus of the research varies, it is generally the case that a good proportion of the work done by sociologists on learning usually involves an attempt to relate student position in a social environment to what is learned. "Learning" is usually (but not always) defined by some measure of academic achievement.

Yet, while the significance of these group factors is accepted by virtually everyone interested in the sociology of learning, important unexplained problem areas remain. One of the key issues that remains unresolved is the problem of how the ideas of the group are built into or taken on by individuals. We may know that social class, peer group status or certain classroom roles are correlated with achievement, but as of now we have only vague notions of how these factors actually operate to produce the learning effects that are observed. We know very little about the interactional dynamics that lead to the student's assumption of an image of the world that presumably affects what he learns. In short, an adequate social psychology of learning has yet to be articulated and is still in the formative stage.

There are several studies that indicate important directions that such a social psychology of learning might take. Stinchcomb shows how a set of attitudes that he calls "expressive alienation" is generated by specific kinds of social structural dilemmas that students in certain social positions experience. While expressive alienation is experienced subjectively, Stinchcomb reveals how this set of attitudes that affects what is learned is generated by factors operative in the social systems of which these individuals are a part.[4]

Similarly Becker et. al., in their study of a midwest medical school suggest that what medical students learn is shaped by the specific social organization of the medical school setting. The student peer group is viewed in terms of how it responds to certain systemic dilemmas of school

life and the study shows how the peer group evolves a definition of the situation for each of its members that proscribes and sets the limits on what is learned. [5]

In Pygmalion in the Classroom Rosenthal and Jacobson attempt to show how the teacher's expectation of student performance affects actual student achievement. The social psychological dynamics implied in this work suggest that the student's self image is a function of teacher expectation. [6]

These studies are interesting because they begin the task of analyzing the actual school experiences that students are having in terms of how these socially patterned experiences affect what is learned. The properties of the social milieu are examined in order to show how these properties produce certain typical kinds of learning.

The chapters that follow should be read as an attempt to continue along this line; my purpose is to look at social interaction in terms of how the way it is patterned affects what is learned. The conceptual framework that I assume is essentially symbolic interactionist. A basic premise that this perspective assumes is suggested by one of George Herbert Mead's remarks: "So far as education is concerned, the child does not become social by learning. He must be social in order to learn." [7]

Any accounting of the factors that are operative in the construction of the definition of the learning situation should be of interest in other contexts where definitions of the meaning of the event are constructed as a result of human interaction. The problem of spelling out a social psychology of learning then should be subsumed under the broad

social psychological issue of how the individual comes to define himself as an actor in any situation. The chapters that follow may also be read then as an attempt to contribute to the ongoing dialogue of how we take on (or more properly, how we construct) a view of the world and of our role in it that is somehow a function of the groups of which we are a part.

As I read Mead's dictum that the child "must be social in order to learn" it suggests that participation in a social group is a necessary condition (one which is essential and must be present) in order for learning (or thinking or knowing) to occur. Learning is essentially an act that involves an individual mind, but which nevertheless is a phenomena that derives from interaction. It follows then that in terms of the interactional processes that are involved, academic learning--learning to read, for example--is no different than learning any other social activity or role.

In this sense, knowing one's role or identity, knowing one's social position and the expectations ascribed to that position in a group of interactants requires an act of the mind that is not qualitatively different from knowing any other aspect of reality. In terms of the interactional processes involved, knowing the social category, male, is no different that knowing another category, slow learner, or the equation, $2 \times 2 = 4$.

Knowing in the sense that I am using it here is merely the assumption of a perspective--the mental acting out of thoughts that have evolved from interactions with others. While this process does give rise to novel and original

thought, the main point I want to emphasize here is that the learner's self image, the identiy that he constructs based on his involvement with others, is a very significant element in what he comes to know.

While the individual may not attend to certain aspects of his role or identity as he focuses on some particular item that his is learning, these factors may be so much a part of the interpersonal cognitive screen that is operative in the situation that they may set the problem he is focused on in very important ways. For example, in a situation discussed earlier, a student may not consciously attend to the cognitive style indicative of his social class as he is trying to read, but this factor may be very important in terms of what he learns. It is often precisely because a given factor is unattended that it plays a significant role in what is learned.

The value of this position lies in the fact that in coming to terms with what is learned, any social role is considered important, not because the learner is a member of that group or status, but because this fact of social life that is assumed by the interactants may have led to the assumption of an important cognitive screen by the learner. This conception is social psychological in the sense that I outlined earlier. The learner is viewed as actively involved in the construction of what he learns and is not merely the passive recipient of group ideas. Yet while the individual's involvement is active, he constructs his behavior (he goes about learning) within a context or framework that is socially patterned.

I would like to turn now to a brief review of the content

of the chapters that follow. In the first chapter two common assumptions about learning are discussed. Both conceptions (what I call "environmental determinism"and "individualistic reductionism") are considered as inappropriate models of learning, because they do not come to terms with the interactional context of the learning situation.

The notion of metalearning is introduced as an attempt to deal with the problem of how the learner arrives at a definition of the situation. The term, metalearning refers to the learner's construction of a definition of the learning situation as he or she interacts with others in the situation. This definition is constructed within a framework whose perameters are set by interaction with others. My contention is that an analysis of what is taken for granted by the others about the learning situation should provide a key to understanding the boundaries that are assumed by the learner. These everyday assumptions are rarely questioned by the participants, yet in accounting for the learner's definition of the situation, these background assumptions are likely to have been important factors and should be incorporated as part of any analysis of what is learned. This is especially true of those situations where the individual has constructed an inappropriate definition that has come to be labeled by others as a learning problem.

In the second chapter some examples of student definitions that derive from assumptions implicit in certain teaching strategies are explored. The position is presented that the teacher's assumptions are very important in terms of the sets

and definitions that students evolve.

In the third chapter several of the typical private worlds or meaning systems that are operative within the classroom are discussed. An attempt is made to show how these private universes of relevence become implicated with the ongoing behavioral system in the classroom to produce learning identities, (assumptions about oneself that predispose what one can know) that then become self perpetuating.

The fourth chapter deals with time and medium in the classroom. In this chapter I attempt to suggest some of the important assumptions that underlie the way time and media are approached in typical classrooms. The definitions that are constructed as a result of participating in settings where these assumptions are operative are explored.

The fifth chapter departs from classroom behavior as a central focus in order to explore several social interactionist propostiions about the nature of thought. A case is made for the position that thought is the product of interaction and that the development of thinking requires continual redefinition of the boundaries that one assumes.

The sixth chapter elaborates on the notion of learning identity. An attempt is made to introduce a temporal dimension into the discussion by considering the problem of the learner's view of himself as a selective mechanism that proscribes what he will come to know over time.

The concluding chapter suggests how the notion of metalearning may be used in developing strategies that may be useful for teachers.

One further note concerning how the concepts I discuss

have been generated is necessary before these introductory comments are complete. It should be clear from my previous remarks that my intention has not been to substantiate or verify existing theories of learning. On the contrary, my objective has been to attempt to generate a discussion of some important aspects of a social psychology of learning that is still in the formative stage. The history of my involvement in this undertaking then is quite different than it would have been had I been engaged in verifying some existing conceptual framework.

As a consequence of my interest in generating a theoretical discussion, prestructured experimental methods were of little value in this undertaking. I used no predetermined guide or design in generating the concepts that will be presented, nor was there any sample population selected for study. As the research evolved over a period of several years, different populations were observed. Where I was observing and what I was looking for was determined by: A) conceptual problems that emerged from prior observation, reading and discussion, and B) the problem of managing other demands on one's time that have nothing to do with the particular focus of research, but which inevitably affect what one sees and does.

While the central core of ideas changed and evolved over time, there were systematic aspects to the process. The basic procedure I followed was derived from: The Discovery of Grounded Theory[8] by Barney Glaser and Anselm Strauss. I took notes as I observed and new observations were considered in light of the developing conceptual position which I periodically summarized in a series of memos. While this

method lacks the observational rigor and preciseness of the highly structured design, it is particularly useful for investigating problems that cross cut a number of differing social situations and are as difficult to observe as is the general problem of the effect of social interaction on learning.

It is interesting to note that this methodological approach is fundamentally compatible with the general epistemological view that I adopt thoughout this work.

The general epistemological position that has guided my methodology is based upon the proposition that an ultimate distinction between the observer and the subject of observation is impossible. If one makes this assumption, then it follows that ultimate knowledge of events is also unattainable. Any knowledge is always partial; it is relative in the sense that the observer's perspective limits the field of what can be known.

Empiricism, the view that knowledge about the world should be grounded in observation, does not contradict this epistemological assumption. The major advantage that accrues to an empirical approach derives from the fact that observing and stipulating the conditions of observation makes it much easier for the reader to evaluate one's theoretical statements than if these conditions of observation are not precisely defined.

The inherent reasonableness and logic of such a position I think accounts in good measure for the emphasis on technique in much of contemporary social science research. But if we assume that it is not possible to attain ultimate knowledge, then it follows that there are always definite limits to the

precision which is possible in observing any phenomenon. The unavoidable interaction that always develops between the observer and the subject of observation makes it inevitable that there are always limits to the certainty which is possible in any observation situation. Certainty then is <u>always</u> a matter of degree. The scientific enterprise involves a continual compromise that balances the need for precise observation with the need to explain and describe phenomena that are difficult to observe.

The simple observation task of measuring room temperature provides an illustration of this dilemma. If we measure room temperature in the conventional manner by using a column of mercury, it is possible to increase the accuracy of our measurement by adding more mercury and lengthening and narrowing the containing column. By taking such a tack we would in effect increase the increment that obtains between any two points on our temperature scale.

But there are limits to the precision that is possible. As we increase the precision of our observation, it becomes increasingly apparent that the temperature of the room and the volume of mercury are interrelated. Logically one can show that the process of increasing room temperature and thereby increasing the volume of mercury also has built into it an observer effect, (the cooling effect in the room as heat is dissipated in the energy conversion). Usually such observer effects are trivial, but they are nevertheless <u>always operative</u>.

Precise observation coupled with the stipulation of the conditions of observation is a good strategy, because it usually facilitates understanding, but by no means <u>guarantees</u>

understanding. In the room temperature illustration highly precise observation may in fact obscure important issues regarding room temperature by focusing attention on the details of measurement. In the social sciences this tendency has been identified by a number of writers. C. Wright Mills argued that such practices constituted "abstracted empriricism" or "an over elaboration of method."[9]

One of the central issues that I have tried to raise in the chapters that follow is the fact that context is major component (or variable) in the process of knowing. An inherent weakness in a view that posits that precise stipulation of the conditions of observation is a requisite for good research is that this view limits the context of what constitutes good or adequate research.

For example, I have tried to describe the unattended frames that set the perceptions of the learner. Insofar as this process constitutes a general social interactional problem that cross cuts a number of learning situations (all of which have by no means been exhausted in this account) and insofar as my purpose in writing this account has been to begin an <u>exploration</u> of these issues, it is highly likely that any attempt to satisfy rigid observation criteria would have frustrated the overall process from its inception.

It is important to note that I did not start out with the notion of metalearning; it emerged as I reflected upon the meaning of my observations. My purpose in reviewing the epistemological grounds upon which this study is based is not to present a case against empiricism (or neopositivism for that matter). I introduce the notion of indeterminacy to

emphasize the importance of striking a compromise in approaching methodological problems in a scientific context. As the example of temperature measurement illustrates, there is a point where increasing the precision of measurement is absurd. Similarly, in the social sciences one can make a good case for the fact that we may be suffering from methodological overkill.

If an ultimate rationale for the activities of persons who call themselves social scientists is required (a rather dubious assumption), one can make a case for the position that such a rationale should center around the issue of making sense of the world. Any methodology that one employs should only function as a means toward this end. It is for this reason that I have chosen a brief history of the evoluation of the concept of metalearning as a guide for the reader, rather than an involved description of the conditions of observation. While observation has been an important element in this process (as examples from my field notes suggest) the conditions of observation have been imprecise, the task and timetable of the research deliberately vague and the final product colored by the observer's perspective.

Knowing this, the reader should be adequately forewarned. No claim is made that an objective verified theory of learning is presented. However, I would argue that the matters discussed in the following chapters do make sense of some very important problems and issues in the sociology of learning.

Since verification was not the concern and generating a theoretical discussion was, it follows that the usual description of methodology would be of little interest to the

reader. It is my contention that an assessment of the value of the concepts I introduce does not rest on whether or not this work is sufficiently operatinalized to permit replication; rather the concepts should be judged in the larger context of whether the ideas are credible, whether they advance knowledge and make sense of the phenomena that I am discussing.

In order for the reader to have some idea of how I arrived at the concepts that are presented in the pages that follow, I would like to present a brief history that attempts to show how the ideas developed over time.

In the closing months of 1970.I was employed as a field researcher on a national study of adult education. While the origin of any set of ideas is usually vague, an early theoretical issue that eventually evolved into the notion of metalearning became problematic for me as a result of my participation in this study.

The study involved observations in adult basic education classrooms in several major cities in the western region of the United States. An important focus of this research project was the role that paraprofessionals play in these adult educational settings. The issue that I came to see as problematic as a result of these observations was the fact that the presence of an additional "teacher" (the paraprofessional) created organizational difficulties in some classrooms and not in others. The behavioral routines in some classrooms seemed to leave little room for the paraprofessional role. The problem that emerged in my mind was: why did there seem to be room for this role in some classrooms and not in others?

After a period of about six months my involvement with the adult education study ended. I nevertheless continued researching the problem of behavioral "room" in the classroom by shifting my observations to several Berkeley Unified School District elementary classrooms that employed teacher aides. By this time my thinking had developed to the point where I was considering a "dramaturgic" analogy.[10] My notion was that some classrooms had a central stage with a definite script or set of specified roles that excluded more than one teacher.

As time passed I began to see that this conception was inadequate, because it revealed very little about how the behavioral rules or script evolved in any given classroom. Coincident with these theoretical problems I began accumulating a set of observations that contradicted this notion of a stage dominated by one star. I began to observe that <u>every</u> classroom had some competition for whatever focus there was. As I tried to come to terms with how students saw or defined the situation, all manner of multiple meanings and interpretations of the lesson seemed to be the rule.

I began to realize that this notion of multiple meanings or "latent lessons" was a general phenomena that had important social psychological implications. The problem of room for teacher aides was only a minor part of this more general problem of how the individual interactants in a classroom arrive at their definitions of the situation.

My obervations led me to the view that each individual defined the situation in part as a result of the behavior of others. It was not so much what was intentionally and

explicitly said and done by the others, but what was assumed by the others (and functioned as an orientation and framework for their behavior) that formed the basis around which a given individual of necessity had to construct his own definition of the situation.

Symbolic interaction involves a dual process. Not only does meaning derive from convention or explicit agreement on signs and words, meaning is always constructed in a situation where the intentions of the others are assessed by what is explicitly said and by the larger context within which the explicit behavior has been constructed.

In general this larger context is rarely called into question. It is only when we feel something is wrong or when we do not understand some behavior that we begin to question the assumptions that others are making. Normally we take these assumptions for granted.

When as outsiders we observe a group of people interacting, it is the deviant, the problem person who usually makes the assumptions that are operative in the situation apparent. In my classroom observations the problem students revealed a good deal about their own assumptive systems; but more importantly they revealed a good deal about the assumptive systems of the others. As I will attempt to show in the pages that follow, normal and extraordinary behavior in classrooms are inextricably linked in self perpetuating systems.

Metalearning is a shorthand for the system of assumptions that sets the daily life in the classroom. These assumptions, while rarely questioned, form the background against which each student constructs his behavior. In this way each student

arrives at a definition of the situation that accounts for the behavior of others as well as his own and which sets what he learns in important ways.

NOTES INTRODUCTION

1. Ernest Campbell in an introduction to Sarane Boocock's An Introduction to the Sociology of Learning, New York: Houghton Mifflin, 1972, P. vii.

2. Mannheim, Karl, Ideology and Utopia, New York: Harcourt Brace, 1936, p. 3.

3. See Boocock, op. cit., Part III or Guskin, Alan and Guskin, Samuel, A Social Psychology of Education, Menlo Park: Addison Wesley, 1970, for a summary and discussion of these studies.

4. Stinchcomb, Arthur, Rebellion in a High School, Chicago: Quadrangle Books, 1964.

5. Becker, Howar, et. al., Boys in White, New York: Brown, 1972.

6. Rosenthal, Robert and Jacobson, Lenore, Pygmalion in the Classroom, New York: Holt, Rinehart, Winston, 1968.

7. Mead, George Herbert, "The Psychology of Social Consciousness Implied in Instruction," Science XXXI (1910) p. 693.

8. Glaser, Barney and Strauss, Anselm, The Discovery of Grounded Theory, Chicago: Aldine, 1967.

9. Mills, C. Wright, The Sociological Imagination, New York: Grove Press, 1963; see especially Chapter 3.

10. For a discussion of this approach see: Maurice Stein, Eclipse of Community, New York: Harper and Row, 1964.

CHAPTER I THE SOCIAL PSYCHOLOGY OF LEARNING

Because of our familiarity with the school setting most of us assume that we know a good deal about the meaning of the behavior that we see when we are present in a classroom. Even if the subject taught is unfamiliar, we are often disposed to make certain assumptions about the nature of the activity that we are observing. Common sense tells us, as well as the others who are present, that an activity with definite boundaries, expectations and purpose is taking place.

If you question any of the participants about the nature of the activity, the assumptions that they are making about the nature of the situation are revealed in their responses. Remarks like: "This is a geography lesson" or"We are doing the problems on page twenty-one," reveal that there is usually a good deal of consensus about the nature of a given activity. But, answers of this sort reveal a deeper, more universal form of agreement; they reveal that each of the parties is in fundamental agreement on the fact that a fairly well defined, purposeful activity is in progress. This agreement is rarely noted; it is so much a part of the definition of the situation that it almost always is taken for granted.

If one of the participants were to respond that he or she didn't know what was happening, we would immediately infer that the person hadn't been paying attention or that some unknown factor had somehow blocked the perception of the event. But, we shy away from the interpretations which require the assumption that there may be no meaning or multiple meanings in the situation. To raise such possibilities is to make our usual

unselfconscious performance difficult in these situations. In fact, one can make a good case for the position that in order for individuals to engage in any prolonged collective activity, it is necessary that these kinds of issues be taken for granted.

Yet if our purpose is not to interact and if we probe more deeply into the experiences of the participants in classrooms we find that even in those classrooms with the most concentrated and focused activities there are all manner of perspectives, interpretations and private worlds present. To speak of the meaning of the activity is to do violence to the reality of this multiplicity of perspective. From a rigidly logical point of view, the response: "I don't know," is perhaps the most accurate rendering of the situation.

If as an observer, one could assume the perspectives of each of the participants, each with it's own ideosyncratic development then it might be possible to say with some degree of certainty that one understands the meaning of the situation. Clearly this kind of certainty is as impossible in social settings as it is with similar problems encountered in the physical sciences.[1]

In a sense the "meaning" of a situation derives from the meanings that are attributed to it by the participants. Each provides a definition of the situation for himself. Behavior is the result of each individual acting upon his definition of the situation for himself and the subsequent readjustment of this definition as the other reacts to his behavior.[2]

Each participant acts toward the situation as if it had meaning (that is, that the meaning is in some sense objective and unitary); nevertheless, in accounting for this state of

affairs one need not make the common sense assumption, rather, the more realistic view, that there are continually readjusted meanings in the situation is probably the better alternative.

As indicated earlier, collective activity requires boundaries; in order to engage in it requires that one make several key assumptions. To become preoccupied with these boundaries or sets is to make it difficult if not impossible to interact. While at any time these boundaries or frames or sets may be attended to, usually this does not happen unless some serious threat to the definition of the situation occurs.[3] The fact that at times we can begin to talk about what it is that we are taking for granted; I take as evidence that these factors are operative as part of the definition of the situation. That they are not attended to (are not the focus of attention of the actors) should not exclude them from an analysis of the situation. It is precisely because they are ignored and yet are major constituents of the frame or set for experiencing a situation that makes these factors important.

The meaning that an individual attributes to a situation is derived in part from the overt behavior of others and in part from the unspoken, unindicated frame or set that surrounds a particular gesture or action. Any given behavior presents with it a whole potential field of interpretation which the recipient of that behavior must delineate and come to terms with. Each of us comes to terms with the gestures of others in our own unique way. We act on the basis of our definition of the situation and in so doing (in acting) we set off a similar process in the other person. In this way meaning is constructed in interaction with others.

In the classroom the meaning that any individual attributes

to the situation, in a sense what he is capable of perceiving and learning, is developed out of this kind of process. While behavior in most classroom situations is infinitely varied, there are limits and patterns to the way the situations are typically defined. Understanding these patterns required that one take into account the unattended frames, sets and boundaries that the learner develops through his interaction with others. The term metalearning can be used to indicate these boundaries which the learner assumes as he interacts. The prefix "meta" stands for that which is beyond, surrounding or outside.

Metalearning refers to a process that characterizes the way that students experience the learning situation and consequently how they act and what they learn. Metalearning in any given situation depends on the interaction that develops between a given learner and the ongoing structure of behavior in that situation. Thus the focus of the discussion is social interaction. Learning then is to be conceived of not as an attribute of an individual but rather as a consequence of an interactive process. The value of this view is that it avoids some of the more troubling problems associated with the way we usually conceive of learning.

These problems result from several inappropriate assumptions of what the process of learning involves. These assumptions about the nature of learning ignore the context of interaction; they tend to cluster around two tendencies.

The first tendency (hereafter referred to as environmental determinism) makes the error of assuming that the individual plays little or no active role in learning. The learner is treated as if the primary function of his mental process was the storage of information; he is seen as a receptacle for retaining factual

knowledge about the world. A correlary assumption is that of seeing the learner as totally malleable; he is viewed in terms of how he may be molded by those around him, especially by his teachers through the use of highly structured materials and lessons.

The other tendency (hereafter called individualistic reductionism) incorrectly assumes that certain problems of learning can be explained in terms of individual disability. While it is necessary to come to terms with the physiological processes that underlie learning, this perspective presents little or no information about these processes. Instead, the notion of "superior" and "inferior" ability is introduced as an explanation for certain behaviors that learners exhibit.

A brief review of several formative contributions to the way we usually think about learning and the problems that these conceptions engender should make the value of the interactive conception more obvious.

One can demonstrate the interactive nature of learning even in the early learning experiments even though this was not the intent of the researchers. Usually when we think of classical conditioning we think of a passive organism whose behavior is shaped by the stimulus. The stimulus calls forth the response; it dominates our attention while the response itself is given little consideration. Yet underlying the experimentation in classical conditioning is the biological necessity for a response that alters the environment. Natural activity (such as salivation in the presence of food) is the basis upon which stimulus-response theory is constructed. By forcing the association of the conditioned stimulus (a bell) with the unconditioned stimulus (food) Pavlov superimposed a

set of laboratory conditions on the natural activity of the organism.[4]

On the biological level, salivation is a necessary process by which the organism begins the digestion of ingested food. The activity of the organism is tied to the perception of variation in the environment. In this case the sound of food becomes a relevant perception. Salivation is only one of a whole complex set of behaviors that the dog must employ in order to survive. The dog's response is a very important part of an ongoing interaction with the environment. If the interaction is short circuited at any point- if for example, salivation were to have no chemical effect on the food, then the whole process is affected. In cases where the response of the organism is ineffectual, extinction of learning is the most probable outcome.

Later experimentation with operant conditioning used the same model to produce more refined learning. Operant conditioning harnesses the goal directed behavior of the organism (e.g. its normal activity) by reinforcing selected elements in the behavioral repertoire of the organism. In this manner a pigeon can be taught to move to the right by reinforcing this behavior with food as the behavior appears in the random activity of the bird. Quickly, the pigeon learns to achieve its goal (food) by performing the appropriate behavior. By rewarding gross activity at first, and by continually refining the activity which is rewarded, it is possible to teach highly complex behavior. Skinner suggests that children acquire speech through a similar process. That is, the child's "correct" speech is reinforced and refined by the people around him.[5]

This view of speech acquisition has been criticized by Chomsky. He argues that the operant conditioning model does

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not account for the speed and economy which children demonstrate in learning language. He posits a universal facility or structure (probably an innate physical quality of the brain)[6] which the child brings to the learning situation. The particular conventions of a given language (the surface structure in Chomsky's terms) are then incorporated by the child into his speech using this universal grammar as a framework. Not only is speech acquired quickly but the child is capable of generating novel sentences. Were he completely dependent upon his reinforcing environment, this characteristic of human speech would be impossible.

While Chomsky's position has been criticized,[7] his emphasis on the novelty and autonomy that the learner exhibits as he goes about acquiring speech suggests that traditional learning theory requires some modification, at least insofar as it assumes a model of the learner as a passive recipient of "knowledge". The propensity to view learning in this manner often derives from the fact that the context of the learning situation has been ignored. The experimental situation, because it controls so much of the environment often produces this kind of imagery and model of learning.

Similarly much of the discussion of individual ability insofar as it also focuses on the learner in isolation from the context of interaction also runs similar risks of producing inappropriate models of learning. Performance on some standardized test is taken as an indication of some underlying ability in the individual. The fact that an initial performance correlates well with similar kinds of performances over time is taken as evidence of the reliability and validity of the technique. Yet validity and reliability are two quite separate

issues. Many of the tests are undoubtably reliable; performance on them tends to be consistent. Validity is another question- if intelligence is no more than an ability to perform in a certain way on certain kinds of tests, then the validity claim is justified. Yet if the proponent of I.Q. testing makes no claim beyond this, then one must question the procedure as trivial. The issues become much more complicated once the dis cussion centers around the meaning that is to be attributed to test performance. Test results may be correlated with other factors, such as grades or race. It is at this point that the inadequacy of a conception that treats the learner as an entity isolated from interaction becomes manifest. While the relationship between grades, race and some underlying physiological process presumably tapped by I.Q. tests is an open question, it is obvious that any explanation that does not take into account the learner's interaction with his environment falls far short of providing a useful understanding of how learning is possible.

From a logical standpoint the validity argument for these tests hinges on the fact that they stand as indicators of some process (presumably physiological at base) that is located in the individual; hence, one tests individuals. The notion of mind and thinking presumed by this conception of intelligence is quite different from the social psychological assumptions underlying metalearning.

Yet one may ask, even if we assume that thinking is a process to be understood primarily in individual terms, what would an adequate theory of intelligence have to explain? First we would have to have some physiological statement about brain function. These statements would have to focus on

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factors such as genetic, chemical, electrical, structural elements of the brain and their interrelation. These processes would have to be tied to characteristic behavioral responses. The tests then would serve as an aid in establishing links between the physiological and behavioral systems by standardizing the behaviors that would be considered.

There are a number of objections to this view. The tests tend to force premature closure on what constitutes superior intelligence. For example, speed is often a valued factor in the tests, yet many of real life problems do not present themselves for solution in short, clearly delineated form, nor is speed always a crucial factor in problem solution. More importantly the tests are rarely used as a means of getting at the process of thinking; rather they are used to label behavior.

In all probability, intelligence is much like computer thinking, that is, assessing the potential requires some knowledge of circuitry- but what is far more important is the nature of the program. Conceiving of intelligence as an attribute of individuals focuses attention away from the program, perhaps when it is precisely the program that must be considered.

There are of course other approaches to the study of intelligence; the Geneva school is a prime example of an alternate way of viewing intelligence. The important differences between what Piaget and his colleagues have studied and the position criticized here are: A) The Geneva school observes children in actual learning situations, using the child's behavior, including "mistakes," to generate theory, B) the child is seen as active and to some degree learning is viewed as interactive, and C) the purpose is not to differentiate

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ability so much as it is to understand the process that leads to the development of "operational thought".

The importance of understanding the learner in terms of the context of the learning situation is demonstrated in the work on Black speech.[8] Apparently some of the difficulty that black children have in culturally white classrooms is due to the fact that the language they speak is different in fundamental ways from white speech. As long as the focus of attention is the child and the problems of learning that he presents, it is difficult to see the role that white language and curriculum play in the process.

Briefly, to review the position presented so far: inappropriate assumptions about the nature of learning tend to cluster into two main tendencies. The first set of problems that derive from the failure to consider contexts are problems associated with environmental deterministic assumptions. The learner is treated as if all his learning were produced or programmed by others in the situation. It is assumed that the learner plays little or no role in constructing his world. Criticism of this view is implicit in Chomsky's critique of Skinner.[9]

Another set of problems deriving from the failure to consider the learner in context falls under the rubric of problems associated with individualistic reductionism. In this view, problems of learning are seen as problems of the learner. They are internal to or reside in particular individuals. The individual is seen as having some disability. Since Marx and Durkheim antireductionist thinking permeates all the sociological literature. The literature on deviance is especially

critical of this view. Yet, on the whole, educators and pedagogues have been little influenced by this thinking.

The problem that is faced by theorists of learning in attempting to come to terms with the learner as part of his situation is very similar to those problems faced by theorists and practitioners in the field of mental health. R.D. Laing states the problem this way:[10]

> Unless we begin with the concept of man in relation to other men and from the beginning 'in' a world, and unless we realize that man does not exist without 'his' world nor can his world exist without him, we are condemned to start our study of schizoid and schizophrenic people with a verbal and conceptual splitting that matches the split up of the totality of the schizoid being-in-the-world. Moreover, the secondary verbal and conceptual task of reintegrating the various bits and pieces will parallel the despairing efforts of the schizophrenic to put his disintegrated self and world together again.

The parallel with learning problems in classrooms is obvious. Much of the rhetoric assumed by experts concerning learning problems has similar contours to the psychiatric labeling process. As long as the attempt is made to treat learning problems outside the context of learning (the learning situation), teachers will find themselves in the position of "conceptual splitting' that matches the split of the learner. Similarly any theory based on testing which ignores this context runs the same risk of conceptual splitting.

What I am suggesting here is an analogous process to the one that Laing and others discuss. Often not only are we confronted by an alienated student, we are also confronted by a situation which alienates the learner by using categories to come to terms with his problem that then further complicate the problem. This discussion will be elaborated in another

section.

The notion of metalearning provides a point of departure from which we may begin to construct the process of learning without resorting to either individual reductionist or environmental deterministic positions. Conceiving of learning as an attribute of situations rather than individuals requires that we have some vocabulary or means for coming to terms with the definition of the situation that participants are invoking. Metalearning attempts to describe properties of the milieu that are normally taken for granted which nevertheless structure the kinds of experiences that are possible in that situation.

The concept of metalearning derives from the notion that an individual's behavior is usually perceived as communicating or revealing somewhat more than he intends. "At any moment in time each of us reveals to the outside world a huge manifold of cues out of which only a small number are experienced within awareness."[11] As a result each of us continually hypothesizes, interprets and in general comes to terms with the often complex, always revealing behavior of others. We understand others in part on the basis of what they intentionally reveal and in part on the basis of unspoken, unattended frames which surround their behavior.

This process is operative in all aspects of everyday life, including those situations either formally or informally defined as learning situations. Metalearning is a concept which attempts to characterize the process that gives rise to typical or patterned ways of experiencing the learning situation.

Obviously the role of teacher is an important one in

contributing to the set that a student will adopt, for one course of action tends to preempt others and normally the teacher initiates much of the interaction.

While sequentiality is an important aspect of providing the frame that is likely to be adopted, the preempting of possible definitions in a situation is not necessarily a matter of sequence alone. For example, while observing in a primary grade classroom I happened to put my arm around the shoulder of one of the children. As soon as I did this he pushed away saying: "You can't touch me." This action preempted much of the behavior that I could initiate at that point. Even were I to ignore his behavior and attempt to start again on another tack, our future interaction would of necessity be colored by this event. While his behavior wasn't the first act in the sequence (I touched him before he spoke) it was nevertheless a forceful event, even though ignored by my later behavior that defined the terms of our later interaction.

While the teacher plays an important role in the process of setting the bounds for interaction, this example illustrates that the ability to control the definition of the situation by the teachers or other adults is rarely ubiquitous. As suggested earlier, much of the interaction in classrooms derives from the attempt by the teacher to create a world with the others by presenting a course of behavior that produces an interaction sequence with an objective or obvious learning configuration. Yet as we have seen this reality is created, in fact there may be little "reality" to a particular interactional sequence. The following example illustrates how the taken for granted may in fact be quite the opposite, when

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I assigned a reading selection to a large group of students for reading prior to a lecture on a related topic. I indicated that the assignment should be read to derive greatest benefit from the lecture. When I gave the lecture my behavior presented the frame that I assumed the reading had been done; in fact part of the lecture was unintelligible without reading the assignment. Later as I reviewed the situation in my mind I realized that in all probability the assumption that the assignment had been read was fallacious and that we were all probably participating in the perpetration of a fiction.

Undoubtably some students had read the assignment, whether they constituted a majority I had no way of knowing, but one fact was almost certain, there was a large group who had not read the assignment. One of the covert norms of student life is that reading is done prior to exams, not necessarily prior to any lectures on the topic. If one is aware one avoids this kind of situation, but often in teaching these kinds of ironies crop up despite one's best efforts to avoid them.

As a student I had often experienced the uneasiness that arises in a classroom when there is a threat that these kinds of unmaskings might arise. Invariable the situation is normalized even when a profound unmasking has taken place. In one classroom it became painfully apparent to most of those present that the teacher had not read the assignment. One could sense the uneasiness in the air; some of the students actually appeared to be experiencing physical discomfort. After a brief period of fumbling for the former line of

interaction, the tension in the room began to recede and although there were some recurrent tense moments on the whole the interaction continued as if nothing of consequence had transpired.

The fact that the situation is quickly normalized should not be considered as exceptional; to repeat, it is necessary that certain issues not be treated as problematic in order for interaction to continue. What these situations reveal is that the reality of the situation is created by the participants and that this reality is subject to change and redefinition.

In any given classroom there are always a number of competing contextual interpretations. We may speak then of any learning situation as presenting the potential for multiple lessons, depending upon the frame or set that the particular behavior is considered within. In some instances this fact is recognized by teachers and consciously employed to enrich the potential for learning in the situation. Teachers who recognize that they are forcing students to use one meaning system instrumentally while focusing on a problem of a different order, as when they ask: "How many 'a's' are there in the sentence: the cat ate the rat?" may be consciously manipulating categories of relevance in order to produce double lessons. In this example the student is required to make use of two separate and distinct skills as he or she engages the problem. That is, some exploration of mathmatics and spelling are required for "proper" solution of the problem.

Almost all learning contexts entail at least a double lesson, insofar as the learner is usually faced at minimum with the problem of communicating his discovery in addition

to having confronted whatever problem he faced in the first place. In some instances where there is much complex behavior required on the part of the learner, a given lesson may entail engaging in a number of contextual redefinitions as the learner follows the problems that crop up in the course of his investigation. As we have discussed, the potential contextual interpretations that a given learner may attribute to any particular situation are infinitely varied, while some definitions tend to predominate, the situation always retains the potential for redefinition.

Intuitively teachers rely on the informal meaning systems usually operative in most classrooms to reinforce the lesson, as when leaders are singled out for special attention on the assumption that if an example can be set with them other students will benefit. An analogous though more formalized process can be observed in the use of sociometric techniques in the classroom. Unfortunately on the whole sociometric techniques are not used as productively as they might be. Given the fact that our knowledge of the meaning and significance of informal, associational systems, especially their function for learning, is so little developed, it is not surprising that teachers can take so little advantage of what should be an important consideration in teaching.

While at varying times to varying degrees teachers are aware of multiple meanings it is also the case that much of the time these meanings are not attended to. John Holt cites the following: [12]

> Children are often quite frank about the strategies they use to get answers out of a teacher. I once observed a class in which the teacher was testing her students on parts of speech. On the blackboard she had three columns, headed Noun, Adjective and Verb. As she gave

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> each word, she called on the child and asked in which column the word belonged... There was a good deal of the tried and true strategy of guess and look, in which you start to say a word while scrutinizing the teacher's face to see whether you are on the right track or not. With most teachers no further strategies are needed. This one was more poker faced than most, so guess and look wasn't working very well. Still the percentage of hits was remarkably high, especially since it was clear to me from the way the children were talking and acting that they hadn't a notion of what Nouns, Verbs, and Adjectives were. Finally one child said, 'Miss ---, you shouldn't point to the answer each time.'

In this case, the teacher is unaware of the meaning system that is being invoked to come up with the right answer. Her physical presence, her gesturing is not taken as a category of relevance by her, whereas the children are using the metalesson derived from taking into account physical presence.

Not only is it possible for teachers to be unclear about or unaware of contextual interpretation that students are invoking in particular situations, it is also the case that students may be unaware of unclear about the parameters that are being invoked by teachers. An analogous phenomena has been demonstrated in a number of studies of perception. Let us use a drawing cited by Kohler as an example.[13] What the observer is likely to see in figure 1 are two relatively unfamiliar figures with a horizontal line running through them. In all probability it is not until one is told that the number 4 is contained in the figure that its existence as a visual fact becomes manifest. For the Gestaltist, organization and perception are inseparable. In an analogous way we may speak of classroom interaction as made up of gestalten. The student may not be aware of the key (in our figure the number 4) that

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unveils the teachers world. In that event for all practical purposes, student and teacher exist in different worlds; it is futile to attempt to discuss one or the other as the "real" world.

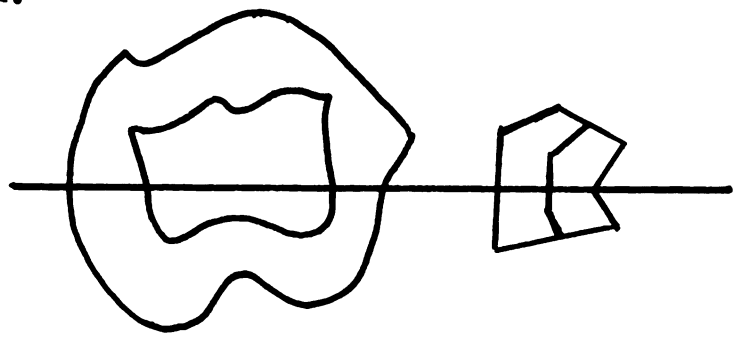

FIGURE 1

Similarly, studies recently completed suggest that persons from different cultures tend to "see" different objects when confronted by the same picture.[14] These studies reinforce the notion that what is "there" is by no means given; what is most important are the kinds of sets that the observer (learner) brings to a situation. Prior experience, especially one's cultural experience, plays an important role in the process.

The following observation from an English as a Second Language class illustrates how culture (especially language) can produce separate lessons depending on the referent that is used to orient the lesson.

> The teacher (who spoke no Spanish) was trying to get across to her students (most of whom spoke Spanish) the meaning of the word 'sauce'. She pointed out that a sauce went on top of things like meat or poultry or even vegetables. She mentioned soy sauce and then emphasized 'chile' to stand for a Mexican sauce that she was familiar with. For her Spanish speaking students the word 'chile' denoted either a pepper or a country in South America. The fact that she emphasized the word 'chile' rather than 'sauce' (which has a similar cognate in the Spanish word 'salsa') meant that her meaning was lost to many of her Spanish speaking students.

In addition to the fact that culture and past experiences influence what is selected as relevant and consequently the context one assumes, there are a number of typical characteristics of learning situations in our society that predispose the establishment of certain typical contextual interpretations. These characteristics and the way the process operates to produce the definition of the situation will be discussed in the chapters that follow.

The contextual assumptions that a learner makes, the boundaries, frames and sets that he or she assumes are what I am calling metalearning. Metalearning is in part a function of past experience (including one's culture), but metalearning is <u>also</u> a function of the way behavior develops in certain social settings, most notably the classroom situation. The more or less typical ways behavior is patterned in classrooms as well as the unique history of events in any given classroom all contribute to the learner's definition of the situation. These processes are significantly implicated in what we commonly call "learning" in real life settings. They are processes that treat learning as a function of the actions of individuals in actual social situations, not as abstractions that apply to laboratory experiments or other highly structured situations.

The concept of metalearning is useful for handling a neglected but nevertheless essential aspect of learning: the fact that learning, like all human behavior is emergent. That is, the individual does not "take on" in any mechanical way a set of ideas that is somehow given; rather, learning is an active process, one that requires that the individual establish a definition of the situation for himself. This definition

of the situation includes past experience but also it includes an image that is contructed by the learner of his role in the situation as he confronts the necessity of fitting his behavior in with that of others and thereby creating meaning in the situation. Metalearning refers to this process of contructing a definition of the learning situation.

Just as learners are involved in the construction of their own definitions of the situation, teacher's also construct a definition of the situation in interaction with others. What is assumed or taken for granted by the teacher is not given in any classroom situation; it evolves and has a history and is the result of the same process that is operative with respect to the development of meaning in any human interaction situation.

My purpose has <u>not</u> been to create a model of the teaching role that is either determinist or reductionist in the ways I have characterized certain theories of learning. As I suggest in the introduction, metalearning refers to a process that is operative in many different situations. The same principles that apply to the <u>learner</u> also applies to the <u>teacher</u> because each is involved in the contruction of the meaning of the event. From a social interactionist point of view, learning and teaching involve essentially the same problem (that of arriving at a meaningful definition of the situation). I emphasize the learning aspect of the problem because it is the traditional focus in discussing the educational setting.

Just as it is possible for the learner to broaden his perspective in order to take into account previously unattended assumptions that set his experience, it is also the case that

teachers can make the same "leaps" out of their own prior definitional systems. Part of my purpose in presenting this discussion of metalearning has been to make such revisions of assumptions more likely when problems are experienced. The final chapter attempts to suggest strategies that may be employed in order to minimize the effects of one's assumptive system by making that system problematic.

The point is not that assumptions are inviolate, rather it is that assumptions are necessary but that they also account for many problems that arise as the definition of the situation evolves.

The purpose of this chapter has been to outline some of the social psychological assumptions that underlie a social interactionist perspective toward learning. The notion of metalearning has been introduced and it has been suggested that this concept should be useful in coming to terms with the way the learner constructs his world- the way he goes about learning. It has been suggested that an interactionist perspective avoids some of the pitfalls associated with environmental determinist and individualistic reductionist assumptions.

1. The problem is one of observer distortion. That is the observer can't be in all places at the same time. See for example: Heisenberg, Werner, Physicist's Conception of Nature (trans. Pomerans, Arnold) New York: Greenwood, 1958.

2. For a discussion of this position see: Mead, George Herbert, Mind, Self and Society, Chicago; University of Chicago Press, 1965. See especially the section on "meaning" in Chapter II.

3. For a discussion of this issue see: Garfinkel, Harold, "The Routine Grounds of Everyday Activity," Social Problems, Winter 1964 and Goffman, Erving, "Alienation from Interaction," Human Relations, Vol. X, No. 1, 1957.

4. Pavlov, Ivan P. (trans. G.V. Anrep), Conditioned Reflexes, London: Oxford University Press, 1927.

5. Skinner, B. F. Verbal Behavior, New York: Appleton-Century -Crofts, 1957.

6. Chomsky leaves open the question of the physical nature of the process. He states: "It seems to me that the most hopeful approach today is to describe the phenomena of language and of mental activity as accurately as possible, to try to develop an abstract theoretical apparatus that will as far as possible account for these phenomena and reveal the principles of their organization and functioning, without attempting, for the present,to relate the postulated mental structures and processes to any physiological mechanisms or to interpret mental fundtioning in terms of 'physical causes'. We can only leave open for the future the question of how these abstract structures and processes are realized or accounted for in some concrete terms, conceivably in terms that are not within the range of physical processes as presently understood; a conclusion that, if correct, should surprise no one." Chomsky, Noam, Language and Mind, New York: Harcourt, Brace & World, 1968, p. 12.

7. Searle points out that while Chomsky's contribution is: "one of the most remarkable intellectual achievements of the present era" (p. 23-24) it is nevertheless the case that he does not come to terms with an important element of human speech- namely its function: communication. According to Searle the speech act is essentially an attempt on the part of a speaker to produce certain effects on the hearer, and that the rules of speech are employed on the basis of these intentions; they are not merely formal propositions, to be understood independent of function. (John Searle, "Chomsky's Revolution in Linguistics," New York Review, June 29, 1972.)

8. Dillard, J. L., Black English, New York: Random House, 1972.

9. In addition to Chomsky, for a critique of this view as it applies generally to social action see: Dennis Wrong, "On the Oversocialized Concept of Man," ASR, Vol.26, April, 1961.

10. Laing, R. D., The Divided Self, Baltimore: Penguin Books, 1970, pages 19-20.

11. Tauber, Edward and Green, Maurice, Prelogical Experience, New York: Basic Books, 1959, p. 2. For a full treatment of the revelations that we make see: The Sociology of George Simmel, trans. and edit. by Kurt Wolff, Glencoe: The Free Press, 1950.

12. Holt, John, How Children Fail, New York: Dell Publishing Co., 1964, pages 14-15.

13. Kohler, Wolfgang, Gestalt Psychology, New York: Mentor, 1964, p. 110.

14. Deregowski, Jan B., "Pictorial Perception and Culture," Scientific American, Vol. 227, No. 5, November, 1972.

CHAPTER II STRUCTURING BEHAVIOR: SOME UNINTENDED CONSEQUENCES

In this chapter the teacher's attempt to involve the student with the lesson is examined. One strategy: The highly structured lesson is discussed, especially in terms of how this approach alienates some students. It is further argued that any strategy that the teacher attempts is likely to have unintended consequences for student learning. These consequences derive from the fact that any behavior must be situated in a context by the learner as he attempts to establish the meaning of the event. One possible explanation for inappropriate student definitions is the context that the teacher assumes.

The structure of behavior in classrooms derives in good measure from kinds of expectations that are set by the teacher. For the most part these expectations develop from the teacher's attempt to have students become involved with the particular subject that is to be presented. While usually these structures are taken for granted, in some cases formalized lesson plans, lecture outlines or other guidelines for behavior are prepared.

In terms of how students are expected to experience the lesson, this tack that the teacher takes can be seen as an incorporating strategy. The teacher's intention is to structure behavior so that the student becomes involved with the material to be learned (the curriculum). While this strategy may have as its goal the student's involvement, in actual fact the result may be quite the opposite.

Structures are patterns of behavior. They are the result of expectations shared by all that each person will behave in a proscribed manner. Students are socialized into classroom structures beginning with their earliest school

experiences. For the most part these behavioral expectations, although subject to modification in each new situation, are fairly stable and are reinforced throughout the school experience.

From the teacher's perspective, behavioral structures provide an organized approach to learning. Rather than the chaos of nonstructured behavior, structural routines focus interaction, exclude extraneous, irrelevant behavior, and make for the efficient use of classroom time. These structures are rarely attended to after they are initially established and yet they may have serious consequences in terms of how the class activity is experienced.

The term "structure" stands for a whole variety of behavioral expectations or routines that develop in classrooms as the result of the teacher's attempt to get the students involved with the particular curriculum that is to be learned. For example, a "structure" might take the form of a recitation routine, such as when students take turns answering from a book, or a structure may be non-verbal such as the way sound is typically managed in the classroom.

In addition to the teacher's reasons for establishing behavioral structures, there are other pressures that work toward the establishment and maintenance of these routines. Administrative pressures for: A. standardized curriculum and B. teacher accountability for student performance produce routinized-structured classrooms. By routinizing behavior the teacher can feel some assurance that he or she is in control, that things are running smoothly and that the material has been covered. Similarly, economic pressures which require that large numbers of students be processed by the education system,

produce pressure for bureaucatic or assembly line routines in the classroom.

While these pressures are operative in educational settings it is important to keep in mind that all social settings require some kind of routinization of expected behavior if there is to be any prolonged interaction. The point here is not to make a case for the removal of routines, but rather to show some of the consequences that derive from establishing certain structures. Hopefully, this knowledge can make it easier to come to terms with certain typical problems that evolve in educational settings.

In most classrooms behavioral structures themselves are the subject of attention only on occasions when special events have made them problematic. For example, routine behavior may become problematic in a classroom where an intrusion, such as the noise associated with street construction,makes the normal procedure impossible. Under these conditions, new structures for managing sound are necessary. Attention is focused on sound and some considerable time and effort may be required before an effective alternate procedure for managing sound levels is evolved.

In some classrooms however attention is focused on the establishment and maintenance of behavioral routines almost to the exclusion of other activity. This is especially the case where for one reason or another, the teacher is not focused on the material to be presented. If the teacher is unmotivated, lacks social interactional skills, feels threatened by the material, or for some other reason is unable to set the behavior of the students he or she may drift into (or may consciously adopt) a strategy of focus on structure. While

other foci are available (the possibilities for getting away from the subject are infinite), one of the patterns that typically evolves in the preoccupation with administrative detail. Discussions about the length of an assignment, recitation procedure, frequency and duration of examination, may become so frequent and prolonged that they may take the place of consideration of ther topics. Students may also attempt to manipulate the situation by promoting this kind of discussion in order to avoid what they fear may be an unpleasant experience with a particular subject.

In this way, discussions about how behavior is to be routinized and structured may become the focus of interaction that occurs in the classroom. What has been suggested is that these discussions represent avoidance mechanisms. Attention is focused on the background (the structures and routines) in order to avoid the threat posed by the problem that should presumably occupy the foreground- the lesson.

While these avoidance factors are certainly operative, a concern for the rationales that underlie structures and routines is often a justifiable pursuit for both teachers and students, especially where a given routine has alienated many students. Unfortunately the important questions that should be raised regarding particular behavioral structures are often ignored in these discussions. The dialogue usually evolves into one in which the eacher defends a particular procedure and the students attack it. Similarly in classrooms where the routine has not become problematic, these questions about that effect that is produced by a particular structure of behavior is rarely probed. The following situation illustrates

some of the salient problems that are associated with an invisible structure of behavior that is established as an incorporating strategy which nevertheless has different consequences when metalearning is considered.

> In one classroom that I was observing there was such an intricate pattern of recitation response in answering questions from the book that I was unaware of its existence for some time. Finally one day when the teacher called on a student and he responded: "It's not my turn," I began to look for the pattern. Ater a little careful observation, I was able to discern the pattern and soon I was able to predict who would be called on. The teacher would begin by calling on the student in the front row on her left, then she would call on the student in the back row on her right. In this way she would work her way toward the center of the class. From time to time she would use some variation on this basic pattern.

While the pattern of the recitation was not visible to me for some time, when I finally recognized it, I quickly saw that all of the students were very much aware of whose turn it was. Unfortunately what the teacher was apparently unaware of, yet what was perhaps the most salient fact about the entire situation, was the fact that the students were counting ahead to the answer that they would be required to recite and then they would take the time while the others were reciting to prepare their answer.

If I were to question the teacher about this situation, she might become aware of the fact that students were reading ahead for the answer to only one of the questions. In doing so they were disregarding the entire "lesson" that was being enacted before them. Without probing or in some way making the situation problematic for the teacher this fact remains obscured.

There is a famous illusion that was common during the

vaudeville era. Persons were made to appear and disappear from the stage with no apparent visible explanation for the phenomena. The illusion was accomplished by positioning mirrors on the stage in such a way that they produced reflected images which were taken by the audience as direct images. By carefully minipulating the lighting the attention of the audience could be focused thereby creating an illusion of reality which violated most of the assumptions that the audience held about the laws governing the functioning of the physical universe.

In the classroom the focus of attention is also important in creating illusions of reality. The illusion that is created in the situation of the recitation routine described earlier, is that an environment conducive to group learning had been created. Presumably each student is learning from the material presented by the others to the group. Yet as we have seen, many of the students are not concerned with the behavior of others, rather they are focused on their own performance, finding their question, preparing the answer and imagining how they will present themselves to the others. When they finally perform, the performance they give will focus attention in a direction quite different from the one which went into the construction of the behavior.

In this way an illusion is created, the structure of behavior produces an accomodation on the part of each student but what is learned is something quite different from the appearance of what is being learned. Each student is learning to give a performance, the performance includes presenting a right answer (one that is acceptable to others) but the performance itself may be manipulated to arrive at an acceptable

response, one which does not require a process in the student which it was the teacher's intention that he go through.

Students may respond in this kind of recitation situation in a number of ways. First of all they may engage in behavior that is related to the curriculum precept that the teacher is attempting to get across. They may have gone through the process in the way the teacher intends and they may have produced the correct answers. Or they may have the right answer but it may have been arrived at as the result of processes entirely different than the ones intended by the teacher. Other processes include various forms of "cheating," getting help from others or finding answers in other unsanctioned ways such as reading the teacher's nonverbal cues or just plain guessing.

In addition to this kind of behavior, all of which, at least on the surface, engages and is oriented toward the teacher's program, there are other student behaviors in these kinds of situations that are oriented in other directions. When the student is called upon he may enact any one of several other roles that are available in most classrooms. Clowns, tough guys, jocks, and dummies are examples of roles that are potentially available as alternatives to engaging the lesson. Without considering these roles in detail, at this point we can at least say that they represent potential roles for students who may not (for whatever reasons) be interested in directing attention toward the teacher's curriculum. In this case the response, while not acceptable from the point of view of the lesson, is nevertheless accepted de facto, because to engage the student requires abandonment of the proposed

curriculum- something which few teachers are willing to abide.

These examples suggest that when one considers the experience that students are actually having in classrooms, these experiences may be phenomena of an entirely different order than any superficial concern with the curriculum and methods of presentation might suggest. These observations, inaddition to revealing that it may often be the case that the student is not apprehending the material in the direct, simplistic way we often conceive of learning, also reveal that there are some factors which may be fairly consistent from the classroom to classroom. The situation limits the kinds of experiences that are possible- not all roles available outside the classroom are possible inside. For example, most of the time students cannot act out the role: "mom" or "dad" given normal definitions of what the classroom is. These roles are possible only under very special conditions (when playing house or if one's progeny are actually present).

In order to come to terms with the way behavior is patterned in classrooms and the consequences of this patterning, it is necessary to have some image or model of classroom interaction. One way of coming to terms with this problem is to construct an ideal type. The ideal type presented here is constructed from observations of many classrooms. Certain salient factors have been selected out of the total variety of behaviors possible in order to present a consistent whole. Any given classroom at any given time represents only an approximation of the ideal characteristics. What is described here is a tendency having certain consequences- this tendency while characteristic or no classroom in its entirety, is

nevertheless operative to some degree in all classrooms.

I have chosen to arrange these characteristics around the unifying theme of the highly structured classroom, obviously the converse- a loosely structured classroom- also implies certain characteristics and consequences. Since one set of terms derives its meaning from the other, any real situation represents the potential for analysis from either perspective. What should be kept in mind is not the fact that a particular style of teaching is being criticized but rather that there are certain factors that must be taken into account if one is to reconstruct the experience of the learner as he learns. These "background" factors are important insofar as they are constituents of the learner's definition of the situation.

There are a number of characteristics of interaction in the classrooms where behavior is highly structured by the teacher. Generally, highly structured classrooms have some central focus toward which all activity is to be directed. There is a defining event which evolves over time. While this defining event may develop and change- the fact that there is an event, as opposed to a diversity of events, remains constant.

Even though many persons are present interaction tends to take either the form of a monologue or a dialogue between teacher and student. Generally, students do not interact with one another; when they do, the interaction is usually defined by everyone as tangential to the central focus. This is the case even though in constructing their behavior each student must take into account the other students who are present. Behavior is oriented toward the teacher or toward

the teacher's definition of the situation.

The teacher controls the spotlight- who is to present themselves and what is relevant evolves from dyadic interaction between teacher and student. Many of the cues that set and maintain these structures are nonverbal. Eye contact is unidirectional, that is, it is primarily restricted to visual recognitions between the teacher and each individual student. Students may avoid interaction with the teacher and each individual student. Students may avoid interaction with the teacher by not looking up at her- or teachers may avoid engaging in dialogues about potentially diversionary behavior by not "seeing" it, but on the whole eye movement tends to be highly patterned. There is little of the rapid eye movement usually associated with states of great excitation of the organism. The mood of the classroom- that the situation is routine, with few astonishing characteristics, is especially revealed in the eye movements of students.

Similarly, bodies are oriented in space in such a way as to reinforce the behavioral routines. The classroom is usually surrounded by four walls. There is usually a requirement that there be little movement in the room. Each student is required to remain in a particular space and movement to and from this space is regulated and cued by the teacher. The classroom furniture may be oriented in such a way that dyadic interaction between teacher and student is vitually the only behavior that is possible without extreme contortions of the body. Furniture tends to be of the same type for each student- so that it functions in the same way for each student. Novel experience with the physical objects in the room is

minimized by these kinds of arrangements.

There is little that would be visually intrusive that is allowed to enter the room. Windows rarely open on an environment that contains novelty or other visual stimulation. Lighting is uniform and regulated. Temperature is controlled. In addition to furniture, other physical objects (including persons) are regulated in terms of what is acceptably present and what is not. Objects that may be visually, tactilly, or auditorilly interesting are excluded or regulated. Students are separated from physical contact with one another. Other physical objects that are present tend to be standardized and relatively uninteresting from the point of view of the nonverbal stimulation that they represent. (I have in mind other objects in the room such as books, pencils, chalk, etc.).

Extraneous sound and odor, generated outside the room is either physically excluded or minimized. Sound and odor within the room is controlled as much as possible. Even the few bodily processes which inevitably intrude are met with selective inattention. Selective inattention is aided by the existence of taboos concerning public discussions of these subjects. These bodily function taboos and prohibitions characteristic of most aspects of western culture tend to guarantee that the bodies of those present remain in the backgound and never become the sanctioned focus of attention. Those processes that cannot be sublimated (e.g. elimination of body waste) are usually handled with a routinized set of interactions.

In this way the nonverbal environment is manipulated so as to make it virtually impossible for novelty to intrude on the verbal interaction that is taking place. These factors insure that the student experiences the situation as one in

which there is a definite, specific focus of attention with a unitary meaning. Whether or not the student shares or participates in this meaning is an open question. The fact that the nonverbal environment when structured in this way produces a frame for interaction that sets the student for experienceing it as unitary is not open to question, however. The student must see the situation as unitary (that there is one proper meaning or interpretation of the situation). In order for the student to escape this conclusion and the orientation that flows from it, it would be necessary for him to hold as problematic most of these nonverbal structures- something which rarely happens.

In this kind of situation (one this is highly structured) the students become instruments in the teacher's plan. Getting through the lesson, with as few interruptions as possible becomes a dominant motivation for the teacher. A smooth, well paced performance is the goal. Whether or not the student knows and follows behavioral routines can become more important than whether or not he is learning. The student's performance is taken as an indication that he is learning. While this is often a safe assumption, as we have seen earlier- the performance may be the result of a process that is entirely different from the one that is intended by the teacher.

This kind of highly structured situation is usually organized around highly patterned materials. The teacher often relies completely on some plan or book as the guide for the lesson. Working in this kind of structured situation can mean that feedback from the student is short circuited before it can be used to redirect the lesson toward real problems

that the students are having with the material. It becomes very difficult to deviate from the plan. Students and events that intrude by presenting an alternate focus of attention are a threat to the plan and must be neutralized.

When this kind of situation develops successfully, then each student as a unique personality recedes into the background. The foreground is occupied with the progression of the lesson. As long as the inner world of the student is enough in accord with the requirements of the situation- as long as he is able to perform the operations required to assure the smooth functioning of the lesson, then the teacher encounters few problems with the system.

Inevitably, there are a few students whose inner dialogue is different from that required to produce a smoothly functioning lesson. These students are then thrown into the foreground- they cause interruptions which require that their behavior be treated as problematic. From the point of view of the teacher they have ceased to be instruments. As long as we use objects as instruments we are unconscious of their configuration.[1] When we become aware of what was at one time an instrument for us, we are unable to use the object in the same free flowing manner. For the teacher then these students are stumbling blocks that are very difficult to manage. Taking the point of view of the student who manifests this problem; he sees that his experience is of a different order than those around him, consequently his construction of his own behavior in future events is all the more problematic because of this awareness.

Even for highly independent students the pressure to

conform to behavioral routines is great. No matter how strongly a student resists the pressure of the collective, each student must confront the classroom as a world in which others conform to certain expectations. The others are experienced as being motivated toward conformity. Not only do they seem motivated but they also possess the ability- witness the fact that they do conform. It follows then that the history of behavior in a highly structured classroom is apprehended by each individual in part as a model requiring future behavior in conformity with certain rules. How then are we to account for deviation? It is not a matter of "personality" factors?

In order to explore these questions let us review an incident described earlier. In the recitation described earlier students were reading ahead for the right answer to their question. It was indicated that this kind of structuring produced a smooth, flowing performance in the classroom. The lesson moves quickly. Yet careful analysis reveals that there are limits to the speed at which a given lesson can proceed. Even if there are no other constraints, there are physical limits to the speed at which one can speak and be understood. Obviously there have to be pauses and interruptions- the situation itself creates the potential for and requires these pauses. Once a pause occurs the individual who is responsible is under a good deal of pressure from the others because he is impeding the foward progress of the lesson. But it is also to the advantage of the other students that the lesson slow down or stop at certain intervals. Obviously if speed and accuracy of response are relative then a "good" performance derives its meaning from a bad one. If one student

slows the lesson down, everyone else has more time to prepare. As a consequence, their response is all the more accurate and rapid. This of course means that for whatever reason the student was initially slower in responding- he is additionally burdened with an accelerating pace- the acceleration deriving from his own deceleration.

In this manner the social facts of the classroom are created. Each student is confronted with a performance that he must account for. We have seen how these social facts derive from the structure of interaction- yet the individual does not perceive the situation in these terms; for him the structure of interaction is invisible. This process is not restricted to recitation procedure and the consequent identities that develop around speed or accuracy of performance. It is a general social psychological phenomena in all classrooms. Learning identities develop in the learning context- it is not at all extraordinary that the construction of one particular identity derives its motive force from the identities of others. What <u>is</u> striking is the almost univeral tendency to ignore the interactional context as it structures the identities that will emerge. The invisibility of the interactional context contributes to the strength of the identities that develop. The student sees his behavior not as a result of an interaction with a situation that is structured in certain ways, rather he sees his performance as resulting solely from his own "ability" or "inability"- the <u>situation</u> recedes into the background and is seen as essentially benign.

If the learner hasn't engages in an inner dialogue that is acceptable to the others then he may find himself in a bind.

The situation calls for a response (one which he is presumably capable of) yet he is unable to produce an appropriate response. The strategies that teachers use to involve students by structuring behavior may create the condtions for this double bind. There are two requirements that are to be met by students, on the one hand students are asked to participate, to share their inner worlds (their thoughts) with the others. On the other hand only certain inner worlds are acceptable in these highly structured situations. Students who are experiencing difficulty matching their inner experience with what is considered acceptable behavior are confronted by a situation with contradictory requirements. They must share their inner experience, yet this experience is unacceptable. Moreover, like all double binds there is an injunction in the situation that makes escape impossible- the student must <u>do</u> something. Under these conditions the individual is highly susceptible to definitions of self which depreciate his ability to handle the material.

Part of the problem in this situation derives from the necessity for the student to reconstruct what are unique, private experiences in a situation that calls for well defined, highly specific responses. While this situation is particularly difficult for the learner it is not different in kind from the requirements characteristic of most social situations. In fact, most social worlds require that the uniqueness of each individual has to be violated to some degree in order for <u>any</u> behavioral routines to be successful.

Each of us in constructing behavior is always confronted by a similar problem. The meandering of our thought is usually entirely different from the presentation we make to others.

Were we to give an accurate presentation of thoughts as they are conjured up while we are interacting- the result in all likelihood would be incomprehensible to others.

To some degree each student if he is to perform properly in the classroom, must trike a compromise between the chaos and uniqueness of his inner experience and the rationalized product required by the structured behavioral expectation. Much of our inner experience must be set aside while we attempt to construct rational, consistent behavior for others.

R. D. Laing[2] speaks of a process he calls "engulfment": the fear that others will swallow you up in an all embracing comprehension. He suggests that persons allow themselves to be misunderstood in order to protect what they feel is a vulnerable inner world. If the world of the classroom is perceived as a threat to the autonomy of one's inner world then it follows that some students would attempt to construct barriers around themselves so that they are not "understood" and thereby avoid being drawn into a situation that they may feel threatens the integrity of some very real experience that they may have had.

On the cultural level the psychic costs of this kind of an engulfment can be considerable. Grier and Cobbs point out that the Black child has a good deal to lose in entering and becoming successful in the white environment.[3] Many of the early primary group experiences that minority children have had may be contradicted by expectations in the classroom. In this kind of situation compromising one's early experience may be very painful and disorienting- one can avoid the compromise by not understanding or by being misunderstood.

Much of the driving force behind the autobiographic "ethnic" novel derives from precisely this kind of dilemma.

This situation is not only true for Blacks and other minorities, it is also true of most children's experience as they first enter school. The secondary relations that children encounter in school are in direct conflict with the warm, personal primary experiences that they are accustomed to at home. The behavioral expectations in the classroom call for a different type of relating to others, than most children have encountered at home. The routinizing of behavior in highly structured classrooms makes this encounter even more discrepant in terms of the conflicting expectations presented to the child.

The situation is one in which opening up one's inner world for some children involves considerable risk. One must present one's inner world for scrutiny by others who are likely to be impersonal, analytical and most importantly these others constitute a group. One's inner world is to be subjected to the rigidifying realism characteristic of the consensus producing dialogue encountered in most secondary groups. Once one has been exposed in this manner the power of the group in defining one's inner world is not to be trifled with.

The degree to which students are consciously aware of these issues is problematic. From the point of view of the potentially alienating nature of the situation student awareness of these issues is not critical; the situation requires that they behave in a proscribed manner. These proscriptions may exclude a good deal of the student's inner experience- especially those areas of experience having to do with warm, person, affective relations. The structure of the situation, then, produces an

experience for some students that may make learning the "facts" of the lesson very unlikely.

What is all the more telling about the situation is that the systematization and routinization may lead to a trained incapacity. Because the system is highly organized, when an error or oversight is made- it is made systematically. The situation is like the process of natural selection- it is organized for handling certain kinds of problems, but this very organization may make it difficult to adapt to a different set of problems.

The problem with highly structured interaction in classrooms is that if a student's inner world is excluded- if the student is not engaging and becoming involved with the lesson, he is excluded systematically. Because the situation is routinized the response to any problem is highly patterned. If the pattern of response to a particular student is unsuccessful, the tendency is to respond with more of the same, rather than establishing a new pattern of interaction with him based on the peculiar set of definitions that he presents. Establishing a new pattern usually requires a good deal of alteration of routine,in contradiction to all the pressures working toward maintenance of the structure.

The discussion presented so far in this chapter suggests a central problem that is posed for teachers when one considers how students are experiencing the lesson. From the point of view of the student- he may be overtaught, that is, the teachers's attempt to structure the situation in order to facilitate the student's involvement with the curriculum may produce exactly the opposite result, rather than involvement

the structure may systematically exclude some students. Or to put it another way, from the point of view of metalearning the consequence of participating in a highly structured classroom for some students is that the situation produces an experience for them that is very different from the "lesson" that the teacher wants to get across.

Moreover the situation is such that some students will begin to develop identities or self concepts that depreciate their ability to handle certain kinds of problems. It is important to note that while these view of self are called for by the situation, that is, the social situation requires that some individual perform these roles, the individual experiences the world as if he on his own (not as the result of interaction with a situation that calls for a particular role) is a certain kind of person.

The highly structured classroom makes this kind of metalearning more likely because teacher reaction to student feedback tends to pattern along lines that reinforce these kinds of identities for certain students. Because the teacher's focus tends to center around perpetuation of the lesson there may be a number of inaccurate assumptions made about the way students are experiencing the situation.

One of these inaccuracies has already been alluded to. Teachers may accept an answer as an indication that the student understands a process when in fact the student may be responding on the basis of some set of criteria entirely different than those that the teacher is attributing to his response. In Chapter 1, John Holt is quoted as he describes how children arrive at answers in ways that are different than the teacher

intends. He says: "Still the percentage of hits was remarkably high, expecially since it was clear to me from the way the children were talking and acting that they hadn't a notion of what Nouns, Verbs and Adjectives were." (Emphasis my own)[4]

Holt is sensitive to other cues (besides actual verbal answers) that the students are presenting that reveal something of the processes that they are engaging in. Unfortunately in highly structured situations, teachers are forced to ignore many of these cues. Because the focus is on "moving" the lesson, the tendency is to accept any answer on face value. The consequence is that the student has the experience of getting by with an answer even though he hasn't participated in the process. "Getting by" may become a strategy that is brought to other learning situations if it is reinforced in enough early experiences.

An example of a "getting by" strategy that may be employed in later formal educational settings is "snowing" the teacher. The student performs an empty exercise such as writing a lengthy paper which is neatly typed and meets grammatical requirements but which requires little or no serious thought. While this kind of exercise may fit one quite well for later experience in certain aspects of bureaucratic-institutional life of our society, it is nevertheless likely that the experience the student has is quite different from that which the assignment was designed to encourage. This behavior becomes self-perpetuating because it is usually very difficult for teachers to reject this kind of performance. The teacher usually encounters this kind of a problem relatively late in the learner's development, there is usually a history of

acceptance that has developed over time and as a result the student (as well as others to whom the teacher is accountable) is likely to view the situation as sone in which the teacher has some special axe to grind (or so the teacher may fear).

Another misreading of student cues derives from the fact that the teacher does not interpret a response as revealing some problem with the lesson, when in fact such an interpretation is in order. Any lesson may be boring or confusing at times. While the tendency to ignore feedback that reveals problems with the way the material is presented is a general tendency in most classrooms- the more highly structured the situation the more likely it is that these cues will be ignored or misread. Again, this is the case because the focus is the progression of the lesson rather than the problems that the student presents as he experiences the lesson. The direction that interaction is to take is established by the plan rather than a reasoned response to the student's presentation of self.

The following situation, typical of highly structured classrooms, illustrates this kind of phenomenon.

> In one classroom that I observed, the teacher was presenting a spelling lesson to her students. It was obvious that much of the vocabulary that she was using were words that were outside the usual experience of her students. When one student asked for the meaning of a particular word, the teacher indicating by her demeanor that she viewed the question as unreasonable, responded that the lesson was concerned with the way words sound and not with what they mean.

This kind of response, while perhaps extreme in this particular case, is nevertheless built into the system when one sets up a highly structured lesson. Questions and

problems that are tangential to the lesson are viewed as distractions rather than as potential areas for discovery as an organic reading program, for example, might presume.

Student responses that may be directed at other definition of the situation than the one intended by the teacher in presenting the lesson may be misinterpreted by the teacher as being directed at the lesson. For example, a student may be operating with a definition of the situation that assumes that an important component of his interaction is the respect and deference for his toughness that his performance can manage to solicit from his peers.[5]

The teacher on the other hand, because of her focus on the progression of the lesson may view his behavior in terms of his inability to handle the lesson. Any attempt to understand his behavior without taking into account his orientation (his definition of the situation) is likely to produce an inadequate analysis and any strategies that are derived from this analysis are likely to miss the point.

One consequence of this kind of structuring of the situation is that the students are presented with material that is at great variance with their experience. Not only may the material be irrelevant from the point of view of the students' prior experiences, the material may also be either too advanced or too elementary. At times the material may be entirely inapropos or totally confused and the teacher may be completely unaware that this is the case. I have observed students reciting in unison from a book yet some were turned to the wrong page.

When one considers metalearning (the boundaries that students assume as they define the situation) another

consequence that becomes apparent from this kind of situation is that students are not sharing their inner dialogues (their mental processes) with one another. Because each student is oncerned with presenting an acceptable response and because the situation discourages sharing the process of arriving at answers while encouraging the presentation of "right" answers, the situation makes the sharing of inner mental processes unlikely. Given the competitive nature of some classrooms the student may even find it desirable to disguise his mental process so as to have an advantage over other students.

As we have seen, in the highly structured classroom most activity is predicated upon routines that require that teachers as well as students behave in certain well defined ways. The teacher may delegate some of his or her responsibility (usually requiring that others perform in a similar manner) but in general when the teacher is not present the structure of behavior becomes disorganized. This especially apparent when the teacher is absent. Some classes are so geared to having the teacher dominate the routine that when he or she is absent the substitute may find it impossible to establish meaningful interaction with the students.

Since the students have experienced the situation as one created for them rather than by them, establishing meaningful interaction becomes highly problematic. It is not the teacher's intention to create this kind of experience, but the situation is patterned and structured in such a way as to produce this kind of metalearning despite what we may assume are the best intentioned efforts.

The fact that student experience may be of quite a different order than that intended by the teacher may be

important in terms of the long range learning identities that develop. One significant consequence that I have observed is that the "spotlight" situation (for example, a recitation from the book) may be experienced by certain students as a public degradation. While it is not the teacher's intention to produce this kind of experience, it is nevertheless true that all inappropriate responses in a "spotlight" situation lead to some degree of public degradation.

Fear of public degradation may lead to the adoption of a number of strategies by students who may feel that such degradation is likely when attention has been focused on them. One of these strategies is to try to refocus attention on others. Persons with identities that are convenient safety valves (the clowns, tough guys, etc. mentioned earlier) may be called upon in indirect ways by threatened students to rescue the situation so that a public degradation is avoided. This behavior on the part of threatened students has the result of reinforcing the pressures already operative in the situation that call for the enactment of these roles. I do not mean to suggest that these students are called upon in any direct way; rather the process operates covertly through innuendo, nonverbal cueing, sympathetic activity or merely because there may be a long pause in the interaction.

Another strategy that the threatened student may adopt is to give the spotlight back to the teacher. In some classrooms this is an especially effective tactic insofar as the teacher may derive a good deal of ego reqard from being the center of attention. Unwittingly teachers may be manipulated in these kinds of situations by students who fear degradation.

Finally if all else fails the threatened student must not act as if the situation is at all problematic if he or she has become the focus of attention. This strategy requires that even though one is feeling anxiety, one acts in such a way that the others will see the situation as normal or at least they will enter into the unspoken contract of pretending that the situation is as it should be.

These strategies once adopted, have further consequences, especially insofar as the individual is successful in manipulating the situation. If he is successful, the student must come to view the situation in an alienated way because the apparent resolution does not come to terms with the original threatening factors. Mush as one is fated to relive "unresolved conflict" in the Freudian view, the student who faces degradation and avoids it in the manner we have discussed, must confront a similar threatening situation the next time the spotlight is focused on him. That these threatening factors are components of a situation that is itself threatening and alienating is rarely perceived by the student. Rather the student is likely to begin to view the classroom situation as a place where he is condemned to further threat and consequent strategic interaction.

In this chapter I have constructed an ideal type (the highly structured classroom) which was for the purpose of illustrating how the assumptions implicit in the way behavior is patterned affect what is learned. As I have indicated previously, the point is <u>not</u> that assumptions are made, in fact, my position is that assumptions are necessary. What I have tried to show is that if one wants to understand how problems of

learning are generated it is important to consider the assumptions that "frame" the learning experience.

Nor has it been my intention to cast an image of the teacher as a person who is blind to all the subtleties of human interatction. As I briefly indicated, good teachers take advantage of the potential presented by tacit, nonverbal meaning contexts. I have emphasized examples where teachers have not attended to the assumptive system because I wanted to make the point that this inattention can have negative consequences. Also, as I have tried to show, it is not always the case that attending to the assumptions that underlie a particular course of action and making them explicit is necessarily a positive strategy. This tack can result in paralysis or complete lack of direction for classroom activity and as a consequence very little learning may transpire.

As suggested earlier, the ideal type that was constructed, the highly structured classroom. could have been replaced by its opposite (the loosely structured classroom) in order to generate the same analysis of metalearning.

Briefly let us examine what a loosely structured class would look like in light of what was said about highly structured classrooms. The following characteristics are typical of such a situation:

1. The teacher (or teachers) do not control interaction.
2. Eye movement is rapid and varied.
3. Bodies are oriented in space in such a way that there is no single focus.
4. Walls do not enclose and focus the use of space.
5. Movement is characterized by its variety of direction and function.

6. Furniture is varied and multifunctional.
7. Intrusions of sound, visual form, temperature, physical objects and odors are common.
8. The physical body is attended to.
9. There is no prearranged plan for learning.
10. Interruptions in the various foci of behavior are common.
11. Learning materials are varied and loosely organized.
12. The uniqueness of each personality continually intrudes.

While these attributes are not typical of most classrooms, I have observed each of these characteristics operative in some classroom environments.

By definition this kind of situation does not provide many cues as to appropriate behavior. The fact that there are few cues may mean that certain kinds of students find these kinds of situations problematic. If the student's prior experience includes a good deal of proscription of his behavior and specification of roles by others, then this kind of situation is likely to be experienced as problematic.

The learner who is having problems in this kind of situation is in much the same position as the student who evolves an inappropriate self definition in the highly structured situation. There are likely to be few cues that the learner is capable of reading regarding how he or she is to construct appropriate behavior and the student is likely to look to himself as the "source" of the problem. In this case the learner is not so likely to adopt the negative self definition of "troublemaker" but he or she may come to see himself as "uncreative".

I have introduced this brief discussion of the loosely

structured situation to reinforce the notion that it is not the specific content of the assumption system that is important. The evolution of any definition of the situation (whether that definition evolves in a situation where behavior is rigidly proscribed and delineated or one in which expectations remain vague and uncertain) involves a similar process. Any behavior that others engage in always presents an explicit and tacit dimension for the person who is attempting to "read" that behavior in order to understand the meaning of a given situation.

In any human interaction situation the tacit, inexplicit framework that surrounds behavior is an ever constant factor in the construction of the definition of the situation, no matter how loosely or well defined and explicit the pattern of interaction may be. In this conception meaning is always dependent on contextual interpretation. It is this quality that makes possible the infinite variety of human interaction.

This chapter has attempted to come to terms with some of the metalearning consequences that derive from certain kinds of teaching strategies. The general process that has been presented describes how a particular set of behavioral expectations does not involve certain individuals in the intended learning experience. On the contrary, the situation has been discussed in terms of how it generates an alienating set of experiences for some students. The intention of this chapter has not been to suggest that structuring behavior is of no value, rather, the purpose has been to illustrate why it is important to take into account metalearning when one attempts to set expectations in a classroom. Taking metalearning into account should make it possible for teachers (who must always confront relatively

unique problems) to develop appropriate strategies for coming to terms with these problems. The focus on one particular pattern of interaction has only been intended as an illustration of a more general process that is operative in any learning situation.

NOTES CHAPTER II

1. For a discussion of this problem see: Polanyi, Michael, Personal Knowledge, Chicago: Univ. of Chicago Press, 1958.

2. Laing, R. D., The Divided Self, Baltimore: Penguin Books, 1970, Chap. 3(Ontological Insecurity)

3. Grier, William and Cobbs, Price, Black Rage, N.Y.: Bantam Books, 1969, Chapter VII "The Promise of Education."

4. Holt, John, op. cit. pp 14-15.

5. Cohen, Albert, Delinquent Boys: the Culture of the Gang, New York: The Free Press, 1955.

CHAPTER III PRIVATE WORLDS

Each individual brings a unique configuration of sets to the classroom situation. As we have suggested earlier, these "sets" "frames" or "boundaries" that are brought to the learning situation are important because they provide the framework within which the situation will be experienced. In the previous chapter we have seen how the teacher's attempt to structure behavior affects the kinds of sets that the students will derive from their participation in the situation.

In this chapter we will be concerned with the private worlds that each student brings to the learning situation and how these private worlds interact with the behavior of others so that a learner begins to set his expectations for future interactions. We will look at some typical private worlds and we will try to account for deviations from the teacher's definition of the situation (that is deviations from what the teacher sees as proper behavior). Finally we will try to show how the teacher' interaction with a deviant student may affect how the student will define future situations.

Each of us in constructing our behavior in any given situation orients that behavior around those dimensions that we come to define as the relevant characteristics of the situation. As we have discussed earlier, an important component in creating the definition of the situation is the structure of behavior- the patterned behavioral expectation that develops in most classrooms. When a student says: "This is a spelling test," he is pointing to a set of behaviors that are fairly well defined; in fact the pattern for the

behavior called "spelling test" is so well established that anyone who has attended school in any fairly formalized setting can predict with a fair degree of accuracy the kinds of behaviors that will be engage in.

In addtion to the structure established by the teacher that represents the teacher's attempt to involve the students with a particular learning problem, there are other factors which set the bounds for the way behavior is constructed and on how the situation is experienced and defined. Metalearning then involves more than a reaction on the part of the student to the teacher's program. Some of these other factors and how they function to develop the sets which some learner's adopt will be discussed in this chapter.

These other factors include "other worlds" or subuniverses of meaning that present alternate or conflicting potentials for metalearning (that is for the sets that students bring to the class). Alternate subuniverses include different reference groups within and outside the classroom as well as the highly personalized private world that represents each student's unique history of experience as it reoccurs in his consciousness at any given moment. Not only can a student relive his own past history in the present and consequently experience the learning situation in a highly unique manner, it is also the case that the situation may be experienced in terms of dreams, fantasy and other highly unique worlds of consciousness which are highly personalized but are nevertheless relevant to how the student will behave and how he will be reacted to by others. The reaction of others is crucial to the future development of interaction and the consequent

metalearning that occurs. In short, the personalized unique world as it is brought to the classroom situation produces behavior that is reacted to in such a way that it influences the later sets and frames that are assumed by the learner in subsequent interactions.

Following the model suggested by these comments the classroom (like most other social situations) is a place where a number of subuniverses of meaning come into interaction. Each individual presents not only the potential for a highly unique definition, each individual changes over time in terms of how he defines the situation.

Each subuniverse has its own characteristic style of apprehending events. The logical, matter-of-fact style presumed by a programmed math lesson presented by a teacher is quite different from the style characteristic of a child's fantasy world. Both are extreme examples of varying styles of defining the situation. From a behavioristic point of view the child may perform in certain "illogical" ways with respect to the math lesson, yet the behavior may be very comprehensible when one takes into account a cognitive style that is possible in a fantasy.

While we will note in passing some of the sources for these personalistic styles of defining the situation, it is nevertheless the case that the focus in the chapter will remain interaction. The important point to emphasize with respect to these personalistic styles is that they form the basis for behavior which is part of an interaction. While the individual is always the ultimate initiator of action, it is important to note that <u>meaning</u> is a social phenomenon.

We may experience our definition of the situation as a highly private affair yet the categories that we use to define the world are derived from interaction. Or to put it more specifically, a child's fantasy may secretly enter a math problem but the fantasy (or some reasonable facsimile) must be revealed if one is to be drawn into a meaningful dialogue with others.

There are three interactional alternatives to the revealing of a personalistic definitional system. One calls for the learner to abandon his personal definitional system, another reuqires the adoption of a view of self that manages the unique system at the same time as it accounts (to oneself as well as to others) for one's behavior. The third alternative is withdrawal from interaction.

All four of these possibilities (the three alternatives and bringing the private world in by explicit statement) are observable in actual classroom settings. Before describing these alternatives and delineating some of the consequences in terms of metalearning, it is important to emphasize that in each case, including withdrawal from interaction, the behavior and the views attendant to it are derived from interaction. Even in those cases where the views are held by an individual are at extreme variance from the others in the situation, this variance is always derived from a history of interaction. Just as there are no insane persons in societies with no conception of mental illness, in classrooms where there is little notion of "proper" thinking there are few problems with improper thought.

This is not to suggest that certain behavior or the views attendant to it is not (when viewed from the perspective of

the overall welfare of the individual) self defeating or aberrant. On the contrary, what is suggested is that certain attitudes- such as those that require withdrawal or strategic interaction are derived from a process of interaction and that recognition of the process is itself an desirable and valuable awareness that may make it possible for teachers to help the student avoid some of the more self defeating consequences.

I am also not suggesting that a classroom that presents no notion of proper behavior solves the problem. It is quite possible that a good deal of self defeating interaction may develop in this kind of context. As always the key to understanding is to attempt to construct a picture of how the learner is experiencing the situation. The example discussed previously provides an illustration of this. A situation with few cues regarding proper activity can be experienced by some as a threat. A given student may request that he be told what is expected; when he is informed that he is free to do as he pleases, he may find that he is unable to come up with anything meaningful or important. As we have discussed, the threatened student in the unstructured situation may begin to view himself as incapable of self motivation and creative activity.

Having introduced these cautions, let us proceed to a discussion of some of the alternatives that characterize the problems that learners face when interaction requires that they allign their personalistic universe with the patterned behavioral expectation of the classroom.

The first alternative that may be adopted is the revelation to others of one's personal system. To some degree the "atmosphere" of disclosure that pervades any given

classroom conditions the kinds of revelations that are possible. There are a number of variables that affect this atmosphere and there is no simplistic formula that can account for this phenomenon. For example, in one semester I taught a course that had a good proportion of students that never disclosed even so much as their names to the group. In another course students discussed in detail such personal issues as the serious life problems that they were confronting with their spoused, lovers, and parents.

In general the physical stting, the institutional context, the size of the group, the style of the teacher as well as the nature of the private worlds that are brought to the situation all interact to produce an atmosphere of disclosure. No one factor accounts for the phenomenon.

Whatever produces the atmosphere, it is a fairly safe assumption that through reading numerous cues that are directed toward one's behavior, each individual adopts a view of what should or should not be disclosed in any given situation. When an individual decides in a learning situation to disclose a private universe of meaning there are several possible consequences.

If the disclosed universe is seen by others as acceptable and appropriate then the individual may begin to incorporate this private meaning system into an ongoing discourse with the universe of meaning established by the teacher. For example, in my wife's kindergarten classroom one of the children was focused on dinosaurs and other prehistoric beasts. He continually phantasized great battles between these monsters and other fictional characters that his imagination conjured up.

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My wife encouraged him to discuss his world with others and for some time it appeared that his monomania would devour him as well as all those around him. The year ended and he passed on to another classroom and for some time he dropped out of sight. Imagine my surprise and my wife's delight when one day he showed up at our house and immediately drew us into the backyard and began one of the most incredible explorations of the natural environment that either of us had witnessed in some time. He lectured us at length on the various salamanders that he managed to capture and for some time he poked around and discovered virtually every living organism that existed in what I had assumed was a fairly barren area.

Was there a relationship between the fact that he found an accepting environment for his dinosaur fantasy world and his later voracious interest in the natural environment? Intuitively I felt there was. Of course there is no "objective" means for establishing this link; the problem as it is cast defies direct observational procedure, yet one is drawn to the conclusion that the fact that his private world (the prehistoric phantasy universe) was welcome in the classroom was an important element in his later curiosity about the natural environment. Were he to have found the classroom a place where there was no room for his fantasy then one is drawn to the conclusion that a very different youngster would have been visiting us (if he would have had the motivation to visit us at all).

One is tempted to jump from the foregoing to the conclusion that welcoming any private universe into the classroom is a valuable educational experience. Yet as we have seen, interaction is a much more complicated phenomenon than any

such simplistic formula can explain. What is more important is the kind of self definition that the learner may derive from making public a private universe of meaning. If for example a world is accepted that may be self defeating, as when a Black child is allowed to pass for white, then the outcome may not be a positive learning experience.

I choose the example of the Black child "passing" for white because it illustrates the problem of how identity may be influenced negatively by an environment that accepts a private universe. The problem here derives from the fact that the child will not be treated as white in most of his later interactions. If his race is invisible in the classroom (seemingly a goal desired by many educators) then the discontinuity with later experience is likely to be traumatic. I am not arguing that many Black children privately want to be white or see themselves as such. But if they do, the tendency of liberal educators is to allow that perception with its consequent assumptions that vary greatly from reality as perceived by others.

Again it is not thespecifics of the situation that are important (e.g. should Blacks be allowed to pass?), rather the example is intended to illustrate the point that it is not the acceptance of the private universe that is ubiquitously a positive strategy, but the consequence in terms of how the learner defines the world and his role in it that is of utmost importance.

What then are the consequences that derive from the rejection of an unacceptable personal universe after it has been revealed by the learner? It would appear that the learner

has several alternatives, most of which are the same as those facing the student who has not revealed (in explicit terms) some private universe, that he may fear is unacceptable. That is, the universe may be abandoned, managed or one may withdraw from the situation (withdraw from interaction into the private world).

The difference in the case of the learner that has revealed a private universe of meaning is that he may have to cope with the additional problem of carrying the stigma of the unacceptable private universe in further interactions. It then becomes a reason for his behavior in the minds of others, especially the teacher. Under these conditions abandonment or withdrawal become increasingly difficult. The most likely alternative under these conditions is that the student will begin to engage in "management" strategies.

To review: If the disclosed universe is accepted then from the point of view of classroom interaction, the learner's problems are more or less solved. It becomes a universe that is incorporated into the ongoing "official" universe established by the teacher. No matter how "unreal" it may be to others. This does not necessarily mean that there will be no self defeating consequences that derive.

If the disclosed universe is not accepted then the student faces the same alternatives that students who have not disclosed face, except that the student who has disclosed carries the stigma of his universe with him.

Assuming that the student is unwilling to reveal a private universe because he defines the situation as unaccepting of his personalistic system or universe (whether

or not he has made any attempt at revelation) as we have discussed, there are three alternatives that are open to him. When the student attempts any of these alternatives there are metalearning consequences. That is, the adoption of any one of these courses of action results in characteristic patterns of framing how the situation is to be experienced in future interactions.

First let us consider the alternative of abandonment of one's universe. A crucial factor with respect to the metalearning consequences that derive from abandonment has to do with how the personalistic universe is integrated with other meaning systems that the learner participates in and are significant for the identity he has constructed. Important conditions that affect the process are social class and the ethnic group membership. If the personalistic universe is well integrated with definitions that derive from significant and sustained interactions that are different than those expected in the classroom then the consequences of attempting abandonment are likely to be severe.

The student is likely to experience confusion, fear and hostility toward others, all of which derive from the strong conflicting expectations that are operative. Attempting abandonment often requires that the student learn to live with failure. The fact that the personal universe is well developed means that behavioral habits are likely to reestablish themselves from time to time; each reoccurance represents a failure at abandonment. The student, over time, is likely to come to define the situation as one in which he does not have the ability to adapt to the behavioral expectations of

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In order to illustrate this phenomenon let us look at the problems faced by a lower class child as he confronts a typical middle class classroom. Since cross-class interaction is minimal in most early life situations his personalistic universe is likely to have been derived from interactions with others who participate in his socioeconomic group. Much of his cognitive style (what he sees as relevant) as well as how he expresses himself is likely to have been developed and set by these interactions. His language will reflect these differences. Should he attempt to abandon this universe he is likely to experience a good deal of frustration and failure. One does not readily change fundamental components of one's symbolic universe such as the pattern of one's speech without experiencing a good deal of diffiulty. Under these conditions the attempt to abandon the personalistic universe means that the student may come to define himself as deficient with respect to certain kinds of learning abilities. The classroom is experienced as a place which is fundamentally alien in certain respects.

If on the other hand the personalistic universe is not a highly integrated meaning system which is reinforced by other persons who are significant, then the attempt at abandonment is likely to produce few of the conflicts characteristic of the attempt at abandonment of more fundamental universes. Much of fantasy is routinely abandoned in classrooms with little of no serous consequence in terms of definitions evolving that may be self defeating.

> I interrupted a child as she fantasized about flying. As far as I was concerned she was seated right in front of me but in terms of her fantasy she was flying all over the room. We talked briefly about whether or not she was actually moving from place to place. Gradually as we spoke her frame of reference began to shift; she reported to me that she wasn't actually flying right then and there, but that early in the morning just as she awakens she sometimes finds herself flying into bed. By the end of our conversation it was obvious that she was willing to abandon her world, for the time being at least, in order to join me in my world. This abandonment it seemed to me was of little consequence in terms of the later evolution of our interaction.

Revealing one's private world- having it accepted or rejected or abandoning it - are rarely well defined processes. Usually these alternatives represent tensions that are operative in most situations. Most of the time, most of us are involved in managing our private universes. In the example cited above the flying fantasy was not abandoned in the strict sense of the term, rather it was relegated to a different domain, one existing in another time and place. In this way many of our private universes of meaning are held separate and interaction with others is "managed".

These kinds of managements are possible because the requirements of one universe often may not necessarily call for conflict with others. Successful students (those persons defined by teachers and others as successful) are generally persons who have managed interactions in such a way that conflict between the universes that they bring to school and those operative in the school setting has been minimized to the degree that they are able to meet the expectations that are set by teachers. Obviously this kind of situation calls for certain kinds of managements as well as being blessed with

having certain kinds of universes to manage. One of the negative consequences of successful management is that future learning situations are experienced as situations calling for management. That is, others reinforce the learner's sense that acting competently requires a management of one's various universes. The learner comes to associate the demonstration of competence with a process of segmentation and isolation of his own inner world. In the extreme the learner may find himself locked into a feedback-reward system that rewards his "expertise" while at the same time requiring greater segmentation and isolation of his private universe. He may begin to view himself as appropriately engaged in a struggle to perfect himself by segmenting and isolating as much of his various meaning universes as he possibly can.

This tendency to segment consciousness has its own built in dialectic in the broader cultural system. C. P. Snow's "Two Culture" argument points to the tendency to segment consciousness while Snow's work itself or similar work by Koestler, Cassirer, etc., point to the antithesis.[1] In the classroom the student may begin to feel a sense of alienation or estrangement as he continues the management of his behavior. Whether or not the individual is able to transcend these dilemmas depends in good measure upon the unique historical situation that he will experience as he goes through life. What is important in this context is the fact that these kinds of later life dilemmas have their source in a learning situation that teaches (from the point of view of metalearning) a potentially self abnegating lesson.

There is one other alternative available to the individual whose private universe (for whatever reason) is not seen by the

individual as potentially incorporable or expressable in a given learning situation. In addition to abandoning or managing a private universe the individual may simply withdraw from the world of meaning established by the teacher. This tack differs from management only insofar as the learner is directed toward his own definitional system rather than the teacher's. Instead of working at segmenting one's universes the individual withdraws from the classroom definitional system into his own private world.

Given the fact that interaction is often vague and open to multiple interpretation and given that the learner's situation in the classroom often calls for relatively passive behavior- the potential for withdrawal is usually high in most classrooms. Since it is virtually impossible to render the inner definitional systems of each of the students in a classroom at any given point in time, it is difficult to say with any great accuracy how much withdrawal may be occuring in any given classroom at any given time.

While monitoring this kind of experience is (at best) a very imprecise operation, there are several strategies that are available. One can informally interview students after some lesson has occured. The main difficulty with this tactic is that there is a high probability that if the student's universe hasn't been disclosed the situation will require that a good deal of rapport with the interviewer be established before the student will feel comfortable enough to divulge his inner world. This may never happen; it is the same problem that a teacher faces. In the final chapter several techniques that facilitate this process will be discussed. Not only does

the technique presume that a high degree of rapport has been established, but also that the student can report on some private universe of meaning. In fact it is probably the case that without specific probing some of the other worlds that students engage in are so split off from the world of verbal discourse with others that attending to them as an object of discourse with others is a formidable task.

Another tactic for monitoring private universes that may be adopted is careful observation of the classroom situation with special attention paid to thei clues to the student's private definitions of the situation that are revealed by their behavior. This technique requires that the observer reconstruct the student's private world. There are both advantages and disadvantages to this technique; the obvious disadvantage is that the observer's characterization may be far from the way the student is constructing his world. The observer has very little in the way of feedback as a corrective for an inappropriate reconstruction. The chief advantage of the technique is that the reconstruction does not depend on a report of how the situation has been experienced (with all the problems of selective reconstruction that such reports present).

Combining both these techniques (observation and interview) probably represents the best strategy since it maximizes the possibility for revealing factors that may be ignored by the student's reconstruction while at the same time it makes it a little less likely that there will be gross observer distortion. Using these techniques in combination over time in several different learning settings revealed a number of typical "private worlds" or subuniverses. I have organized these subuniverses into several categories, each with its own characteristic focus.

One broad category of private worlds has to do with involvements with the body. Included in this category are private universes that have as their center or focus various somatic states. Hunger, sexuality, elimination of bodily waste, physical symptoms, such as pain or allergic reactions; all may occupy the attention of students in learning settings. While these somatic states are only rarely the sole focus of attention for more than brief periods of time it is nevertheless the case that for some of the students, one or another of these states may become an important focus of attention.

In the case of unsatiated hunger, in some lower class communities the attendant physiological processes may be so pronounced in some learners that it is virtually impossible for the child to concentrate on the lesson.

The most easily observed of these potential focuses or universes are involvements with those somatic states that reveal themselves in overt behavior. For example, it is possible to observe children masturbating in some classroom situations. If a student engages in masturbation the process requires a good deal of his attention. Not only must he perform the act, but the situation prohibits this kind of behavior so he must devote a good deal of his consciousness to concealing the act.

Because the situation often prohibits certain behavior, concealing bodily functions may occupy quite a bit of a student's consciousness. Running noses, sexual arousal, flatulence are all physiological processes that require special attention and concealment. Concealment itself then may become a world that engages the learner's attention. In addition to those processes that are directly related to well defined

physiological funtions there are a whole set of processes that entail involvement with the body in less direct ways.

> On one occasion I observed a group of first graders in a school library. The librarian was reading a story to them. The children were seated in a semicircle on the floor around the librarian. One of the boys sat with his back to the wall and his legs spread apart in front of him. A girl was sitting in front of him. Gradually each of them revealed that they were becoming more and more aware of each other's bodies. They began to stroke one another and move closer; by the end of the story I was fairly sure that both of them were only slightly aware of other things in the environment than each other' bodies. The girl's eyes were focused "away" and the boy's eyes were set on the girl's hair as he stroked and parted it.

In most classrooms attention is focused on the body only on special occasions, such as during special exercise programs, or during lessons whose specific content is the body. This mode of awareness parallels the high emphasis on the verbal environment that characterizes most of western culture. Yet in fact, the body is always present in every encounter. Being inside one's body, in the sense that one suspends the verbal, symbolic world, is a mode of being in the world that most people in our culture experience only on rare occasions.

In dyadic and triadic (two and three person) interaction there is usually the necessity for a high degree of verbal interaction. In these situations, "being" in one's body is uasually difficult and is highly unlikely. In the classroom situation where there are larger numbers, one is not required to interact with the same degree of frequency and as a consequence it is much more possible for involvements with the body to develop.

In western culture there is very little emphasis placed

on this kind of "being" and the vocabulary that is used to refer to this state is not well developed; consequently discussion of this universe with the learner does not produce much in the way of descriptive evidence.

One can only come to terms with the phenomenon in terms of analogy and emphathetic putting oneself in the place of the other. What I am calling the universe of the body then is like playing a game of table tennis where one is involved with one's body (physical reactions). There is little room for symbolic representation; one acts directly and is the physical event of moving one's body. The universe of the body may be thought of as a form of yoga, where attention is focused on a physical action so that "conscious" thought is suspended.

The dualistic mind-body dichotomy that characterizes much of western thought not only makes this phenomenon difficult to talk about with the learner, the denial of the body that is implicit in the dichotomy produces the kind of situation where one's body as a means of access to the world is excluded from sanctioned classroom activity. As a result, the physically experiencing body becomes an "other world" or universe of meaning that is to be managed, abandoned or withdrawn into. In this kind of situation one's body becomes a problem, rather than a solution to the problem of apprehending the world. It is in this sense that one's body can become a universe, that it may constitute a mode of experiencing in the classroom that is entirely different than the one established and sanctioned by the teacher.

Another broad category of private worlds that are observable in most classrooms centers around self involving rituals and

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games. Self involving ritual-games differ from body universes in that the focus is not a physical sensation as in a somatic related universe but rather the focus is the performance of some ritual or game like activity. Self involving ritual-games are like the body universe in that they absorb the individual's attention and represent a state of being or consciousness that is quite different from the sanctioned activity expected by the teacher.

Doodling is a mild form of this kind of behavior. When a student is doodling his attention may be focused on the lines that he is drawing so that other concerns recede into the background of his awareness. While the degree to which this is the case varies from individual to individual and from situation to situation, my classroom observation suggests that for some learners this kind of world is a distinct alternative to participating in the lesson. Ritual doodling is a rather mild form of self involving activity because in itself it requires very little focused attention to engage in this activity. Other rituals and games may become quite complex.

> One of the children often engaged in the ritual-game of construction of a maze which he would escape from when he completed his construction. While the problem of escaping from the maze would have been a difficult one for most of the other children in this class, the degree of difficulty involved in solving the maze was minor when compared with the difficulty of creating it. It usually required a good deal of concentration, over a period of some time, before the labyrinth builder was satisfied with his creation.

There are several factors which seem to be operative with respect to ritual-games that apparently help to make them desirable alternatives for some students. These rituals often have the quality of repetitiveness- the individual repeats the

process over and over- often in a fairly habituated manner. After some time he is able to demonstrate a good deal of proficiency. There is also a high degree of formality to the process. I use the word ritual, instead of words like habit or routine to describe this world because it connotes the formal, design or motif inspired quality that is characteristic of these games. The behavior is rarely random; it often requires strict adherence to proscribed rules. What may be significant is that the rules are established by the individual and require no reinforcement by others. This may represent a primitive form of the more generalized process of setting one's own limits on problems that is characteristic of all mature creative activity.

There is another type of private universe that doesn't require the performance of some ritual-game and at the same time requires little involvement with the body. This is the universe of fantasy. While fantasy is usually conceived as a broader category of consciousness that would include the other universes discussed so far, I would like to retain the term for a more specialized use. The overt behavior characteristic of a fantasy may vary from actually acting out the fantasy in the classroom to an almost complete presentation of self as involved in the class while one is in fact "living" in another world. This world may or may not include past experience.

I want to distinguish fantasy from other private universes because there are certain requirements that must be met by ritual-games and body universes that have important consequences for interaction. These requirements do not have to be met by fantasy. Both the ritual-game and the body universes require presentations of self that have a high potential for interrupting

the stream of interaction. An involvement with some physical state usually entails physical activity. Any physical activity always presents the potential of being recognized by others and consequently affecting the nature of the interaction. Similarly ritual-games require that the individual do something, that he perform some act. Again there is a high potential for recognition of the act by others and the consequent influence on interaction.

Fantasy, while it may involve behavior that is open to recognition by others, nevertheless does not require this kind of behavior. In fact, a fantasy world may be concealed through a good deal of interaction. It is this characteristic of fantasy that is crucial because it makes it possible for the individual to live in a private universe without interruption. This private world may have very different rules of relevance than the rules of the classroom. Given the fact that the teacher gives off a number of cues as to what is expected of the student, it is quite possible that a student may act quite in line with what the teacher sees as desirable; whereas, in fact the student may be engaged in a fantasy universe that makes use of these cues in quite a different manner than was intended.

> It is juice time; two children are seated side by side. One child reacher over to the other's cup and pours a little of the other child's juice into his own half filled cup. The other child screams at the teacher: "He took my juice" (meaning he took some of my juice). The teacher turns to the first child: "Is that his juice?" Answer: "No, it's mine." (Meaning it is mostly mine)

Because the interaction centers around a fairly concrete event and because their is little history of elaboration of the private definitions; the varying definitions of

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the situation suggested here present a relatively simple straight foward problem in terms of explicating the intentions and meanings of the actors. Let us look at a slightly more complicated problem.

> A young father concerned about what he sees as an overly materialistic orientation of his son, interacting with his son. The son wants a particular gift for Christmas.
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> Father: "I'll help you make one."
> Son: "I don't want to make one. Can't I have it? (Unspoken: you can't make them like the ones you can buy.)
> Father: "No."
> Son: "Why not?" (Unspoken: why do you want to deprive me?)
> Father: "Because you have too many cars already."
> Son: "Billy has more than me." (Unspoken: Don't you love me as much as Billy's Dad loves him?)
> Father: "Just because Billy has them is no reason for you to have them too."

This situation is slightly more complicated. Both the father and son are bringing a little more to the situation than the actors in the previous situation; yet we are still not dealing with a full blown fantasy. The final example is of a private world that is almost completely inaccessable comes from The Bell Jar, written by Sylvia Plath after she has been hospitalized for psychotherapy and shock treatment.[2]

> I hated these visits. I would be sitting in my alcove or in my room, and a smiling nurse would pop in and announce one or another of the visitors. Once they'd even brought the minister of the Unitarian church, whom I'd never really liked at all. He was terribly nervous the whole time, and I could tell he thought I was crazy as a loon, because I told him I believed in hell, and that certain people like me, had to live in hell before they died, to make up for missing out on it after death, since they didn't believe in life after death, and what each person believed happened to him when he died.
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> I hated these visits, because I kept feeling the visitors measuring my fat and

> stringy hair against what I had been and what they wanted me to be, and I knew they went away utterly confounded.
>
> I thought if they left me alone I might have some peace. My mother was the worst. She never scolded me, but kept begging me, with a sorrowful face, to tell her what she had done wrong. She said she was sure the doctors thought she had done something wrong because they asked her a lot of questions about my toilet training, and I had been perfectly trained at an early age and given her no trouble whatsoever.

The private universe of fantasy as these examples suggest includes a whole range of personal definitions that may be brought to an interaction situation. The range varies from private interpretations of a specific event, such as the interpretation of the meaning of "my juice", to a completely unique universe that is for all practical purposes inaccessable.

In the classroom setting "fantasy" as the term is used here may run the gamut from children whose behavior is labelled "autistic" to behavior that may arise from a perspective that is only nominally divergent. While a later chapter is concerned with the learning identity that an individual may develop over time, the important point in this context is that fantasy represents an alternate universe of meaning- one that may be quite different (in terms of what is defined as relevant) from the teacher's universe.

While the term "fantasy" usually refers to an unreal mental image or story I am using it to stand for all private universes that are not involved with the body or with ritual-games. Other terms that are used to label this kind of behavior are: daydreaming, hallucinating, tripping, etc. The important characteristic of this universe is that the learner is "away from the lesson and is involved in some private universe.

While often this behavior is labeled fantasy it is especially significant that others may not be aware of the fact that the learner is "away", that is, there may be few behavioral cues that the fantasizer gives off that reveal the nature of his private definitional system.

An important component of the universe then is its visibility. If one is engaged in overt behavior or if there are subtle cues to a private universe that are observed by others, then these observations are likely to influence the development of interaction.

> One student is sitting in the back of the room; he is eating some nuts that he must shell. Every time the teacher moves so that he is not easily observed he throws a small handful of the shells out the window.

In this example we can see the joining of several private worlds. The student is involved in physical gratification (eating). At the same time he is playing a risk type of interaction game with the teacher (even though the teacher at present is unaware of his behavior). An important element in the game is the element of risk. He is engaging in behavior that if attended to by the teacher, requires some form of sanction to be brought to bear on her part. In the strict sense this is no longer a "private" universe; an important component in the situation is the teacher's potential behavior. This situation illustrates that the distinctions characterizing different universes that have been discussed so far, when applied to a developing interaction situation tend to break down. What these distinctions represent are possible tendencies. For example there is a tendency to become involved with one's own body in the classroom; the fact that any given individual may or may not be involved in a body universe at any given point in time

in no way requires that the situation stablaize or solidigy around this issue. In fact, for the most part, behavior is rarely rigidified in the manner that a strict appraisal of a private universe might lead one to conclude, if the interaction component is ignored.

It follows then that all private worlds are to some degree potentially public, in the sense that they all present at least some potential for discovery by others. The important point that this example illustrates is that it is fairly easy for them to spill over into interaction and become a focus for others. In light of these remarks the characteristic of fantasy, that it does not require some easily identifiable behavior, becomes very significant. In fact, this characteristic is always a matter of degree; that is, given an infinite set of interactions it becomes only a matter of time before one becomes aware that the other may be engaging in an alternate definitional system.

In the shell game illustration (discussed above) I was not the only person in the room who was aware of the shell throwing episode. I observed several students who indicted their awareness by eye contact, smiling and other gestures directed at the shell thrower. Just as each classroom presents the potential for private universes, most classrooms also contain potential subgroups that share their own definitional systems. In this situation a private universe (the risk-gratification game) became the source of a shared universe among a subgroup of students.

Not only is the private universe gone semipublic a source for the formation of these subuniverses, these subgroups may be formed as the result of a shared reaction to the teacher's

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lesson. It is possible to observe what I call "counter groups" in many classrooms. These counter groups may be made up of a few students or they may engage virtually everyone. The defining characteristic of these groups is that they create a definitional system that takes into account the lesson but at the same time stands outside the lesson framework that the teacher has intended. The manner in which these subuniverses are formed varies and may require a history of events that evolve over some time. While the problem is usually subtle and may entail tacit agreement some of the pressures that produce a counter universe can be observed in the following situation.

> In an adult education class I was trying to talk with one of the students, whom I had met on several prior occasions, about some of the problems he was encountering in the class and what he thought might be some improvements that the teacher or others might institute. Although the context of awareness of one another was fairly open (he knew that I knew that he was almost completely illiterate; at the same time I felt that he also knew that I respected him) it was, nevertheless, difficult for both of us to speak openly and freely. It wasn't until we began talking about the reading materials that he was using that I felt we began to communicate easily. We were both engaging in "putting down" the book. That is, we talked about the book in terms of how it was oriented toward children, that it had no relevance to the real world and that the authers sometimes engaged in absurdities. In general we began to talk about the book and relate to it not as a set of sentences which he was expected to read but rather in terms of two adults relating to the problem of an adult who is forced to learn to read from a book that was designed to teach children to learn to read. By confronting the situation in this way some of the embarrassment implicit in the situation was dissipated by making an object of the embarrassing element and thereby mutually sharing the embarrassment as equals. That is, we were transformed into two persons who were capable of discussing their perceptions of the absurdities implicit in the situation.

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When a teacher presents a lesson, the conditions for the formation of colleagueship through establishing counter group universes are established along with the presentation of the lesson. The lesson itself becomes an object for students to focus on as colleagues. In almost all classrooms one can observe semicovert counter group universes that represent students communicating with one another about how they are experiencing the lesson. These counter universes usually focus on the more obvious ironies and absurdities that are contained in the pattern of interaction.

In this manner a different universe of relevance is created; the teacher's boundaries on the lesson are exceeded and a different level of meaning is constructed by the participants. The consequence of this situation is that this universe may develop conflicts for individuals that may make it impossible for them to engage the lesson in an unselfconscious way.

> James is a very alert young man. On several occasions I have noticed that he manages his response so that he doesn't appear overly bright. Apparently there is a covert norm operative in this situation that operates to keep students from presenting themselves as radically different from the others. In this case one does not make oneself appear too bright or too involved with the lesson. Each individual acts toward the lesson in such a way as to fulfill the teacher's minimal requirement, while at the same time not betraying one's colleagues by demonstra-- ting a total commitment to the lesson. One must hold back a little, must remain slightly cynical, in order that the teacher's definition not be ubiquitous.

In the sense that the term is used her "counter groups" are different from "peer groups" in that "counter groups" result from interactions that center around the lesson or other interactions specific to the classroom setting. The

notion of peer group as it is used by sociologists usually denotes an age cohort of persons in sustained informal interaction. This notion lacks the more specific reference to the teacher's lesson and the structure of behavior in classrooms as it shapes the formation of the counter group and the consequent metalearning that derives from this development.

There are other subgroups that may condition or set the bounds and limits that students adopt in defining the classroom activity. These subgroups in some instances are formed because the teacher is following a conscious policy of using smaller groupings to facilitate learning. Many teachers divide their classrooms into smaller groups based on ability or other criteria. The assumption that usually underlies this tactic is that the teacher can be more efficient and the students more involved if individuals with similar learning problems work together.

One of the matalearning consequences that derives from this kind of practice is that students may begin to take on the identities that are implicit in these kinds of groupings. That is, some students may come to see themselves as "fast" or "slow" learners or they may take on some other definition of self that is implied by the category they have been assigned to. In the case of those in the "fast" category the consequent behavior may be quite desirable; in the latter case the results may be disasterous. For a discussion of this phenomenon see: Pygmalion in the Classroom.[3]

Many teachers are aware of these kinds of concerns and as a result they temper this practice by disguising the "ability" distinction that is implicit in these kinds of subgroupings.

Presumably a situation is created where there is no status heirarchy or other evaluative framework that has the potential for counterproductivity; yet in fact these disguised often barely mask the situation and even though explicit reference to distinctions between students is discouraged, it is nevertheless the case that often these evaluations are covertly made.

> A covert status heirarchy in one particular classroom was not revealed until a Christmas party was planned. One of the teacher aides became very agitated at the thought of giving gifts at the party. Up to this time her identity as an aide was fairly wll disguised. The teachers and other aides in the school all refer to themselves as teachers and a populist-egalitarian air pervades the adult roles in all the classrooms. After several unsuccessful attempts to get the others to drop the idea of giving gifts for Christmas, in a moment of revelation of self the aide admitted to the others that the reason that gift giving is threatening to her is that it raises fears in her mind that the gifts may reflect distinctions between the various adults in the classroom,a fact which she is very reluctant to face, but which nevertheless has been weighing upon her.

In this situation the adults are subjects of a covert heirarchical evaluative framework. While the potential is always high for these kinds of evaluations among adults; in the case of grouping of students the potential for evaluative heirarchies is maximized. One can observe over a period of time in educational circles a succession of euphemisms to describe these kinds of groupings. As the connotation of a term begins to take on a more negative hue, new terms are devised to handle the groupings. A child who started out with "low intelligence" may have gone through various stages of being labeled: "slow learner", "culturally deprived" and "educationally" or "emotionally handicapped" before being labeled "drop out".

While the terminology that is used to categorize various groupings may attempt to mask the evaluative component that is often built into these groupings, if one carefully observes interaction, if one focuses on informal, non-explicit interaction, in most classrooms, it is usually fairly obvious that the students are aware of these distinctions. This is the case, if for no other reason than the fact that ab important component of the role "teacher" usually requires the establishment of some set of bench marks with respect to how well the students are doing. The teacher must do this in order to have some direction to teach toward, some sense of where he or she wants the students to be after working with them. This means that he or she will perceive certain students as further along in progress toward these goals. One consequence that derives from this is that eventually some students experience the situation as one in which they are not as capable as others. This is not the teacher's intention, but the nature of the situation requires that the teacher have certain perceptions of student progress. It would be quite astonishing that the situation would be perceived in other than these terms. Groupings (no matter how masked) further reinforce these kinds of definitions of the situation.

Under certain conditions the classroom may become polarized into two conflicting universes. I will borrow the term "superimposition" to stand for this situation. Loosely interpreted, the term is used by Dahrendorf [4] to signify the condition in a society where all the various institutional heirachies reinforce one another to produce definitive "in" and "out" groups. It is one thing to be a subordinate in one area of one's life, if one has other roles where one may

exercise power; it is quite another situation if all of one's roles (work, family, church life, etc.) reinforce the experience of subordination.

In the classroom "superimposition" occurs when a number of factors coalesce to produce a definite, discernable "out" group, with its own system of relevance. This possibility is especially pronounced where the middle class "academic" world of the teacher is greatly divergent from the socioeconomic world which the students experience outside the classroom. Under these conditions if counter groups develop, the break between the two worlds may be extremely severe. Each world and the definitional system of relevance attendant to it may be so divergent that each is virtually in total isolation from the other.

Superimposition is the result of a number of factors working in combination to produce two distinct subcultures in the classroom. Factors that reinforce this isolation are: A) the atmosphere of disclosure, undisclosed worlds such as fantasy or ritual-games that are shared by some of the students but not by the teacher foster isolation, B) a structure of behavior that excludes certain kinds of behavior, and C) subgrouping patterns that foster isolation and D) divergent socio-economic reference groups. All these factors may work in conjunction to produce two separate universes of relevance- the teacher's universe and the counter group universe.

What is especially significant about the formation of a counter group under conditions of superimposition is that students who participate in the counter universe are engaged in ighly significant interactions with one another and behavior is not oriented toward the other students in the counter system.

Most importantly, the situation tends to be one in which each student's experience with the world outside the classroom tends to be validated.

Interactions between counter group members tend to be more concrete and experientially oriented than interaction oriented toward the lesson. Much of the counter universe interaction I have observed tends to be only minimally abstract or analytical. For example, I observed a group of students who were involved in a discussion of airline highjacking (a tipic which most had heard discussed on television). For a brief period they engaged in a systematic analysis of the options that were available to highjackers or police. But this analysis was not prolonged; after a short time another topic was introduced relating to a similar phenomenon that they had observed on television. The teacher's universe on the other hand, tends to force much more prolonged analysis of topics.

This factor accounts for the strong hold that a counter universe may have on the individual group members. Each student experiences the counter group universe as "real" in the sense that it presents a high potential for fit with his experience. Since much of what is prohibited in the teacher's universe may be very"real" in terms of the student's universe and since much of what is prohibited by the teacher is welcomed in the counter group, it foolows that the alternate system of relevance offered by the counter group may take precedence over the teacher's universe in terms of how the student orients and constructs his behavior in the classroom.

Superimposition reinforces the hold of the counter group on the individual because it makes it much more likely that

each of the members of the group will be reacted to in a consistent manner. If for example the atmosphere of disclosure presents little likelihood of revealing a private definition and if at the same time one is grouped with others who have similar backgrounds, then each individual as a unique entity recedes into the background of the "official" classroom interaction. Students are forced to present themselves (they are forced to behave) in terms of generalized, stereotyped roles rather than as unique individuals. Under these conditions one's uniqueness must be abondoned in order to participate in the lesson (the teacher's universe). The counter group on the other hand represents a universe where one's self may have greater opportunity for expression; one can act more authentically and uniquely.

When these conditions are operative the counter group may come to play an important role in the way an individual constructs and orients his behavior. The consequences that derive from this situation are manifold. Most importantly, because student behavior is oriented toward a universe that is different from the one that the teacher is attempting to establish a lot of the behavior of counter group members becomes problematic for the teacher.

To summarize: the teacher's lesson creates the focus around which a counter group is formed. The counter group provides its members with an alternate universe or definitional system, one that is shared with others and one that is reinforced by them. This universe plays a strong role in how the world will be experienced by the counter group members and also it is an important factor in how they will construct their behavior. Often when superimposition occurs the behavior that

is derived from participating in the counter group universe is problematic for the teacher; it doesn't fit with the way the teacher wants the students to behave. The teacher may then react to these deviations from what he or she expects. The process has then returned full circle, with the important difference that the "new" focus that the teacher bases his or her behavior on is not some particular content that is to be taught but rather the "new" focus is based on the teacher's perception of a deviation form his or her plan for learning.

Interactions that have as their focus the perception of deviations from the behavior that the teacher wishes to establish I would like to call deviance dialogues. In additon to the counter group as a source for these deviations as we have seen in the prior chapter there are a number of other factors that create potential deviations from the behavior expected by the teacher (e.g. the pace of the lesson may mean that aomeone must be too slow). Whatever its source, once behavior has become problematic for the teacher a deviance dialogue is likely to ensue; once a deviance dialogue has been established an important interactional corner has been turned and the consequences that derive from this development may be very important in terms of how the "deviant" comes to see himself and define the situation.

The situation with respect to deviance dialogues in the classroom from a social interactionist standpoint is remarkably like attmepts to come to terms with "deviant" behavior in other social settings. As I indicated earlier, there is a growing body of theory in the social sciences that suggests that many "solutions" to problems may in fact contribute to the perpetuation of the problem.

The development of a deviance dialogue as it evolves over time illustrates how this process operates. Both parties are likely to assume that the deviant behavior is the result of some cause (that there is a set of factors that explains the behavior). It is likely that this assumption will not be attended to- that it will be taken for granted. Yet there is very little that can be said with any certainty about the cause of a student's deviance.

In the instance of counter group generated deviance (as described above) what could we point to as the cause? Is it the existence of the counter group? The teacher's lesson that makes the group possible? Some subculture outside the classroom that reinforces the group? Or is there some factor in the individual's development as yet unexplicated that is the cause? Obviouly no one factor alone accounts for the deviation; in truth, there are a number of factors that produce the deviation. Some reference to more than one individual in interaction with others is necessary for even a miniamlly adequate explanation. I am not suggesting that some factors are not more important than others- the point is that the interactants in a deviance dialogue rarely approach the situation in this manner. On the contrary, it is often assumed that some thing is wrong (a more or less unifactor analysis), usually the situation is defined as the deviant's problem. In this way the deviant is defined and comes to define himself as imperfect in some fundamental manner.

The fram that conditions the interaction in a deviance dialogue is the assumption that the deviation (whatever it is) is significant and requires some sort of "work" so that the

behavior may be changed in the direction considered appropriate. The consequence of making this assumption is that the deviant is forced to focus on his own behavior as problematic. It becomes very difficult for him to act unselfconsciouly. Moreover, it is usually the case that the dialogue provides few cues as to what "work" is to be done on oneself in order to purge oneself on those factors that are responsible for the inappropriate behavior. When there are cues, it is likely that the deviant will not be able to perceive the relationship between what he is supposed to do to make himself into a person who behaves appropriately and what it is that causes him to behave inappropriately. In simplistic terms, writing on the blackboard, "I will not ---" or some other act of penance (such as a parent conference) is likely to provide very little connection for the student in terms of his ability to understand why he is unable to behave properly.

The deviance dialogue focuses attention on the deviance. The more intense the dialogue the more the deviant learns to focus on, mark and account for his deviation. Insofar as there are others who share the deviant's label (and fate) there exists the potential for learning nuances of the career from one's peers. This is an especially strong probability in counter group generated deviation.

Recividism rates for prisoners suggest not that criminals are "cured" by their incarceration, but rather most sociologists seem to agree that one learns to be a "better" criminal in jail. Similarly, deviance dialogues, because they are focused on certain acts, often require that the student learn a good deal about the troublemaking career. He learns a vocabulary,

a set of "reasons" why he acts in a cerain manner; he learns that there may be rewards from peers for behaving in a certain manner and he may eventually learn to avoid the teacher's recognition of his action without necessarily giving up the behavior.

Once the dialogue is engaged the tactics brought to bear by the teacher may very depending on a number of factors. Isolation, physical coercion, bribery, humiliation and other pressures may be brought to bear and may be observed in any combination in many classrooms. One significant interactional element remains the same no matter what the tactic is that the teacher employs. The deviant is defined as having a problem and it is highly likely that he will come to define hemself vis-a-vis the teacher's world as having some disability with respect to his skill at constructing appropriate behavior. The deviant then incorporates the teacher's definitional system into his own image. Since the deviance dialogue tends to be ongoing, this image of self is therefore reinforced over time.

Not only is the process operative in the more or less obvious ways I have described so far, the interaction may be more subtle, yet the metalearning consequences may be identical.

> The teacher seems to be aware that paring attention to certain kinds of noise and other acts coming from a few of the "troublemakers" will mean that her behavior will cycle with theirs and she and the troublemakers will end up in a deviance dialogue. One of the strategies that she uses is to be selectively inattentive to certain noises and other troublemaking activities. Sometimes this strategy works; on several occasions I have noticed that the strategy backfires. The troublemakers seemed to be aware that she was ignoring them; rather than abandoning their

> behavior they began to push her further. The louder they become the more transparent her selective inattention becomes. Her attempt at noncommunication becomes a very significant communication. They know that she knows they are making trouble- the fact that she is actively ignoring them only lends fuel to their fire.

As in other contexts, it is not the particular strategy that the teacher employs in pursuing or not pursuing a deviance dialogue that is the significant issue. The important element is the definition of the situation that the learner develops from his interaction with the teacher and others. Any particular strategy may or may not produce a given consequence depending on the nature of the evolving interaction. As I have indicated one of the consequences that is built into the deviance dialogue is the assumption on the part of the learner of a view of himself as imperfect. This definition on oneself is carried to each new situation and influences the kinds of experiences that are possible in the new situation. In this way a deviance dialogue that develops with a particular student over time may become an important influence on the student's development. Over time the individual may come to define himself in terms of this deviance and may begin to construct his behavior around this image of self. While the deviance may be initially the result of counter group membership and other factors, over time it may become so much a part of the individual's definition of the situation that other factors may recede in importance as the dialogue develops.

In this chapter we have discussed how private universes function in the classroom. We have indicated that each student has certain options with respect to his private definitional system. He may or may not reveal it and it may be accepted or

rejected by others. Furthermore, the student may "abandon", "manage" or withdraw into his private world. Three typical private universes that arise in classrooms have been discussed: "body", "ritual-games" and "fantasy". It has been suggested athat under certain conditions a counter universe may develop that may become the source for deviation from the teacher's notion of what constitutes proper behavior. We have also suggested that a teacher may engage in a deviance dialogue with a student and that this may influence how the student sets future interactions.

NOTES CHAPTER III

1. Writers who have attempted to bridge this gap include: Snow, C. P., The Two Cultures: and a Second Look, New York: Cambridge Univ. Press, 1963.

Cassirer, Ernst, An Essay on Man, New Haven: Yale Univ. Press, 1967.

Koestler, Arthur, The Act of Creation, New York: Macmillan, 1964.

2. Plath, Sylvia, The Bell Jar, New York: Bantam Books, 1972, pp. 165-166.

3. Rosenthal, Robert and Jacobson, Lenore, Pygmalion in the Classroom, New York: Holt, Rinehart, Winston, 1968.

4. Dahrendorf, Ralf, Class and Class Conflict in Industrial Society, Palo Alto: Stanford University Press, 1970.

CHAPTER IV TIME AND MEDIUM

In this chapter I will discuss several factors that illustrate in more detail how the definition of the situation comes about. The issues to be discussed are the manner in which time, and various objects or media are treated in the classroom and the metalearning consequences that derive from the unattended assumptions that underlie the way these phenomena are approached. As in previous chapters the focus of the discussion is not the typical pattern that is established so much as what underlies and is assumed by the pattern. With respect to time it is not the "clock" that is typically used in the classrooms to mark the passage of time that is important; what is more significant is that each classroom reveals some manner of dealing with time. The assumptions that underlie the way time is approached are usually unattended and as a consequence the learning sets that derive are rarely fully appreciated.

In most classrooms it is usually taken for granted that time unfolds in a lineal, unidirectional sequence. That is, the participants in the classroom usually assume a sequence of events, one following the other, leading from the past to the present, toward the future. In western society, this way of dealing with time is so pervasive that it is reflected in all aspects of our culture. For example, our language discriminates various tenses of action. Verbs are conjugated differently depending on whether or not the action takes place in the past, present or future. Similarly the structure of our leisure activities reveals corresponding assumptions about time. Most of our game activities make specific reference to the period

of time (the mechanical clock time) that is to be observed by players and spectators alike.

Yet if the special theory of relativity is correct, one can speak meaningfully of sequentiality only if one takes into account the fact that different perspectives produce differing perceptions of sequence. An event that proceeds another from the perspective of one observer may follow in the eyes of some other observer.

For example, one witness to a battle might report: "I was sitting near our cannon. We fired at the enemy; shortly afterward I heard the enemy gun returning our fire." Yet it is entirely within the realm of possiblility that a soldier on the other side might report the same incident with the suggestion that it was his side that fired first.. We know this to be possible because we recognize that sound requires some time to travel from one point to another. In this case, an observer midway between the two guns might hear the sound of both simultaneously. If we use an accurate set of clocks to record the exact time that the guns are fired, we are in a better position to make a statement about which event came first. Common sense tells us that "sound" is a very imprecise way of measuring the occurance of an event.

The usefulness of the clock and its near universal acceptance as the standard of time in our culture leads to a good deal of complacency and taking for granted of the way we normally define time. Yet this way of approaching time is not by any means the only correct way of coming to terms with time. When we try to come to terms with problems of time in situations that are different from the normal activities that we engage in, we find that our system is quite inadequate.

For example, absolutist notions of "before" and "after" when applied to phenomena of space travel have little value. In space any perspective is as valid as any other, one event can't be said to preceed another and one can only say that an event preceeds another from a given perspective. The addition of the final phrase is essential in order for any meaningful communication to take place in space. This notion is entirely absent in our earth-bound uniderectional delineation of time that we commonly assume in our daily interactions with others. The famous "clock paradox" in which the hypothetical crew of a space vehicle returns to its home base younger than it would have been if it had never left is inexplicable from our lineal time perspective; yet recent scientific experimentation confirms the validity of the clock paradox hypothesis.

Our earthbound notion of time originated in the attempt to mark the passage of time by noting the position of the sun and other astronomical phenomena. We have refined the process so that mechanical devices give us highly precise markers for noting the passage of time, but the discussion of relativity suggests there are other ways of conceiving of time. Given different needs that require different conceptions of time, no one way can be said to be more valid than any other. In fact, there is considerable rariation in the way various cultures approach time.

In Latin cultures, for example, while mechanical clocks are used, their importance as part of the cultural "weltanschung" with respect to time is relatively a minor one when compared with their importance in North American urban settings. It is possible that in interactions between persons who use different temporal systems, misunderstandings may arise

because the meaning conveyed by relying on one temporal system may be entirely different than one that is derived from another system.[1] When a Latin American keeps a North American waiting, the meanings that both may ascribe to the situation are likely to be entirely different. As anyone who has traveled extensively will attest, adherence to one system often requires violation of some other.

In Hopi language, verbs have no tense (no past, present and future delineation); rather the language discriminates "validity" forms which tell of the speaker's reporting of the situation (these forms correspond roughly to our past and present). The validity form may also indicate the speaker's expectation (corresponding to our future). In additon there are "aspects" that denote tendencies during duration as well as "modes" that indicate relations between verb clauses.[2] In this way the verb plays a much more important role in the language and thought of the participants. Discriminations of time in Hopi culture show a remarkable resemblance to relativist notions of time- much more so than some cultures that we allege are more "scientific" (our own society being a primary example).

It should be apparent from the foregoing that there are many ways to approach and mark time. An important element in the process is the perspective that one assumes with respect to the phenomena that will serve to mark the passage of time. In Hopi, Latin and "scientific" cultures there are discernable sets of assumptions about the nature of time. In our everyday life in most cultures, these assumptions are rarely called to question. The world of science differs to some degree from most everyday worlds, because an important component of the

scientific tradition is a scepticism that continually questions assumptions that any given scientist may be making about the world- assumptions about time are of necessity included in this critical appraisal.

The milieu of the classroom like all other social worlds reveals certain assumptions about time. These assumptions provide the frame for the learner with respect to how he will approach and mark time. While most of these assumptions are related to the way time is approached in the society as a whole, the focus of the discussion in this chapter will remain the classroom and the social world outside will be of secondary interest.

As in other chapters the approach that is adopted here is one which emphasizes the consequences that derive in terms of the sets that the learner comes to adopt through interaction with others. Assumptions about time are largely taken for granted by the participants. As a result it is difficult for teachers to assess the consequences that derive from assuming these perspectives toward the passage of time. Yet as we will discuss, the consequences may be significant in terms of long range problems that are engendered for learners.

While time is marked in numerous ways in the school context there are two systems that can be identified that operate vis-a-vis one antoher. One system marks relatively long periods of time when viewed from the perspective of an individual's life cycle. This "calendar" system marks the passage of time in blocks corresponding to months and years. Important components of this system are the semester and yearly evaluations of various skills- the grade level of achievement. The other system of marking time deals with

relatively shorter periods: a given lesson, the beginning and end of a particular day. The "clock" system is always more "available" to the individual. It is usually much more a component of consciousness at any given time.

One of the problems that the student encounters throughout his educational career is that of bringing these two timekeeping systems into conjuction with one another. The student must learn, if he is to be successful at school, to mark time in the appropriate manner,; if he is able to do this for events of short duration then it is likely that the larger calendar timing problems will fall into place. Conversely errors in adjusting "clock" timing will in all probability make themselves felt in the longer temporal evaluations that mark the termination of calendar periods.

This is the case because the clock timing system functions for the teacher as a means of achieving the ends associated with the skills that are tested for at the termination of calendar periods. Clock deadlines are important because they sustain and reinforce the long range goals. Timing is approached in such a way that the student (in order to behave properly) must experience the present in terms of how it functions for the future. The teacher <u>assumes</u> that the present functions for the future; it is this assumption that may or may not become problematic for students.

It is often noted that learning a given skill may not in itself be an immediately gratifying process. A skill like reading requires mastery of the alphabet. For a variety of reasons, some students may experience frustration or other discomfort before they master the alphabet. These students

must learn to tolerate discomfort in the present, if they are to go on to learn to read. The way timing is approached in the classroom assumes that tolerance of frustration in the present is justified becasue the reward (learning to read) is ample compensation. The successful learner learns to defer gratification until the future. These "lessons" about time are built into the teacher's approach to teaching reading. It is assumed that one approaches time in this manner and by a whole series of unspoken cues the teacher projects this frame on the interaction. These cues are "unspoken" in the sense that they are not attended to as the specific focus of interaction.

When a teacher established a deadline, a whole "set" is presumed with respect to time. The learner must come to terms with this set. Even when the learner finds that he is unable to function properly in terms of the teacher's deadline, he must learn to rationalize his own behavior in terms of the teacher's time definition. In this way a student may come to think of himself as "slow", or he may come to some other negative definition of self with respect to the way he handles time. "Slowness" then may become a self-fulfilling prophecy for some individuals; this view of self may them begin to set limits on the kinds of expectations one has of oneself in future situations. The reader should note that the category "slow" derives from the collective definitional system. "Slowness" derives from a temporal orientation that emphasized the future. In the future orientation, events that occur in the present are seen in terms of their potential for the future (or their nonpotential for the future). A temporal

orientation that is focused on the uniqueness of phenomena, one that deemphasizes the "objectivity" of time, in the sense that each entitiy is treated as having its own period of development and is not matched against some standard leads to an entirely different view. The concept "slow" under these conditions would have very little meaning given our conventional usage of the term.

Marking time, being able to read the interactional cues that set one temporal category off from another, may become problematic for any given student at any given time.

> After a midterm exam I asked one of my students who had done exceptionally badly to come to see me in my office. The student missed the appointed time but managed to catch me on the following day at a different hour. Trying to focus on the positive aspects of the situation I dismissed the exam as trivial and inquired in what I hoped was a jocular tone: "Just so I should go to sleep tonight- how did you manage to miss the boat so completely?" To my surprise the student replied: "I swallowed my mother's keys." At first I thought the student was pulling my leg, but after a brief discussion it became apparent that she was either incapable or unwilling to communicate in the way that most people would consider rational. All of my attempts to establish a dialogue were met with responses that I thought were quite inappropriate. I tried in a number of ways to communicate to her that I felt that we weren't communicating and that I thought that she might benefit from some counseling. After experiencing a good deal of frustration I began to give off all sorts of nonverbal cues that the time to break off the conversation had come. I picked up some papers and put them in my briefcase. Taking the briefcase by the handle I stood up. By this time I had become conscious of the fact that I was cueing her and she wasn't reading me, so I told her directly that it was time to leave. Still she remained seated. I walked to the door and out into the hall, remarking somewhat faintly, that I couldn't lock the door until she left. She ignored my remark. By this time I was completely at a loss; how was I to get it across to her that our interaction was terminated and she should leave? This situation persisted for considerable time,

> finally she came outside and I immediately locked the door. I began walking off in the direction of my car when I noted that the student was following closely behind me. I decided that I might turn the situation to some advantage so I headed toward the student health center. When I arrived the door was closed and a sign indicated that it was the noon hour and that only emergency cases would be treated. I knocked at the door and tried to explain the situation to a nurse, indicating that I thought one of the psychiatrists might be able to help. The nurse told me that the psychiatrist could only be seen by appointment. After some deliberation she agreed to try to locate someone who would help. After a few minutes she returned with the message that one of the psychiatrists had agreed " to make an exception" and would see the student Of course the student was unwilling to go inside so I asked her to wait for me to return. After some negotiation I was able to get the psychiatrist to come out to the reception room to meet the student. My only remaining problem it appeared was to open the door that led from the reception room to the outside. Of course, when I opened the door the student had disappeared. Later I heard that a similar situation had occured with another faculty member.

This situation brought home to me in a very forceful way how the beginnings and terminations of activities are taken for granted. Not only was I assuming that our interview was over and attempting to negotiate a termination with the student, I was also forced to negotiate with the nurse and with the psychiatrist. In each instance the normal channels of beginning and ending interactions were incapable of handling the demands made by the situation.

In most of our daily activities we rely on numerous cues and tacit understandings to begin and end interactions. In the classroom these cues are also operative, even though they are read and interpreted "properly" to varying degrees. In conversations with persons who have observed extensively in classrooms, I have noted that one of the characteristics that

is often mentioned with respect to the timing of events, is that there is a period of "settling down" that usually proceeds any lesson. This settling down is characterized by behavior that is more or less random at first and becomes more differentiated and focused as time passes. Students may be engaged in many different kinds of activities when the cue signalling the new activity is given; gradually there is a differentiation of behavior that takes place as the focus of the new activity begins to dominate each student's attention. This kind of observation of course holds only for those situations where the new activity is one in which there is a unitary focus. In those situations where the new activity may be made up of many separate activities a similar pattern may be discerned. That is, there is also settling down, as each student settles into his own individualized "new" activity.

While the extent to which this is the case in any given situation is problematic, it remains true that each situation, no matter how clearly cued, presents the potential for multiple interpretation and meaning with respect to time. Were this not the case there would be no reasonable way of explaining many typical situations involving problems with timing.

> A fifth grade class, students are working in work books, a bell rings, the teacher tells the students: "Please stop what you are doing." Several students continue with the books.

It may be argued that the students "hear" the bell and "understand" the meaning but choose not to act in the manner that the meaning implies. This is precisely the kind of assumption that is routinely made by teachers about student behavior. But if we explore the situation from the perspective

of the learner as he constructs his meaning of the situation these kinds of assumptions must be called into question. "Hearing" and "understanding" suggest that the meaning of the event is incorporated by the learner into his perspective in much the same way as they were by the teacher. Yet this reconstruction by us, if we assume these perceptions to be identical, must be false because if it were true the bell would ring, the teacher would speak and the student would stop whatever it was that he was doing.

Obviously there must be some other element entering into the learner's system of relevance that at least equally is important to him and is either latent or absent in the teacher's field. This difference derives from the fact that the teacher's world (his or her universe of relevance) is focused on how students are behaving; the student on the other hand is focused on what he or she is doing. While the bell and the teacher's utterance are central in the teacher's field they are peripheral in the student's universe. When seen in this light the assumption that the student "heard" and "understood" the termination cue is given an additional dimension. The new dimension that is added derives from the awareness that "hearing" and "understanding" are complex processes involving a construction of meaning by a learner who occupies a unique perspective inthe classroom. The meaning of a given cue can never be exactly the same for all interactants; the role of the teacher and that of the student often precludes the possibility of an exactly duplicate rendering of the situation. It follows then that marking time- reading the cues that signal the beginning and end of given periods will vary depending on

the unique history of interaction in a given classroom. Given these considerations, "settling down" is a fairly predictable activity when transitions occur. Given the fact that all students will not read the cues and respond in the same manner one expects that the beginning of new lessons would be characterized by a period of orienting behavior as each student adjusts his "internal" timekeeping system with the "external" bell, mechanical clock, or other cueing device.

Furthermore, the length of time required for settling down is usually a fairly reliable indicator of the degree of routinization that has been established in a classroom. As we have discussed, routinization requires considerable sensitivity on the part of students to temporal cues. Temporal cueing is especially important to the routinized classroom because proper reading of the cues means that interaction will by smooth with few problematic interruptions.

Another typical pattern with respect to temporal definitions that is observable in many classrooms is the behavior of "trailing Off". Trailing off is the opposite of settling down. In this case the termination of an event is the problematic issue and each student's adjustment to this termination produces behavior that moves from a concentrated focus toward less and less patterned behavior, as the "period" of activity draws to an end.

Trailing off and settling down are processes that lead into one another, as the end of one activity leads into the next. This transitional stage from one activity to the next is likely to be perceived by teachers as having a high potential for the expression of troublemaking behavior. If a number of

students are experiencing difficulty trying to adjust their own sense of beginning and end with the teacher's expectation, then it is obvious that this uncertainty represents the potential for disruption of the teacher's schedule.

Another characteristic of these transitions that follows from the potential for disruption that they represent is that these transitions are often characterized by the employment of conscious strategies by teachers aimed at minimizing the cognitive-behavioral problems associated with trailing off and settling down. One common strategy is to attempt to routinize transitional behavior by developing a specific transitional routine. Usually this means that each student must engage in some specific behavior at the end of many different kinds of activities, before going on to the next activity. For example in one classroom the teacher would routinely require of the students that they: "Sit, eyes forward, hands on desks, books away, no talking." This instruction was repeated in rapid monotone over and over at the end of each lesson.

One kindergarten teacher routinely asks the children to raise their arms during transitional periods. These strategies are especially prevalent in the earlier grades because the students are less accustomed to reading temporal cues. In fact as the discussion of the relativity of time suggests, the younger students, those in kindergarten, first, second and third grades are learning to assume what everyone else in the culture takes for granted: that events have a beginning and end.

This perspective on time is by no means given in the child's

cognitive structure.[3] What is especially interesting about this situation from an interactionist point of view is that the early school experience with temporal management differs from much of the child's prior experience. While the child experiences as good deal of temporal scheduling at home this breaking up of time is usually done for the child rather than by the child. The child's earliest time related experience includes a good deal of dyadic (two person) interaction. Schedules are usually maintained through interaction with a parent or parent surrogate. In this way the scheduling of events is tailored to fit a unique individual. The child experiences few problems with timing that are not reacted to fairly quickly by some adult.

Another major source of temporal managing experience that is the management of time vis-a-vis television viewing. Again, while television is a source of experience that is highly segmented and rigidly scheduled it reuqires very little autonomous behavior on the part of the viewer. While programming may project definite beginnings and endings it makes no demand (other than continuity) that the viewer respond with a rhythm that corresponds to the one projected. In some households for example the television set may be on for six or more hours a day, yet the actual time that the set is occupying the child's attention may be much less than this, because the child may tune in and out as other stimuli attract his attention. This personal scheduling by the child may follow lines that result in rhythm that is entirely different than the one projected by the television set.

The early school experience differs from these kinds of

situations in that the child is presented with an interaction setting where he or she is not necessarily the center of attention. While interaction with peers may be fairly extensive in the preschool years, this interaction rarely requires the precision of termporal scheduling that is characteristically required of the child in the school setting.

In the school situation the student experiences the necessity for fitting in with an ongoing temporal schedule. It is necessary for the student to do something with respect to time; he must behave in an appropriate manner. At the same time the student is only one of a number of interactants and therefore lacks the personalized attention and tailoring of time that prior experience with scheduling characteristically entailed.

The consequences of this situation are manifold; some students develop a strong sensitivity for temporal cues, while others may be unable to mark time in the proper manner. Once initiated in the early school experience thes "marking" of time processes continue throughout the educational career. The extremes of these positions (oversensitivity and insensitivity to temporal cues) are illustrated in the following situations that one encounters after students have had considerable experience marking time.

> I was talking with a colleague about our experiences with the beginnings and ends of lectures. We agreed about two interactional patterns that are fairly common in college classrooms. There is usually a period of time at the beginning of a lecture that corresponds to the "settling down" phenomenon observed in primary classrooms. When the lecturer is ready to begin there is usually a brief period during which some students are still engaged in conversation or other distracting activities.

> This period of time varies depending on a number of factors, many of which have little to do with the personal characteristics of the lecturer. One of the problems that may be faced by the lecturer in this situation is the problem of when to begin. Should one wait for complete silence? How does one cue the students that the lecture is about to begin? These and other related questions may become important to the lecurer as he starts the class.
>
> Another problem that we noted came at the end of the lecture. When the time officially stipulated for the end of the class is exceeded or often just as the hour that the class is scheduled to end is approaching, students tend to get ready to leave- they shuffle papers, pack brief cases and as the scheduled end draws closer they generally indicate by their behavior that the end of the lecture is determined by the clock on the wall, not by the internal rhythm and dynamic of the lecture itself.

Both of these situations are not particularly significant in themselves; they represent behavior that is for the most part peripheral to the central activity of the class. Should either of these situations become seriously problematic it is likely that there would be other extraordinary factors operative in the classroom that created conditions for misunderstandings between teacher and students. What the situation does reveal, however, is that to some degree at least temporal boundaries are potentially negotiable. The child who hears the bell and understands the injuction that he stop working, who nevertheless continues, reveals in his behavior a temporal scheduling that differs from the teacher. This behavior may then become problematic for the teacher, just as conversation before the lecture or packing near the close of the lecture may become problematic for the lecturer. Whether this behavior is intended as a communication, which would set the stage for negotiation, is an open question depending on

the peculiarities of each given situation. The point is that whether or not students are consciously engaging in the negotiation of a beginning or an end, the behavior they engage in may have the effect of making the temporal boundaries of the activity problematic for the teacher.

When these kinds of developments occur the teacher may interpret the behavior as a threat to the schedule that he or she has attempted to establish. Even where the schedule is not seriously threatened (for example, conversation before the lecture) the behavior may be read as hostility or defiance. Under these conditions the potential for deviance dialogues and the consequent learning identities that may follow them (as discussed in the previous chapter) is greatly increased.

While the teacher may impute various motives or rationales into the behavior of individuals who violate temporal schedules it may be the case that the "reasons" for the violation may be of an entirely different character. For example the failure to mark the end of the lecture in the same way that the lecturer does may derive from very real situational factors. These kinds of existential dilemmas that force different interpretations of time may be no more complicated than the fact that the student has a class that is scheduled on the other side of the campus and the time allocated to move between classes may not be sufficient. Under these circumstances leaving one classroom after the time scheduled for the class to end means that the student will be late to the next class. While these kinds of conflicts are fairly simple and explain the "packing" behavior in a relatively straightfoward manner; if we shift our focus from violations of "clock" time to violations of

"calendar" deadlines, the kinds of issues involved are not specified as easily.

On the college elvel one of the main dilemmas that students face is the scheduling of their time so that they are able to complete the work expected of them in the appropriate period. The fact that most papers and exams are due at the same time (the end of the quarter or semester) all the more exacerbates the student's dilemma. The student often faces deadlines that produce more and more frantic activity as they are approached. If under these circumstances the student has other commitments that require attention, such as work, friends or family, then these other commitments may usurp time that should be devoted to studies. In some instances these kinds of peripheral factors may be so demanding that there is no need to invoke notions of the individual's ability to schedule time. To speak of "ability" in some situations is often to structure the perception of the situation in such a way that the very real force exerted by these peripheral influences is ignored. To some degree this fact is recognized by educators; the instutionalization of the "incomplete" grade, for example, that allows for illness or tragedy, is an explicit reference to the fact that there are often factors that influence whether or not a deadline will be met that have little to do with the effort that a student may be making.

What I am calling "peripheral factors" here includes a large number of differing factors that affect the way the marking and deadlining processes are approached by the student. Because these factors reflect each individual's unique experience the

possibilities are endless. In any given situation in order to analyze why time is approached in a given manner by a student one must analyze a number of complex phenomena. These factors then are "peripheral" in the sense that they result in definition of time on the basis of factors operative outside the classroom.

In general there are a number of social-interactional variables that are important components of one's definition of time and as such they constitute peripheral factors that influence the time marking that a given student may make in a classroom. As we indicated earlier; culture is an important component in terms of how one approaches time. In accounting for a particular student's manner of marking time then, one of the important variables to be considered is his or her participation in one or another subcultural group. Another related factor that contributes to group members: invividuals in close, intimate relations with one another (such as the relations in a family) develop unique ways of handling time. The student's participation in these kinds of groupings must be taken into account in explaining his time perspective. Economic and religious factors may also influence one's perspective. In addition to these and other factors there are the unique turnings of fate, as exemplified by the fact that one may have a class on the other side of the campus, that influence how one marks time.

Given the fact that there are so many components of the individual's perspective with respect to time and given that each of these operates in a unique combination for each individual, it is remarkable that behavior in classrooms can occur with any regularity. It is the fact that human beings have

the ability to live in a number of worlds and to move from one of these worlds to another that makes this kind of phenomenon possible. It is not necessary that we approach each situation with the same system for marking time, we may move from one system to another depending on a number on a number of factors that combine to produce the definition of the situation.

While resorting to these differing worlds to explain the way time is defined in a given classroom is virtually impossible because such an explanation would require that we know all about each of the participants and that we could then spell out how each moment of interaction was constructed by each of the parties; it is nevertheless the case that deviance from a typical pattern of defining time can be explained with reference to these phenomena. While a student may miss deadlines for peripheral reasons it is nevertheless the case that his or her awareness of these factors or the teacher's awareness for that matter, may be minimal. The consequent definitions that arise are likely to be resultingly inappropriate.

In addition to these factors that may account for a student's deviation from the temporal markings that are expected by the teacher there are also several factors that operate directly in the classroom situation that account for deviations. One of these is the alternate temporal perspective that may be operative in a countergroup.

> Raymond happily took his basket, finished
> as much as it could be that day, and
> extended his arm to show the basket to
> Judy Marshall across the aisle.
> She looked at it cursorily without speaking.
> With surprising suddeness Raymond separated

the strips in the middle, giving the basket a hammock effect.
He slipped on strip up for a handle.
Then he carefully placed the basket on his head with the handle on the top of his head and the semicircular rows of strips over his face.
He peeked between the paper strips, looking from face to face.
One child said in a surprised tone, "Look at Raymond Birch." Jimmy Olson, standing up in amazement and delight, said, "Yeah, he's a knight." Several other children chorused the same thing. Some of them punched their neighbors and told them to look at Raymond.
Raymond, behind the 'helmit', must have had a happy expression for he looked with jerky head movements from one child to the other, apparently enjoying this 'knight' role.
He took the basket off after surveying the room in general. He seemed pleased with the finished act, though not overly proud.
He and Watson Kaye simultaneously exchanged broad smiles. Watson as the admirer of Raymond the actor.

> Stanton, in front of Raymond, finished his basket, put it on his head and announced, "I have an Easter bonnet." Several children at the back of the room laughed raucously at Stanton"s Easter bonnet.

Raymond, not noticing Stanton, looked at his own basket speculatively, as though considering what it could be other than a helmet.

> The teacher, seeing Stanton, frowned and said, "Boys! Boys!" That put a stop to the Easter bonnet business at once.

Raymond still speculated solemnly about his basket. He didn't look up at Mrs. Logan or show any sign of noticing her words.

> Mrs. Logan said firmly, "Fold it up," to the class in general.

Oblivious to the command, Raymond put the handle just barely on top of his head, letting the rest hang loosely over his eyes.
He peeked through the 'bars' absently as though he were no longer expecting an audience.
The teacher went down the aisle toward the back.
As she came toward him, Raymond took the basket off quite quickly and held it in his hand.
But he showed only a passing concern. [4]

In this instance cited by Barker, Raymond becomes engaged in an activity with other students in the class. The bonnet

game had its own rules and regulations even though it made use of an activity assigned by the teacher. Termination of this new activity therefore requires a negotiation between the interactants; the teacher's termination of the activity violated the temporal scheduling that was implicit in the situation and derived from each student's construction of the meaning and timing of the event. The teacher's behavior required that the students shift to her definition of time, a definition that had very little to do with the definition that was emerging from student interaction.

As indicated in Chapter III, each classroom has many potential subgroupings; these subgroupings may offer an alternate universe of relevance. These alternate universes, because they define what is relevant differently than does the teacher, inevitably present time perspectives to the student that are different from those the teacher may be operating with. As the example suggests, the way the teacher defines the termination of a "clock" period may differ from the way the student defines it. The student's perspective comes from interaction with peers and that defines the end. But it is not only short term "clock" definitions, that may be affected, over longer periods countergroups may develop temporal schedules that are considerably divergent from the teacher's schedule.

In terms of the "calendar" markings that students are required to make, a typical countergroup definition that diverges from the way teachers usually mark time, is the fact that countergroup participation is likely to reinforce a present time orientation rather than a future orientation

that is more characteristic of the teacher's system. Within the countergroup the present is rarely conceived in terms of its function for the future, rather the experiencing of the present is valued for itself. This is the case largely because the countergroup derives its reason for being not in the attainment of some goal (as does the "group" convened by the teacher) but rather because each individual in the countergroup finds himself in a situation with others who share his or her perspective. The perspective that the students share is that of participants in a situation that has been created for them and not by them. As such the situation is rarely seen by each of the students as serving some instrumental purpose. The "learning" of skills which will benefit one at some future time is rarely a perspective that is reinforced in the countergroup. Time under these circumstances is marked as an unfolding of experience; external clocks, calendars and deadlines tend to become tangential to awareness.

Much as the card player may be more aware of the number of hands that have been played, in terms of marking different qualities of experience that have transpired rather than the 'clock' time that has elapsed, the student who is involved with a counter group may "mark" time in terms of what are perceived as relevant interactional events rather than the record keeping system that the teacher has adopted for the situation. In this way the 'calendar' orientation of the teacher is mitigated and neutralized by the countergroup. The group susstitutes a "present" oriented calendar system.

When the orientation of the teacher is focused on the "external" clock and calendar from a future perspective, the

progression from one event to the next dominates the teacher's perceptual field. Under these circumstances, behavior that is not oriented toward the future, tends to be viewed as non significant time.

> In one of the classrooms that I was observing a teacher from another class brought in some scrambled eggs that had been left over from a special breakfast. The teacher whose routine had been interrupted allowed the class to stop what they were doing in order to eat the food, but as soon as the students started eating she lost interest in the activity. She did this despite the fact that (it appeared to me) there was some very interesting interaction going on. The children who came from varying ethnic, racial and class backgrounds began exchanging experiences about how food was handled at home; they were exchanging and generating concepts that represented (on a simplistic level) an approximation of the Levi-Strauss structuralist approach toward the meaning that is revealed by these kinds of cultural activities. This kind of break in the teacher's routine was seen by her as nonsignificant time. There could be no significant learning going on (after all there was no purpose or direction to the event other than the opportunity to consume what would otherwise be wasted) so it was not necessary for her to pay attention.

The definition of a period of time as insignificant derives from a perspective that assumes that time should be passed in "useful" ways. If this assumption is not made then each period of time is equally relevant; no activities are defined as insignificant and time thereby is rarely seen as wasted or insignificant. The individual attends to each situation in terms of the potential that the situation presents for actualization in the present rather than the potential presented by the situation for actualizing some future goal or reward.

Insofar as the role of teacher proscribes that the teacher

be concerned with the performance of the student at some future time, the role requires an orientation toward time that produces a definition of some situations as significant and others as insignificant depending on the assessment of the potential that the situation presents for the learning of the skills that the teacher wants to teach.

While a situation may be defined as insignificant from the point of view of the teacher, from the point of view of some students the situation may be experienced as very important and significant. These differing definitions of the situation produce the tension between counter group and teacher that may result in a deviance dialogue, as the teacher attempts to enforce his or her temporal definition on the situation. Typically the end of a situation that is defined as insignificant by the teacher will be experienced much earlier than it is by the students who may define it as important.

Even if there were no counter groups in classrooms the deadlining process insofar as it forces closure creates time marking problems for some students. This is the case because many learning problems that students may engage may not be soluble given the typical schedule of deadlines established in most classes.

> A Black college student who I know was using an independent study course to learn what he could about Black History; he was especially interested in Black Nationalism. The school that he was attending was run on the quarter system. After about five of the ten weeks of the quarter had elapsed we had a discussion about some of the problems he was encountering with the deadline for a paper that was due at the end of the quarter. What was immediately obvious to both of us was that it would

> be impossible for him to finish the paper in the time allocated without compromising his original motives for engaging in the study. He reported to me that his interest in studying Black Nationalism derived from his own ongoing participation in several political movements. While the course required that he reach some closure and that he present some written summary of his findings, he was feeling that no such closure would be forthcoming by the deadline specified.

This situation reveals some of the dilemmas that are created for the student by the deadlining system. In terms of metalearning, the assumptions implicit in the deadlining system mean that the student learns to select problems for study that are managable given the temporal rhythms characteristic of school activities. The clock and especially calendar assumptions that the teachers make often result in a realism in the selection of problems for study that may require that student's compromise important components of problems they may be interested in studying. Problems that are soluble given school temporal rhythms are selected out of the potential universe of problems that might be attended to.

Significantly this kind of censoring is rarely attended to either by teachers or students, yet it is a major element in the construction of what will be learned by the student. Students who are successful in selecting or narrowing problems that meet school time requirements are positively reinforced by teachers and others. They are rewarded as competent. Those students who may pursue problems that are not soluble given school deadlines or students who refuse to narrow and compromise important components of problems they have engaged are reacted to by the teacher and others as problems. Again in this way conditions are established for the development of

deviance dialogues with the accompanying identity problems.

When a student compromises further pursuit of a problem in order to meet a deadline the metalearning consequences may be such that the student becomes alienated. Because many life problems do not present themselves in the regular structured temporal periods characteristic of school life, the student may begin to define the school experience as irrelevant or unreal with respect to "real" life problems.

Conversely, the student may also come to define as irrelevant or insoluble those problems that are encountered outside school if he or she becomes wedded to classroom temporal scheduling. In either case the deadlining process creates the potential for dilemmas that may require self defeating choices to be made by students.

The deadlining system when it forces closure reflects the prevailing orientation toward time that is characteristic of our culture. Yet is is precisely this orientation that makes certain issues problematic for many people in our society. Our inability to handle leisure, to cope with death, our focus on youth, are just a few of the problems that derive from the instrumental-future oriented time perspective characteristic of our culture.

While learning to frame time in school terms creates certain problems for the individual it also means that other time management problems may be solved more easily because school time marking rhythms are in step with rhythms in other areas of social life in our society. For example, the timing of school activities matches much of the rhythm of industrial activity. A student who is capable of meeting school deadlines

is likely to experience little difficulty adjusting to most commercial routines. The school functions to some degree as a clearing house for the selection of prospective employees in industry because "success" in school is usually a good indicator of potential for "success" in industrial and commercial life; the rhythms of the former being close to those of the latter. Ability to mark transitions in school is a signal for the ability to do the same in commercial life.

As one might suspect from the above, given the anthropological dictum that each culture pattern creates certain life problems and solves others, the time perspective assumed in most school situations is functional for the individual with respect to some problems and dysfunctional with respect to others. The discussion of the typical assumptions that are made about time is not intended to suggest that one can avoid projecting or assuming a temporal perspective. Even if it were possible to interact with students without assuming some perspective on time (which is not possible to do) such interaction would not be desirable. What is intended by this discussion is that "taken for granted" assumptions about time be considered in terms of how these assumptions contribute to the kinds of sets that students adopt. In this context as well as the others discussed so far, the hope is that such an awareness on the part of the teacher will mean that the more self defeating aspects that may derive for some students from these kinds of assumptions can be mitigated.

Such an awareness means that teachers and others involved in learning systems will be attentive to the fact that different students "peak" at different times. Even though it may be

necessary to maintain a schedule that requires that all students attempt closure at the same time, if one is aware of the fact that there are alternate schedules operative and of the ways these schedules may be functioning for various individuals it should be possible to deal with the problems presented by the different schedules without creating the conditions for an alienating set of learning experiences.

In this discussion of the way time is approached I have (as in other contexts) focused on one particular set of assumptions while ignoring other possibilities. The focus has largely been on how time is approached instrumentally and the consequences that derive from approaching time in this way. While this is the dominant mode of experiencing time in our culture there are other issues that are important with respect to the way time is handled in educational settings. For example, the discussion of deadlines was not concerned with the positive function for learning that such techniques perform. Obviously one positive function is to create pressure for closure. For those students who are able to respond in unself-defeating ways to these pressures the deadline is definitely a spur to productivity. As always the issue is one of how the learner incorporates the deadline into his definition of the situation and of his role in that situation.

It is also the case that not all educational settings establish the orientation toward time that I have discussed. It is possible to observe a few situations where time is approached in less functional, less future oriented ways. Just as the loosely structured classroom produces its own problems that differ from those in the highly structured

classroom, the present oriented classroom also creates its own unique set of "problems". In terms of the metalearning issues involved, the present oriented classroom is functional when students are evolving definitions that are not self-defeating. Insofar as students are able to set their own temporal limits on problems that they are following and insofar as these limits are acceptable and provide a sense of fulfillment, the system is functional. The system becomes problematic where the student comes to see himself as incapable of providing closure. This self-definition may evolve because there are few boundaries for any given activity. If the learner has had little experience with following a problem and allowing it to suggest an appropriate rhythm he may have difficulty deciding when it is appropriate for projects to begin and end.

As in other contexts, these examples reveal that it is not the peculiar character of the approach or set of assumptions about time that have improtant consequences for learning. Rather it is the fact that there are assumptions operative with respect to time and that these assumptions create certain kinds of problems that I have tried to emphasize. These assumptions about time are inevitable but they must be made explicit in order to come to terms with the problems they create.

Since each object brought into the classroom is viewed in terms of its function for facilitating learning, there are limits on the kinds of media that are considered acceptable and are brought by students and others into the classroom. Because these limits are placed on what is acceptable, the classroom becomes a special milieu that is physically different from almost all other environments that learners encounter.

Yet the fact that the classroom contains a fairly specialized assortment of media, which are approached in a highly specialized way is rarely consciously attended to by the teacher and the students.

Outside the classroom the kinds of physical objects that can be interacted with is infinitely varied. In addition, the way these objects are approached and related to by the individual is extremely varied. Since the manner in which media are approached in the classroom is limited and since the media themselves are specialized, it follows that the classroom experience with media produces a different characteristic style of apprehending the world of objects than does daily living. The perception of these differences on the part of the student may mean that he or she may come to define the classroom experience as irrelevant to real life situations.

The world of objects (media) outside the classroom rarely presents itself to the individual in terms of the potential lessons that may be learned. The individual learns from the world, but the learning that one assimilates into one's meaning system results from engaging problems that are linked to daily existence. They are perceived as problems in one's daily life, not problems that are to be engaged in in order to learn a skill that may then assist in solving some real life problem.[5]

In the classroom media are rarely approached in this way. Even the least imposing kinds of materials are designed so that the students will develop specific skills as they interact with the medium. Cuisenaire rods (these are colored rods developed by the Belgian educator Georges Cuisenaire for

developing mathmatics concepts)[6] may be used by the teacher in the early grades to foster "informal" learning. The rods are set out by the teacher for students to use, usually with little stipulation on the part of the teacher as to "rules" for their use. While the teacher may perceive these and similar materials as imposing only minimal structure on the student (and compared with other media they are only minimally imposing) the materials themselves present a precise ordering of the world- one that is designed to result in playing conceptual games of a fairly specialized order.

These kinds of materials and the approach toward the world that underlies them are relatively open ended, in the sense that no explicit rules are required in order for the student to learn from them. In addition to Cuisenaire rods, I have in mind here those materials that allow the learner to proceed organically, that is, at his own pace, in terms of his own interests. Yet all these materials limit the kinds of experiences that are possible to some degree. While the students may experiment with the rods without rules at first usually this procedure is replaced with one that "draws out" certain relationships between the rods as the student progresses.

Because Cuisenaire rods are designed to teach certain mathmatical relationships they limit the kinds of experiences that are possible. For example, the child doesn't experience non ordinal ways of relating objects as he or she might by playing with clay. The point here is not to criticize Cuisenaire materials for failing to teach all the possible relations in the world of objects, the point is that these materials and those like them (as all media) present a fairly

circumscribed potential to the student.

Each medium presents itself before the individual as a limited set of possibilities. Any medium presents a partial rendering of the world; it is limited in terms of the variety of experiences that are possible with it. One's experience with any medium is always circumscribed by the contours of that medium. From an interactionist perspective what is important about the classroom situation is that the teacher rarely assumes this to be the case. On the contrary, the teacher often approaches the media in the classroom as if they are capable of engaging the student in a set of experiences that are lessons that will be applicable in real life situations outside the classroom.

McLuhan takes the position that the experience associated with a particular medium is unique to that medium and is not comparable in important ways with the experience associated with some other medium.[7] As we have noted, classroom media are largely specialized for the performance of teaching functions. If McLuhan's argument is correct then this specialization should mean that the typical classroom experience is different in important ways from daily life outside the classroom.

In terms of metalearning, an important dimension of the set with respect to media that may develop in classrooms is the assumption that the medium should be functional. An important correlary of this assumption is the notion that each medium teaches content, a set of facts that is useful for the student to have assimilated.

> In a human development seminar that I taught I scheduled two movies; one dealt with maternal deprivation in lower primates, the other with maternal deprivation in human infants.. The films were both of the educational genre (they assume that they are passing out information). The narrators in both films told of experiments that had been performed and the films visually recorded the results. What was important about the film showing was that I used two projectors and exhibited both films simultaneously.

After some initial confusion it was obvious that most of the viewers were able to handle the "information" that was coming out, even though there were two sources. More importantly by their laughter and explicit comments the students revealed that they were able to get "outside" the films. They were seeing the films not as an accurate rendering of the world (of the way infants develop) but the films were seen as events in themselves, as work done by persons who had created a movie that attempted to communicate something about how the movie makers viewed infant development.

This kind of perspective is rarely adopted in school. A medium is rarely perceived in terms of the potential that it presents outside the one for which it was intended; that is, outside the terms of <u>the lesson</u> that it was designed to produce. Yet as we have argued earlier, media in the world outside the classroom are not designed to teach a lesson; in fact most objects simply exist. There are not created as the result of some functional plan or design. Those objects that are created purposefully by man are only rarely designed to <u>teach a lesson</u>; usually they fulfill other more direct functions. The consequence of this kind of situation is that the student is much less likely to have the experiences with media in the classroom

that are not dictated by the necessity to develop some skill. If the only early experiences that the students have with books are those associated with the difficulties of learning to read then the fact that many adults are functional illiterates is entirely comprehensible and predictable.

Many media are approached in terms of certain assumptions about the nature of the interaction that is to develop between the learner and the medium. These assumptions are set by the teacher; the teacher creates the definition of the situation by making certain assumptions about the nature of the activity. Computers and other teaching machines, for example, may be used to engage the student in feedback relationships that "teach" or more appropriately, "reinforce" certain behaviors or skills. In terms of metalearning what may be happening when computers are used in this way is that the student may be learning his own fallibility with respect to an infallible system. This unattended consequence in the long run may be seriously self-defeating for the student; he may come to define the right answer as something which exists in the world of others rather than the world of self. More will be said about this in the following chapter.

But computers need not be approached in this manner; children can be taught to make use of the information storage and retrieval funtions of the computer to solve problems that they themselves contrive. In this way the computer, like the medium of the printed word may be used by the student to answer his own questions about the world. In terms of meta-learning the studetn assumes the medium has a potential for revealing the world which he must discover; rather than the

assumptions that the medium presents the world as it is and that the student's problem is to internalize the "facts" presented. In the former the student becomes the medium; in the latter case he becomes its victim. Given even the most modest predictions based on the kinds of information storage and retrieval systems now available it is obvious that children who are being educated today will grow up to live in a world where vast quantities of data will be accessable with little or no effort required to retrieve them. For example, each person in all probability will have at his disposal a terminal console which would be capable of printing out or reproducing in other forms all the printed and taped material ever to be produced by the human mind. Under these kinds of conditions whether one is master or victim of the medium is a question of utmost importance.

from the point of view of metalearning the problem is not one of how limited a particular medium is. For example: the problem is not to establish the limits of television (the fact that it requires a passive viewer, etc), rather metalearning focuses on the <u>definitional system</u> that evolves as a result of an interaction that centers around a particular medium. In the case of television the viewer (as learner) may adopt a position with respect to the set that is quite active in the sense that he or she may be actively evaluating and making use of the images and sounds projected by the medium. I remember viewing the Olympics on a T.V. set located in a furniture store window along with about twenty other persons on a street corner in Cuernavaca. The experience could be described as anything but passive.

Historically, one of the functions of art has been that of forcing the audience to question assumptions about media. Insofar as the artist works in a particular medium, one of the problems he confronts is that of exploring the limits of that medium. In this way art creates new possibilites for any given medium. As the discussion of metalearning suggests, it is very important that assumptions about the way media are approached in the classroom be open to question. One of the key ways that these assumptions are called into question is through artistic exploration. Rather than viewing art as a tangential "subject" in the curriculum, if we take into account the fact that student assumptions about media are very important in terms of what can be learned, then art is central to all media used in the curriculum insofar as it facilitates critical evaluation of assumptions about these media.

The fact that in most educational settings "art" is separated from other aspects of curriculum and taught as if it were some particular content suggests that our culture has gone a long way toward reifying the educational lessons that are made possible with media.

One of the factors that mitigates the tendency to approach each medium as presenting some definite content and specific lesson, is the recognition by the teacher that teaching a "lesson" (a particular technique or method) as an abstract exercise which may foster the development of some skill that may be useful at some future time is not as effective as the situation in which the learner explores real problems that he selects from his own perceptions of the environment that he or she is in.

With regard to media, this recognition requires that the teacher develop strategies that make it possible for the student to develop his own way of challenging the various media he confronts. The student must come to recognize some of the potential presented by the given medium; he must come to ask his own questions.

As I suggest in other contexts, this is not an easy problem for the teacher to resolve because there are contradictory requirements operative. On one hand, the potential that a given medium presents whould not be too circumscribed and rigidly defined by the teacher, but the student should have enough prodding and cueing so that he or she has some reassurance that a sense of problem and its solution can be developed.

As in other contexts, merely confronting the student with varied media and adopting a sink or swim attitude is not necessarily a sufficient condition for learning to occur, given the definitions that some students are likely to evolve. Once again it is not the nature of the approach but the way the approach functions in terms of how the student comes to define the situation that is of crucial improtance for what is learned.

In this chapter we have discussed how teachers typically make certain assumptions about time and various media in the classroom. We have seen how time is viewed in a special way in our culture (and especially in the classroom)where the present is often approached in terms of its function for the future. For a number of reasons time is marked differently by students; some of these reasons are peripheral to the classroom (students have different social class or family, etc.). Sometimes there are issues operative in the classroom that produce different definitons as when a counter group defines

time differently or when a student engages a problem that doesn't lead to closure in the time specified. We have discussed how media are approached in a similar way, that is, they are approached in terms of how the particular medium can produce a particular lesson. One of the central problems that arises from these assumptions about media is that the student comes to engage media as if the media were capable of presenting reality as it is, rather than approaching a given medium in terms of the potential that it presents for revealing the world. in this way the student comes to be a victim rhater than a master of the medium. Art was discussed insofar as it is capable of stimulating the learner to evaluate the potential that a given medium presents.

NOTES CHAPTER IV

1. For an introduction to this topic see: Hall, Edward, The Silent Language, New York: Doubleday, 1963.

2. This discussion is based on the work of Whorf, Benjamin Lee, Language, Thought and Reality, Cambridge: M.I.T. Press, 1972.

3. For a discussion of this see: Piaget, J., Psychology of Intelligence, Chap. V, "Growth of Thought" Totowa, New Jersey: Littlefield, Adams & Co., 1966.

4. Barker, Roger G. and Wright, Herbert F., One Boy's Day New York: Harper and Brothers, 1951, pp. 105-107.

5. For a discussion of this see: Illych, Ivan, Deschooling Society, New York: Harper Row, 1971.

6. Gattegno, Caleb, For the Teaching of Elementary Mathmatics, Mt. Vernon, New York: Cuisenaire Company of America, 1963.

7. Mc Luhan, Marshall, Understanding Media, New York, Signet, 1964.

CHAPTER V INTERACTION AND THINKING

The previous chapters have been concerned with social interaction and how it affects the definitions that learners evolve; very little attention has been paid to the actual thought processes that the learner engages in. In this chapter the focus will remain interaction but we will discuss the problem of how the learner thinks insofar as his thinking is affected by interaction. The notion of metalearning will be explored as a way of explaining how thought and consciousness evolves and develops, at least in terms of the role that social interaction plays in this process.

An important influence in terms of classroom interaction and its affect on the way students think is the role that situationally generated anxiety plays in the thinking process. While anxiety is experienced by the individual as a highly private affair (one <u>feels</u> anxiety), it is not necessarily the case that anxiety is generated by mechanisms or processes that are entirely internal (located within the individuals). Typically certain <u>situations</u> produce anxiety, that is, <u>any</u> individual in that situation is likely to experience anxiety. If one is threatened with serious physical injury for example, it is likely that some anxiety will be experienced no matter who the person experiencing the threat may be.

In the classroom the potential for experiencing anxiety varies over time, and at any given moment students are likely to be experiencing more or less anxiety depending upon the interpersonal mood that may be prevelent. It also follows that some classrooms present greater or lesser potentials for

experiencing anxiety for certain kinds of individuals.

The interpersonal mood experienced in a classroom arises from a number of conditions. Anxiety may be the result of the teacher's attempt to structure behavior. In the highly structured classroom for example, there is usually a good deal of eye checking (students who look around at others covertly). The degree to which this is the case is often a good indicator of the extent of anxiety that is prevelant. While the indicators of anxiety that I assume are not more elaborate than this, I would argue on logical grounds, in addtion to my own observations, that the highly structured situation produces this kind of behavior to a greater degree because the individual's performance at any given time may become problematic for the rest. There is a greater potential for the individual to interrupt the smooth flow of behavior.

Anxiety arises also in situations where expectations with respect to a given role are violated, as when the teacher reveals that he or she hasn't read the assignment. Another situation where anxiety may be experienced is the situation where the counter group projects a different definitional system than the teacher and it is necessary for the teacher and students to readjust their definitions of the situation.

The preoccupation with order and discipline on the part of the teacher may produce a good deal of anxiety in some students. Because the universe in the classroom is symbolic and largely manipulated by the teacher, the student is never in a position of absolute certainty with respect to any of his behavior. If the student has had some prior experience that was humiliating or fearful, he may become cycled into a pattern

that makes it difficult for him to handle situations that are similar and these situations are likely to produce anxiety. I have observed children whose characteristic response to almost any question that is put to them, is to shrug their shoulders or say, "I don't know," or in general to avoid venturing any opinion on any topic.

> I observed a group of first graders taking an achievement test. The importance of the event was underscored by the verbal and non-verbal behavior of the teacher and her aide. The children found it difficult to turn pages; the teacher and the aide walked around the room folding test booklets (a major variance from their usual behavior). Several of the students look up out of the corner of thier eyes at the teacher. They try to see the papers of the students near them. Even though they are so young, the pressure for cheating in this room is very high. The test is an important event. The teacher (for the several months that I have been observing her) has been emphasizing the importance of the right answer in these kinds of situations.

Anxiety in the classroom then may be a product of the pattern of interaction that develops and may have little to do with the personal characteristics that an individual brings to that situation. Yet the individual that is experiencing anxiety is likely to be unaware or only minimally aware of the sources of his own anxiety. He is likely to know that something is wrong, but the something that is wrong is likely to be defined by the individual as something is wrong with himself; the likelihood of a definition that takes into account the interaction that is occuring between the individual and others in the situation is minimal.

If the classroom is one where the interpersonal mood is such that students are experiencing anxiety, from the point of view of metalearning there are several important concerns that

are likely to be operative. Generally, anxiety occurs when the student faces a situation where there are few easily recognizable cues as to how the situation is to be defined, that is, how one is to orient one's behavior. Since it is usually imperative that the individual have some definition of the situation in order for him to behave appropriately, it is usually the case that when the situation is "spoiled" (when the normal cues and expectations are violated), the individual experiences a sense of anxiety and he constructs his behavior because he has no guidelines for arriving at a definition of the situation.

Why it is that these kinds of disorienting situations are associated with the inner experience we call anxiety or fear is a difficult question to answer. Obviously not all observors will define any situation in the same way. While some students may experience a given situation as disorienting, others will have some category of relevance that they will use to incorporate the potentially disorienting behavior. It is a matter of the kinds of meanings that are attributed to the situation by the individual. Yet not all behavior has an equal potential for spoiling the definition of the situation. In previous chapters as well as those illustrations discussed in the preceeding paragraphs, it has been suggested why it is that some kinds of situations may become problematic for some students.

The relationship between the physilogical state of anxiety and the perception of the situation (a perception that we are labeling "disorieted"), however, is more difficult to establish. William James has written [1]

> The more closely I scrutinize my states, the more persuaded I become that whatever moods, affections, and passions I have are in truth constituted by, and made up of, those bodily changes that we ordinarily call their expression or consequence...

Anxiety then is a physiological state, there are increases in heart beat, glandular secretions, etc. that go along with the report that an individual makes about a change in how he is experiencing the world. I use the term anxiety rather than fear because it connotes a more subtle, less pronounced state that is more characteristic of the kinds of experiences that students have in the situations described earlier.

Why it is that these physiological processes are called forth when the student has difficulty defining the situation is not clear. Apparently they are part of a general mobilization that the individual goes through as he calls upon himself to create some meaning in the situation. In one sense the physiological reation is functional insofar as the organism enters an excited state, a state of readiness and receptivity. This state of excitation is functional because it makes possible the reception of additional stimuli which may be useful in the reorientation process.

Whatever the factors that link disorientation with anxiety, it is obvious that the kinds of situations described earlier produce the experience that we commonly call anxiety. That is to say that some students when confronted by a situation whose definition has become spoiled for them, experience a state of hightened awareness.

In terms of metalearning this state is very important because it is precisely at this time that the individual may construct a new definition of the situation. The fact that

there is a physiological process that underlies the shift suggests a rooting of metalearning processes in man's biological nature. We will explore the problem of human nature vis-a-vis metalearning in another section of this chapter; let it suffice to suggest here that metalearning is essentially a process that is accounted for in terms of interaction between thinking individuals and that the process requires no reduction to physiological states of the organism as an explanation of how it arises or is maintained.

One of the interactional problems that is created by situations that produce anxiety, is the fadt that the anxious student is likely to close down access to his inner thoughts. This "closing down" makes the teacher's task of diagnosing the specific problems that the student is having much more difficult. In terms of metalearning, the situation may be outlined as follows: The teacher makes certain assumptions about the nature of the classroom situation. In general, students are set by these assumptions insofar as they react in fairly predictable ways to the teacher's definition. In so doing students make certain assumptions. Yet for a number of reasons the situation may become problematic for any of the parties; under these circumstances some degree of anxiety is likely to be experienced by the student (as well as the teacher; here our focus is the student). The fact that the student is experiencing anxiety makes it much more difficult for the teacher to gain access to the student's inner world.

While everyone accepts the fact that there is an appropriate way of behaving; the individual may be uncertain about the appropriate course that he or she should take.

This uncertainty is experienced as anxiety. In terms of the processes involved the individual who is uncertain about the definition of the situation experiences heightened awareness (stimuli are processed at a higher rate) and one of several possiblilities is created, either: A) a metalearning shift occurs in which the learner entertains an entirely new set of assumptions or B) the learner continues in a state of anxiety until the focus is shifted by other persons from those factors that made the situation problematic or C) anxiety is sublimated: the student regresses to the earlier definition or evolves a definition that does not meet the dilemmas posed by the threat, but which nevertheless avoids anxiety. Because there is no framework (no consistent assumptions about the situation being made), the student who is experiencing anxiety is unable to entertain any consistent pattern of thought. Development of any integrated line of reasoning requires that the thinker begin somewhere, that he make some assumptions about the problem he is investigating. Selecting any problem itself precludes a whole set of assumptions about why the problem is a problem (how it fits and doesn't fit with other information that is known about the world). It is often observed that to pose a potentially productive problem is the most difficult issue one encounters when working in most fields of human endeavor.

If the definition of the situation has been spoiled in any given classroom the learner may know only that some kind of problem exists, that something is wrong, as we have seen he may have very little evidence for what it is that is wrong. In this case, there is no problem that has been identified;

rather the learner only has a sense that something is wrong. It is this kind of situation that commonly produces anxiety.

Let us take an example from the stage of concrete operations that illustrates the role that anxiety plays in learning. One of the famous Piagetian experiments involves the use of a liquid that is poured from one container to another. In each case the volume of the liquid remains the same, but because the shape of the containers varies the appearance of the liquid changes as it takes the shape of the new container. In this situation the child must learn to alter a set of assumptions, in order to gain certain advantages offered by a different set of assumptions. The assumptions that are to be modified derive from an earlier stage (sensory-motor). In the prior stage "perceptual" evidence is a dominant mode and theme; the learner must revise the way he makes use of perceptual evidence in order to attain the notions of conservation and reversibility.

In terms of this particular task (the constancy of volume) the successful learner is one who makes the shift from the perceptual evidence to the notion of conservation. If we ask the learner if the containers are holding the same amount, presumably the successful learner resounds that the amount is the same. If the learner responds that they hold different amounts, we may begin to pressure for the alternate conception; we may ask why? Or we may use any of a number of other probes to get the learner to treat the perceptual evidence as problematic. The more we probe, the more likely it is that the learner will begin to experience anxiety as we raise doubts about his or her definition of the situation. As we have suggested (in alternative "B" above) the learner may remain

in this state of relative anxiety for some time depending on the course of the interaction. Or the period of anxiety may result in a new definition of the situation that requires a regression to some prior definition; the learner may assume the liquid to be the same and that our questions do not threaten this definition. One of the ways the threat may be neutralized is by defining the experimentor's motives in such a way that his questions are incorporated into a definition of the situation that allows the assumption about perception to remain the same.

In any interactional situation the potential for interpretation that differs from the experimentor's definition (or the teacher's for that matter) is infinite. For this reason it is possible for the definition to remain intact despite even the most persistent onslaught of contradictory evidence. The learner merely focuses on the experimentor's stimulus (in the above example on the questioning process) as the problem to be explained rather than as a contradiction to the definitional system. In this way the focus of attention becomes the initiator of the threat rather than the threatened system as when a child who is badgered by a teacher or experimentor begins to cry or otherwise disengage from the stimulus as threat to the definitional system. I am not arguing here that this is a "defensive" reaction to a threat to one's definitional system, rather, this interpretation of the situation that may derive is only one of a whole array of possibilities that are available to the learner which he or she may adopt.

Thinking then entails open ended dialogue- any given response on the part of an "other always retains the potential

for multiple interpretaion. Any message must always be put in context by a listener who is capable of an infinite variety of interpretations. Metalearning is constantly operative in all learning situations insofar as the potential assumptions about the nature of the situation are always unlimited.

In the absence of another human being who may get "outside" one's thought in the sense that the context of the other as he listens has to be different (even if only in the fact that he must listen while I speak), the thinking person substitutes an inner ear, which becomes a voice as it speaks any given thought that the thinker may have. In this way we develop our thoughts by speaking to ourselves, listening to what we have said and then reacting by speaking again.

The converse of this situation can be seen in the practice of meditation. The practitioner focuses on a particular mantra or other thought which is repeated over and over with little or no modification. This process is more properly defined as sentience rather than thought because it lacks the sense of progression of ideas usually associated with thought. Often the purpose of this activity is to transcend" thought in order to tune in on what the practitioner feels is a more fundamental reality. Implicit in this attempt is the assumption that thought is an imposition on consciousness, that it is a process arising from interactions among men and consequently imperfect and partial.

The view underlying much of what has been said so far regarding the process of thinking is one that emphasizes the importance of interaction between human beings. Thought is the product of this interaction; it does not exist independent of interaction between individuals. Feral children

(infants who have for one or another reason or another survived the early stages of development without the benefit of human interaction) exhibit very few of the mental processes that we commonly define as "thinking".

From an evolutionary perspective the development of the cortex (the center of the brain responsible for rational thought processes) is associated with the development of complex social interaction. While some interactions between members of other species reveal highly developed patterns (as "directional" communication between bees), these communications tend to be specific to some particular ecological problem of survival. Communications regarding the presence of some threat of the presence of food or communications leading to sexual reproduction are common to many species.

More broad range interactions that are not tied to specific survival problems, however, are most characteristic of the higher primates. The point in this context is not that changes in brain structure produce the complex interaction that makes thought possible, rather it is probable that the genetic mutations that make possible changes in physiological structure emerge as part of a process which includes communicative interaction as a component. As Dubos [2] describes the process it is one of emergence; where man's creation- culture plays a feedback role in the process. This is not a Lamarckian notion where changes in physical or cultural activity are seen as genetically transmitable to offspring; nor is it deterministic in the sense that man's destiny is seen as fixed by physiological factors that operate independent of man's activity. Man's brain emerges as part of a process

that includes interaction between members of the species.

The importance of interaction in this process is that it makes metalearning possible, or to put it in another way, in order for metalearning to take place it is necessary that there be someone to interact with. In this way one creates a situation that has meaning; the meaning is established through interaction with the other person.

Metalearning insofar as it calls for establishing a definition of the situation in interaction with others is not unique to man. While primate ability with respect to tools [3] and signs [4] is well known; a much more remarkable and perhaps more significant ability has received much less attention. Primates are capable of communicating about communication; this means that they must be engaged in some form of metalearning- of establishing a definition of the situation based on the behavior of others in the situation. This behavior must be read as presenting more than the definitions fo the signals. Stuart Altmann comments as follows: [5]

> Nonhuman primates, too, can metacommunicate. Perhaps the most commonplace simian examples of metacommunication are (1) the metamessages that serve to direct messages to particular individuals, (2) the metacommunicative cues by means of which primates distinguish between playful and serious situations, and (3) status indicators. In fact Gregory Bateson, who discovered metacommunication, first noticed these messages while watching a group of monkeys at play. He writes (1955): "What I encountered at the zoo was a phenomenon well known to everybody:I saw two young monkeys playing, i.e. engaged in the interactive sequence of which the unit actions or signals were similar to but not the same as those of combat. It was evident, even to the human observer, that the sequence as a whole was not combat, and evident to the human observer that to the participant monkeys this was not combat, and this phenomenon, play could only

> occur if the participant organisms were capable of some degree of metacommunication, i.e., of exchanging signals which would carry the message 'this is play'.

The notion that communication takes place in a context, that in order to understand how communication is possible, it is necessary to take into account the elements that form the contest (both verbal and nonverbal), is a fairly well developed concept which has been explored by a number of social scientists.[6] The fact that primates are capable of these kinds of contextual interpretations should not be considered extraordinary if we keep in mind the fact that primates are engaged in interaction with one another and that they make use of signs in communication. The step from these facts of primate life to the establishment of context where the signs are given a variety of meanings depending on the context that is created, is comprehensible even if the result may seem quite remarkable, that infinitely varied, novel and creative behavior is thereby produced.

Given these descriptions of primate interaction and the role that context plays in communication the fact that anxiety is associated with the necessity to act in an uncertain situation may be seen as evidence of a physiological basis for the evolution of thinking. If it is true that without context there can be no meaning, then one could argue that anxiety is a survival mechnism, that it was <u>necessary for the development of thinking</u> (man's adaptive mechanism) that there be some biologically transmitted stimulus for the establishment of context. The fact that anxiety is associated with highteneed awareness, that it creates a pressure which the oraganism mobilizes to reduce, that anxiety related diseases

are most common in "advance" societies can all be taken as an indication of a physiological basis for the evolution of thought.

Logically this argument (like the "evolution of the brain" argument) ignores the emergent nature of the process. "Thinking" is a phenotypic phenomenum; as far as we know it is not transmitted to the next generation. The period of time for such a physiological process to produce any change requires a scale too vast for it to account for such recent phenomena as the evolution and development of thought. For example, there have been only minor genetic changes since the stone age.

A more plausable view of the relation between physiological and cultural process has been suggested earlier. These processes interact, one does not explain or account for the other. Rather, an explanation that seeks the origin of thought requires reference to the interaction that has developed between the two.

In any case, whatever the evolutionary processes that are operative, it is a fact of observation that anxiety levels in classrooms may be high, that anxiety may impede learning and that it arises in part from the fact that each student faces the created world of the classroom as if its meaning were "real" in some objective sense that operates independent of the actions of those who create it. The fact that the teacher and others may be reinforcing the notion that there is an "objective" or "right"way of performing in the class, only may serve to increase the anxiety that a student is experiencing. The classroom may be characterized by a "right answer syndrome", that is, the dominant mode of

experiencing the situation (the mode reinforced and maintained by the teacher) may be one that emphasizes that there is one right or correct way of defining the situation.

The rasons that interaction in a classroom may come to center around a right answer syndrome are complex. In part this mode of experiencing in the classroom merely refects the lineal, instrumental, objective mode of experiencing that is characteristic of western civilization. In part, this situation also reflects the fact that most teachers have been trained in an educational setting that emphasizes these kinds of definitions and each teacher merely defines the situation in terms of the way he or she was educated. Another factor that accounts for the prevelance of this view derives from the professional pride or sense of usefulness that each teacher brings to the classroom situation. If <u>all</u> answers are equally correct, then the teacher may be forced to call into question his or her usefulness. It follows then that there should be right answers (in the mind of the teacher) and that it is the teacher's job to get the students to the point where each student is capable of producing these right answers.

As we have seen in other contexts, interaction in the classroom always involves assumptions about what is appropriate; the dominant perspective that determines what is significant is never neutral. In general, it is the teacher's perspective that sets the kinds of definitions of relevance that are established. Yet when interaction has been set in terms of right answer assumptions about learning, the fact that a perspective is being presented tends to be masked; the student is likely to experience the situation as "real" (in the sense that it doesn't involve <u>assumptions</u> about appropriate behavior).

As a consequence the student may experience a good deal of difficulty establishing how he or she is to find the right answer.

We have discussed this kind of interactional pattern in other contexts; here are a few examples to reinforce what has been said:

> In an integrated school district I observed a group of third graders who were viewing a film that dealt with friendships between blacks and whites. In the discussion that followed about skin color and how everyone was equal, one of the white children said that he felt that blacks were the same as he was, only that they were painted black. The white teacher missed the opportunity to expand the discussion in what I thought were very interesting directions. She either didn't pick up on the assumptions implicit in the child's remarks or didn't choose to explore them. The assumption I have in mind is the familiar gestalt phenomenon of assuming a neutral background. The white child was assuming white skin as the unpainted state; whereas black skin was painted or colored in his eyes.

The right answer orientation tends to focus attention away from questioning assumptions when it may be precisely these assumptions that are responsible for the difficulties that a student is encountering. While it is often difficult to accurately assess the consequences that derive from any given set of assumptions, this difficulty is minor compared with the fact that being inattentive to these assumptions may make the solution of learning problems virtually impossible. For example, the assumption that the absence of sound of any kind represents a "neutral" background (an assumption that it would be safe to guess that most teachers make) probably affects the potential for learning that a situation based on this assumption presents to many Black children. This approach

toward sound runs counter to the experience that many Black children have outside the school environment. "Sound" (especially the sound of music) is an important "neutral" or background factor for many Black children outside the classroom. Yet these same neutral sounds would be considered "noise" by the teacher if they were present in the classroom. The point here is not that either is neutral; quite the contrary, the point is that either practive may be problematic depending upon the kind of assumptions that one makes.

If the "right answer" orientation comes to dominate classroom interaction, the teacher may be forced into adopting certain self defeating strategies even though these strategies were not part of his or her original intentions in the situation. Because it is necessary for someone to know the right answer (because that expectation has developed) it is usually the case that the teacher finds himself in the role of the person who knows the answer.

Many teachers recognize intuitively what is apparent from a metalearning perspective; that is they recognize that the focus on the "right" answer may set certain students for failure. From the point of view of metalearning, when the student is forced to focus on his performance, for example the acquisition of some skill, and when this performance is not acceptable to the teacher, the student may come to define himself as incapable (as not possessing the ability) of performing properly. Intuitively teachers recognize this; often teachers will accept a wrong answer and try to move the learner in the direction of the right answer without declaring the learner's attempt a failure.

> In an English as a second language class that I observed the aide was working with several Spanish speakers on English possessive pronouns. I noticed on several occasions that he accepted sentences that were technically incorrect, such as: "This is mine bood." Given the level of facility with the language that the student had, this strategy seemed quite sensible to me. That is, he was letting the students have the experience of expressing themselves and of being understood. Were he to interrupt in order to make the sentence technically correct, he would violate this sense of accomplishment that the students were getting.

An answer may be correct in an experiential-pragmatic sense, while it may be incorrect from a technical point of view. Often when the focus is the acquisition of some skill, if the individual is forced to continually consider his performance as problematic, as when he is corrected from a technical point of view, it may mean that the assimilation of the skill is thereby made much more difficult.

> In studying the making of a documentary film I remember observing the camera crew in a cafeteria; as they filmed people who were eating lunch. Often as the crew would begin to film an eating sequence, the person who was eating would begin to make all kinds of errors: awkwardly picking up the wrong utensils, choking on food and in general, engaging in all manner of other embarrassing eating behaviors.

In this chapter I have tried to suggest that thinking (the process of each individual confronting a situation and reflecting on it) is in fact a process. It is not a static, predetermined activity. Thinking requires that a definition of the situation be constructed as each individual focuses on certain problematic aspects of the situation; some things must be assumed in order to focus on others. In this conception of thought there are no right or wrong thoughts, rather

there are certain assumptions that are made and certain consequences that flow from making these assumptions. In the example of the child who relies on perceptual evidence to ascertain the volume of the liquid in various cylinders, the child assumes that the appearance of the liquid (its shape) reveals its volume. This "error" derives from the fact that he has been learning to take for granted certain kinds of perceptual evidence and that the "new" problem requires that he no longer make these assumptions. This same kind of problem confronts the learner in most "new" situations; for example, one of the troublesome aspects of teaching reading is that the English alphabet, while somewhat phonetic is not perfectly so. The child learns to assume a phonetic system, yet very quickly he also learns to violate the rules of the phonetic system (he learns to treat the assumed rules as problematic). These kinds of contradictory requirements make learning reading much more difficult than it need be.

The problem with teaching from the perspective that assumes that there is a right answer is that students do not have the experience of observing and interacting with others who solve problems by changing the nature of the assumptions about the situation. The social interaction in the classroom is patterned in such a way (when these kinds of assumptions are made) that there is little opportunity for experiencing the creation of meaning in the situation. The social situation requires that each student experience the situation as a world already created by others. Each student under these circumstances comes to view his or her own problem in the situation as that of internalizing the "facts". The reality

that the "facts" are not given (independent of an assumed perspective on them) is rarely brought to awareness by the student. The "facts" are perceived as "out there" and the problem is perceived as one of getting the "out there" inside one's head.

As we have just seen, often the problem that the student faces is one of doing something to himself, of changing his own assumptions, in order to come to terms with a given problematic situation. When the situation is perceived in the terms outlined above (that there is a right answer "out there") this kind of transformation is unlikely. From the point of view of metalearning the interactional situation in the classroom makes it probable that each student will set or frame the situation as one in which there is an "objective" answer to be discovered independent of the way one approaches the problem. Since the problem is already created, that is, it doesn't derive from one's experience in working on some project that one has been interested in (it is a problem for the student because the teacher defines it as such), the student may have few cues as to how to approach the problem. Yet the "right answer" injunction specifies that there is a correct way of approaching the problem. This kind of situation may make consistent, meaningful learning of any sort quite problematic. This is the case because the student is likely to be uncertain about what may and may not be taken for granted.

For this reason, many students never learn to set their own limits on what they will consider as an acceptable solution to any problem; yet it is precisely this ability that will be required for any sense of accomplishment to accompany

the engagement of problems outside the classroom.

Not only is it important for the learner to set his own limits on the problem that he engages, it is improtant to recognize that in terms of real-life problems, what is to be excluded from attention is just as important as what is to be focused on. Accumulating information (facts or bits of data) that are not organized into some meaningful system, or are not useful is not in itself an enterprise that is likely to be reqarding for the individual. The learner must recognize that the accretion of information in any given area reaches a point of diminishing return without the introduction of some new organizing principle.

To anticipate redundancy, to stick with a problem until the pattern becomes evident and disengage in order to focus attention in other areas once the problem has been elaborated sufficiently are the signs of mature thought. In commenting on the world of the physicist, Dr. Brian Schwartz suggests that "more" is not necessarily "better": "The size of the technical journals is growing exponentially, but people are worried only about how to minaturize them to get them all on the shelf--not about how to cut down on the output." [7]

Concerning oneself with the metalearning problem that is posed by the notion of redundance does not mean that one must conclude that all thinking be done with an eye to the yield in terms of the significant knowledge that may result from the enterprise. Studies of incidental learning suggest that noninstrumental learning may be highly relevant when it is employed in some new context. In fact it would be impossible to program a situation in such a way that the learner always

stuck to the problem at hand until the optimal moment and then moved on to the next problem; this can be done with relatively simple tasks, but as soon as really independent thought is required the system breaks down. This the the case because ultimately it is the learner not the teacher who is to be the measurer of relevance; when all is said and done the learner decides what he or she will know.

This discussion raises questions about the relationship between metalearning and student motivation. One way of dealing with the problem of the student's motivation is to consider it as a separate problem from what are defined as "cognitive problems." Yet when the issue of relevance (that is, what the learner will assume and what he will define as relevant) is seen as an important component of learning, then motivation, insofar as it is a significant factor in shaping what is seen as relvant, must be considered as a part and parcel with the other components that produce the definition of the situation. In terms of metalearning, the learner's definition of the situation evolves as a result of his intentiaonality as part of the necessity that he act in terms of behavior he has observed in others. The activity of defining the situation is tied to how one sees one's role in the situation. The individual defines the situation in terms of the potential that the situation presents for his activity.

There are many factors that influence motivation. For example, the fact that school attendance is compulsory in our society is probably an important influence in terms of the kinds of definitions that many students evolve. When a

student confronts the problem of why he is attending school a realistic self evaluation requires that the student take into account the fact that attendance is compulsory. This does not mean that most students come to define the situation as one in which they are coerced, but the fact that attendance is compulsory does contribute to the potential for the evolution of alienating definitions of the situation and of one's motives in participating.

For some this alienated way of perceiving the learning situation may develop over the life history and it may become so much a part of the way of defining the school experience that when the sanctions against non attendance are removed (as they are in later years) the student may still bring with him the notion that the classroom is not a place where he or she is likely to engage in activity that will be personally meaningful. For example, some students are motivated to attend college with little thought that anything meaningful will be learned, but rather because the college degree is a necessary requirement for certain kinds of employment.

The particular history and development of the motivation of any given student is a complex phenomenon involving many factors. In this context only one of the factors has been discussed (the general climate generated by certain coercive aspects of our educational institutions). Other factors undoubtably enter into a student's definition of the situation and his motivation in that situation. Some of these factors are cultural; others are personal and unique to the individual. The point that bears reinforcing, however, is that whatever the reasons that set the motivational apparatus in motion,

it should be obvious that the learner's intentions, his motives, play an important role in how the situation is defined.

The discussion in previous chapters having to do with how the learner comes to see himself as a result of interacting with others should be taken as a partial explanation of the social interactional factors that lead to certain kinds of motives. Logically it follows that one's motives (what one intends to do, or would like to do) derive in part from how one defines oneself, especially in terms of the assumptions one makes about the capabilities and disabilities one has. We have seen in previous chapters how this defintion of self evolves from interaction with others. While the classroom and the behavior that goes on in it are important in terms of student motivation, they are not the only relevant factors. All the learner's experience, including school, goes into making up the unique image that each individual has of himself. This image goes into the construction of the definition of the situation; the definition of the situation represents one's image of what is possible for oneself in the situation. Learning involves then the problem of what one sees as possible for oneself in any given situation. It is an active process; it involves doing. If, for whatever reason, one has defined the situation as presenting little potential, given how one defines one's capabilities, there is little possibility for meaningful activity and consequent learning to take place. In actual learning situations motivation and cognition are inseparable; they are one and the same act involving the learner's construction of the meaning of the

Given the previous discussion of metalearning, creativity may be seen as involving a change in the assumptions or sets that are brought to a particular problem. In this context I am using the terms "assumptions" and "sets" in much the same way as they have been used in other contexts, that is, to stand for what is taken for granted in a given situation, those factors that form the unattended background or frame in the situation.

A change in assumptions may come about through interaction with others as when an element of a situation becomes problematic for a group. We have seen how any given classroom routine may become problematic for teachers, students or any others who may be present. Examples of these kinds of "spoiled" situations include the teacher's time scheduling, the way deadlining may be violated by different groupings or when some highly personalized "other world" is brought into the classroom. For other examples and elaboration refer to Chapters II,III, and IV.

The literature on gestalt shift includes many examples of these kinds of situations.[8]

> A great chemist found the solution of a fundamental problem in organic chemistry after casually chatting with a friend while waiting for a streetcar. He just went up the steps of the car, waving to his friend, when suddenly an entirely new possibility of arranging atoms in a molecule appeared before his mental eye. Up to that point, any attempt of his to find the structure of those molecules which would explain their behavior had ended in failure. But now, after this moment on the steps of a streetcar, organic chemistry began to expand in an entirely new direction.

The history of science affords many interesting examples

of how the interactional process, that is, interactions between specialists in a field, plays into the process of discovery that a given individual may be engaged in. Thomas Kuhn [9] argues that the major shifts in thought associated with names like Copernicus, Newton, Lavoisier or Einstein derive from a period of crisis associated with a particular paradigm (to use his term). During this period of crisis, the normal scientists accumulate more and more evidence that is inexplicable given the existing framework or paradigm. These anomalies, over time, eventually lead to a revolution in science where the assumptions of scientific practive (the laws, theories, applications and instrumentation that characterize the period) give way to a new set of theories and practices that are capable of explaining and coming to terms with these anomalies.

The problems that are articulated by a group of scientists working with an older paradigm are the source of the reorganization of approach that will characterize the new paradigm. The way this new conceptualization is achieved is by treating as problematic that which has been taken for granted in the older paradigm.

The Copernican revolution provides an example of this kind of development. The Ptolemaic system, positing the earth as the center of the universe, reflected the existing cosmology of the period; it was tied to and made sense in terms of the way men of the time approached the world around them. Additionally the system was remarkably accurate; all but the most precise observations (given the instrumentation of the period) were accounted for. As time passed, it became necessary to modify

the theory to incorporate various anomalies, as when the notion of retrograde motion was introduced to explain the apparent reversal of planetary motion; but in general the theory accounted for most of the observable evidence. The revolution inaugurated by Copernicus was extraordinary, not so much because it changed the facts of observation (although advances in observation were accumulating) but because it questioned and reinterpreted the fundamental assumptions on which the Ptolemaic system was based.

All the history of scientific endeavor is not characterized by "revolutionary" shift from one paradigm to another. According to Kuhn there are periods of "normal scientific" activity. During these periods the implications that derive from the assumptions made by any particular current paradigm are elaborated and refined.

This process is remarkably similar to the process described in earlier chapters, insofar as the theme: the set, or in Kuhn"s terms, the paradigm, provides a key to understanding the problems encountered as well as their resolution. This is applicable both to the problem of learning as well as the history of science. This similarity derives from the fact that in both instances what is being explained is how we come to learn about the world. What we don't know derives from what we <u>exclude</u> (what we assume without examination or choose to take for granted). In order for thought to proceed we must make certain assumptions about the world, we <u>must</u> take certain things for granted. It is often precisely these assumptions that are invisible (in the sense that they lie outside awareness) that may account for difficulties that we

are experiencing in solving the problems that we may have.

In the case of interaction that occurs in the classroom and other formal learning situations, the parties assume certain propositions about the nature of the situation. In prior chapters we have explored how these assumptions set the learner in such a way that he may encounter difficualty assimilating the material that is to be learned. Creativity, since it often requires that the problem be cast in new and differing lights, amy be furthered or retarded in the classroom situation. For example, insofar as students may become anxious as a result of participating in an anxiety producing milieu, the situation is one which is not conducive to creative problem solving. Anxious persons may not be the most likely candidates for entertaining alternate conceptions of any given problem, especially since anxiety makes consistent elaboration of the alternate view very difficult.

Juat as there is a period of naormal activity in science, in most learning situations a good deal of the time, most of the students have little trouble with the assumptions that are operative in the situation. The point is that weh they are having problems, it is often very difficult to locate the source of the problem. Just as retrograde motion was introduced to explain a phenomenon that caused difficulty with the Ptolemaic system, teachers and students often derive explanation for behavior that is problematic, that in fact complicate the situation and make resolution of difficulties less likely, as long as the assumptions inherent in the situation are not questioned. Much of the labeling of "ability" as some quality of the individual, one suspects falls into this category.

Rather than questioning the assumptions that are operative in the situation, as one might do with respect to "deadlining" for example by indicating that the problem may not be soluable given the time period allocated, the focus becomes the student's "inability" to finish in time.

Metalearning and creativity are intimately related insofar as metalearning deals with the problem of the boundaries or frames that are brought to bear in a given learning situation, and greativity has to do with recasting the boundaries of a problem in a new and significant way. Not all new or unique definitions of the situation are necessarily creative; often a highly unique ordering of the world is unintelligible to others. In the way a psychotic person orders the world a unique set of assumptions and definitions of the situation are invoked by the individual, but what makes this kind if defining of the situation problematic for others is the fact that it is often very difficult for others to empathize with or to put themselves in the place of the psychotic person.

The degree to which any manifestation of "mental illness" is a function of some physiological process is an open question. What is obvious, however, is that one of the characteristics of these alienated states is that the person who is alienated is engaging in definitions of the situation that are quite different from the assumptions and definitions that normal individuals engage in. A key characteristic difference has to do with a presentation of self on the part of the alienated person that leads to a definition by others of that person as aberrant. This process quickly leads to a cycle of interaction that revolves around the definition of the individual as insane. Once instituted, this cycle is difficult to break.

But the invocation of the definition of the individual as insane is usually based on an observation of behavior that is in fact problematic. Persons who are acting in strange ways will be defined by persons who do not act strangely as problems; this fact is built into the interaction process. It is inevitable because interaction requires that all parties be oriented toward providing some explanation for the behavior of others with whom they interact. By putting ourselves in the place of the other, each of us comes to the conclusion that we understand the other. When the behavior of others is difficult to understand (when it becomes problematic) we have categories or concepts which explain the behavior and make it possible for us to act even though we don't understand the other person. The other person may be defined as a foreigner, insane, drunk, high, possessed by a spirit, brilliant, dull, or any one of a multitude of categories of behavior that makes comprehensible a definitional system that is at such variance from our own that putting oneself in the place of the other (of assuming what he assumes) is impossible.

Creativity requires not only a recasting of the set or frame of a given situation, but it also requires that one do this recasting in such a way that others are willing and able to take on the new frame that one has constructed. The usual approach requires that one demonstrate mastery of a particular subject or situation so that others will have the confidence required to adopt the new perspective (set of assumptions) that one has assumed. In terms of learning the usual rationale behind teaching any given technique is the notion that mastery of that technique (whether it be reading, math or drawing) will provide the impetus for the learner to use these techniques

in ways that will be meaningful to him, and as a consequence his performance will become meaningful to others as the learner develops his ability.

But the mastery of a particular technique, while it may be a necessary condition for creativity is not in itself a sufficient condition. Just as the learner may learn to read without learning why he should read, in most fields of human endeavor practitioners may be highly developed technicians but their work may exhibit little of the liveliness or interest that is characteristic of creative work. Creativity requires that the individual bring some of the uniqueness of his perspective (his style) to the work that he does. In this way an essentially lifeless and repetitative function (technique) is molded by human intentianality as it is defined and given meaning.

The implications of these notions in terms of the throught processes of the individual learner may be of some significance. Thinking creatively requires discipline as well as innovation. Discipline is necessary in order to follow through on any given insight so that the varying elements of the conception are worked out. Discipline gives depth and enrichment to any novel conception. In order for these kinds of processes to be brought into play by any learner it is necessary that he or she come to terms with his own performance in such a way that he learns to have confindence in his own abilities. He must come to trust his own conceptions and to make use of them. In a number of the situations outlined earlier, the student finds himself (and defines himself in terms of) situations that produce quite the opposite in terms of self

image. The situation may require that he become fearful, self denigrating or confused. The fact that it is the situation (and the assumptions operative in it) that may be responsible for the learner's predicament, compounded by the fact that awareness may be focused away from these factors, and on his or her unique personal characteristics, may make any creative activity on the part of some learners in some situations virtually impossible.

Additionally, since the development of any given conception does not exist in a vacuum, any new conception must have some potential for receptivity on the part of significant others. In the discussion of paradigm shift in science in order for the shift to take place, in order for a new, unique conception to be validated by others, it is necessary that the significant others be receptive to the new conception. In the history of science this receptivity is tied to the fact that the old paradigm has produced anomalies (certain facts which can't be explained) and the practitioners in the field have come up against these anomalies and as a result are receptive to new ways of conceptualizing that can handle these problems.

In the classroom, the learner may continually confront a situation in which his unique definitions are unacceptable and as a result the interactional reinforcement necessary for elaboration of his own conceptions is not available to him. This may result in the processes mentioned earlier which tend to make the learner unsure of his won thinking and unwilling to pursue consistent elaboration of the assumptions that he is making about the situation.

As we have seen there are a number of factors that go into

making up a unique, private definition of the situation for any given learner. Some of these factors have to do with unique experiences (subgroup membership). Innovation in science also reflects unique experience--the Darwin voyage on the Beagle is a prime example of a situation where an individual had the opportunity of making a set of observations that were rather unique for the time; the resulting conceptualization (evolutionary theory) ushered in a revolution in thinking about the biological world that would fundamentally reorder man's conceiving of nature and not coincidently, it affected man's image of himself.

But evolutionary theory was an ida whose time had come; the fact that Darwin intended to continue his research for some time before publishing and was forced to write the Origin of the Species under pressure of Alfred Russel Wallace's independent discovery of the principle of natural selection underscore the fact that the intellectural climate was favorably disposed toward new conceptions. In fact, the history of science is replete with examples of simultaneous discovery and consequent debate over priority. Given the discussion of metalearning, something akin to simultaneity must occur often in learning situation as each learner comes to tems with a situation that has been set by the teacher. This "making an object" (treating as problematic) of the world created by others is a theme that runs throughout the discussion of metalearning. It is rooted in man's coming to terms with the orld of other men, or to put it in a different light, it is rooted in man's symbol making ability.

An examination of the symbolic process may help to

clarify some of the issues associated with how metalearning shifts come about, that is, how the assumptions operative in a given situation are changed so that a learner entertains new assumptions about the situation.

Langer and others have suggested that symbolization is a twofold process; on the one hand discursive, on the other presentational. [10] Discursive symbolization is the process by which names are assigned to refer to particular objects or events. A language may be constructed on the basis of this naming process by bulding from a denotative vocabulary. Presentational symbolization on the other hand has as its hallmark the expression of a subjective state. The meaning of a presentational symbol is contained in the symbol itself.

In order to illustrate this difference let us take the discursive symbol: "Bach's Brandenburg Concertos." If I ask a friend: "Have you heard the Brandenburg concertos?" he may respond: "Yes, I have." At this point he is responding in much the same manner as he would if I had asked: "Do you see that pine tree?" However, if I asked: "What did they mean to you?" the conversation amy begin to shift ground. The question may be taken as absurd when applied to a tree, yet when applied to a piece of music my friend may have a sense of some coherence or meaning that resides in the work itself. He may attempt to explain the meaning to me by refering to the sense of necessity he feels when he listens, a sense that certain instruments should or must perform in some manner, and when this necessity is violated he may be painfully aware of the violation. He may attempt to relate the work to other presentational works or he may simply say, "I can't describe it." Whatever the outcome of this

experiment or of other attempts to describe presentational symbols, the reader should be convinced (through his own experience with presentational wymbols) that all of man's symbols are not denotative. If there were only discursive symbols then there would be no art because art would be indistinguishable from everyday language and symbols.

An important problem that emerges from this discussion in light of prior remarks is the nature of the relationship between these two separate functions of symbolization. One of the obvious possibilities along this line is that the presentational function stands as a gestalt, as a radical ordering of experience that has its own relational rules built in. We feel that a particular work must proceed along certain lines precisely because the work is a self contained unity. It is an a priori that forms and shapes itself. The artist is at a loss to explain (in discursive terms) his work, not because he may be "putting on" an audience, but because the work is comprehensible only as a totality; it only makes sense in its own terms. One may use discursive symbols to discuss a work, but the mode of conceptualization must shift from direct apprehension of the unity and totality of the work to a partialized, analitical rendering.

The history of science provides some illustrations of how these symbolic processes operate. In fact, one might argue that the "scientific method" is itself a model of symbolic process insofar as it is an attempt to codify the rules by which thinking in science proceeds. In discussing the traditional problems of induction and deduction, we encounter issues not unrelated to those encountered with presentational and discursive symbolization as outlined above.

In order to illustrate how these symbolization systems operate with respect to one another, let us return to the earlier discussion of the transition from the geocentric (Ptolemaic) to the heliocentric theory. As discussed earlier, from the vantage point of twentieth century astronomy the question of whether the earth revolves around the sun or the sun revolves around the earth was aproblem which was insoluble given the observational data that was available prior to the introduction of the telescope. There is nothing in the apparent motion of the sun and the planets which can resolve the problem; it is simply a question of the perspective that one adopts. As we know for the period from the early Greeks to the seventeeth century, the geocentric theory held prominence in western society.

Since the apparent motion of the planets can be viewed from several perspectives with equal validity, the choice of one perspective over another indicates something about the particular set that an individual as a member of a given culture brings to the situation. In the Greek cosmology (representing the religious presentational set to be applied to all Greeks to any problem) the notion that the heavens (the habitat of the Gods) were qualitatively different and set apart from the earth was a dominant theme. While the Gods may have had human qualities and failings, their home was definitely located in the heavens. Zeus was the lord of the sky; various other deities were associated with the planets. In order to consort with men, it was necessary that they descend. Even those Gods associated with terrestial phenomena often had a dual identity with a corresponding planet or star.

Man on the other hand as the Icarus myth suggests had no business in the leavens. Even the half mortal Phaethon was unable to control his father's golden chariot as it sped through the heavens. Bellerophon bridled Pegasus and flew through the air, but was nevertheless thrown by Pegasus when he tried to fly up to take the place with the immortals. The location of the mythical homw of the Gods (Olympus) is unclear. At first it was held to be a mountain top; but even as early as the Illiad this idea was Beginning to give way to the conception of "an Olympus in some mysterious region far above all the mountains of the earth."[11]

This mythical cosmology set the development of Greek astronomy. For a Greek philosopher-scientist to suggest that the earth shared the heacens with the other celestial bodies required a break with the presentational set that was tantamount to impiety, acharge that was leveled at Aristarchus and other early proponents of heliocentric theory. Yet within this presentational set a discursive science developed that was striking in its accuracy. The precision of description exhibited by the introduction of the concept of retrograde motion by Ptolemy is only one example of the kinds of refinements that were possible within the framework. In fact, although the system was closed (the geocentric principle was indisputable) there were nevertheless an infinite number of refinements and observations possible which could have been based on the central assumption.

We can see in the development of heretical movements a process quite analogous to the problem of revolution in science. The heretical movement arises as the presentational set is normalized and elaborated. That is, the established chuch

attempts to relate and interpret a presentational set to the congregation; this elaboration is essentially discursive. In the process the force of the presentational set is lost, only to be rediscovered in some other time and place. This phenomena repeats itself over and over in the history of thought. In modern times the breakdown of Freud's dominance of psychoanalysis or the statement attributed to Marx: "Me, I'm not a Marxist," are only two of a number of examples of this process in the social sciences. In the arts the notion of a decadent period, following a creative spurt also bears a resemblance to this process of revolution and normalization.

A similar theme can be noted in recent work on the psychology of consciousness. Robert Ornstein [12] suggests that there are two modes that characterize consciousness. He cites a number of authors who employ varying dichotomous terms to characterize these two modes. On the one hand are terms that classify consciousness as: lineal, explicit, intellectual, and on the other are terms such as: nonlineal, implicit, intuitive that characterize opposite tendencies in consciousness. Ornstein also cites neurological evidence that suggests this "Bimodal split" of consciousness may be related to an actual separation of these functions in the right and left hemispheres of the brain.

Whether future research on the cerebral commissure will support this conclusion is a matter that cannot be resolved here. Whatever the outcome of these researches, in terms of metalearning, the implications of these dichotomous characterizations of consciousness are similar to the implications to be drawn from the discussion of the differing functions of

symbolization; the conclusion one is drawn to is that thinking involves a dialectic. Any thought that may be entertained by the individual contains with it the opposite; juat as any thought communicated to another person contains the potential for some other interpretation to be made by the listener. In this way thinking proceeds from the establishment of a frame (an essentially "presentational" function) to the normalization, routinization function that continues until a new perspective is presented that makes comprehensible certain features of the old, normalized discursive set that have become problematic.

The implications for the classroom that follow from this characterization of thinking can be assessed if one bears in mind the notion that thought requires tension and development. Thought is a process, one that involves projecting a focus, elaborating on the implications that derive from the focus, and removing oneself from the restrictions inherent in the projected focus in order to reestablish a new focus. If the teacher is aware of the boundaries assumed by a given focus, the process need not solidify. It is only where the focus is reified or rationalized (in the sense that it is treated as the <u>only reality</u>) that the process is short-circuited. Under conditions where the definition of the situation is amenible to variation the natural qualities of an active mind propel the learner toward discovery and knowledge.

In this chapter we have discussed the thinking process, especially in realtion to metalearning. We have looked at anxiety, how it comes about, how it is related to treating a situation as having only one right or correct interpretation,

and we have indicated something of the consequences for thinking that derive from the experience of anxiety. We have indicated a few issues with respect to the problem of the emergence of thought in the higher primates, (especially men insofar as man exemplifies the most highly developed forms of symbolic interaction). Motivation was discussed as part of cognition, not as a separate problem. One of the factors emphasized was the fact that any definition of the situation involves how one perceives one's role in that situation. Creativity was defined as the ability to manipulate the boundaries that frame a given problem. This process was related to metalearning and discussed in relation to certain examples from the history of science. Finally, thinking was discussed as a symbolic process which requires continual elaboration of the parameters contained within a focus and redefinition of the boundaries that set a given focus.

NOTES CHAPTER V

1. James, William, Principles of Psychology Vol. II, New York: Holt and Co., 1890, p. 452.

2. Dubos, Rene, So Human an Animal, New York: Charles Scribner's Sons, 1968.

3. Kohler, Wolfgang, The Mentality of Apes, New York: Vintage, 1956.

4. Premack, Ann James and Premack, David, "Teaching Language to an Ape," Scientific American, Vol. 227, No. 4, October, 1972.

5. Altmann, Stuart, (edit.) Social Communication Among Primates, Chicago: University of Chicago Press, 1967, Chapter 17 "Structure of Social Communication," p. 356. For a general view of Bateson's work, which has influenced the orientation adopten throughout this work see: Bateson, Gregory, Steps to an Ecology of Mind, New York: Ballatine Books, 1972.

6. For an elaboration of this view see: Ray L. Birdwhistell, Kinesics and Context, Philadelphia: University of Pennsylvania Press, 1970.

7. San Francisco Chronicle, 2/23/72, page 6.

8. Kohler, Wolfgang, The Task of Gestalt Psychology, Princeton: Princeton University Press, 1972.

9. Kuhn, Tomas, The Structure of Scientific Revolutions, Chicago: University of Chicago Press, 1965.

10. Langer, Susanne, Philosophy in a New Key, New York: Mentor Books, 1962. See also: Cassierer, Ernst, An Essay on Man, New Haven: Yale University Press, 1967.

11. Hamilton, Edith, Mythology, New York: Mentor, 1963, p. 25.

12. Ornstein, The Psychology of Consciousness, New York: Viking Press, 1972.

CHAPTER VI

LEARNING IDENTITY AND THE LIFE CYCLE

This chapter is concerned with the development of learning identities. In previous chapters the focus has been the sets and boundaries that "frame" the learner's expectations. The particular issue to be elaborated here has to do with how the individual over the course of his or her life comes to define himself in typical ways, especially in regard to how he or she may come to regard his "ability" to handle certain areas of potential knowledge.

The notion of "ability" that the learner may come to adopt about himself is not necessarily a well defined, easily articulated set of propositions. On the contrary, often the learner may have only vague feelings about his "ability" to handle a given problem. While these feelings may remain undefined they are, nevertheless, important because they are a part of one's image of oneself, especially with respect to what is potentially knowable and what one should attend to. In this way each of us comes to know a certain corner of the world as we stake out the various areas that we feel are knowable, given the parameters that we assume as constraints on what we can know.

The notion of ability is somewhat inappropriate as a metaphor here because it does not connote that which is excluded by the formation of one's self image, which one feels one <u>could</u> know were it not for some intervening concern. These intervening concerns may be no more significant than the fact that one has decided to ignore certain problems because they can be handled more efficiently by persons who have specialized

in these areas. Normally we exclude much of what is potentially knowable by relying on experts in this way. The notion of learning identity as a substitute for the term ability is more appropriate in the present context because it incorporates the notion that a problem may be excluded as an area of potential learning because it is viewed as trivial or irrelevant, as well as being seen as too complex or requiring abilities beyond the competence of the individual. While the more boad notion of learning identity is preferred here, the notion of "ability" is so prevalent that any discussion of learning identity must include reference to the concept as it is implicated in the individaul learner's image of himself. The reader is forewarned that the analysis will remain sociological in the sense that"ability" will be treated not as an explanation for behavior (as a reductionist might argue) but rather that "ability" is put forth by others as an explanation for an individual's behavior and as such it may be incorporated into the individual's definition of himself as an actor in a social situation.

The learning identity is different from the private world that each student brings to the classroom. While the private world essentially refers to (is focused on) events and phenomena that are peripheral to the teacher's definition of appropriate class activity, the learning identity in our society develops around and is largely focused on issues that have to do with what the learner assumes about his own ability to assimilate certain kinds of knowledge.

The notion of learning identity as it will be discussed in this chapter will focus on many issues that are peripheral

to the formal educational setting. This is the case because the learner's image of himself as he goes through life is likely to be a function of a number of factors that have nothing to do with school. The learning identity (what the learner assumes about what he can know) is related to the learner's total being in the world and it reflects all the roles and identities that he establishes for himself in interaction with others.

The specific influence of the school situation on the way learners come to see themselves has been discussed in Chapters II and V. The processes discussed in these chapters develop over time and are reinforced by the accounting procedures characteristic of the school systems of most "advanced" societies. The individual over time comes to construct an image of himself as a result of interactions with many teachers over the course of most of his early years. For most individuals the definitions attributed by others to him are fairly stable over time and do not usually vary greatly from one teacher or classroom to another.

The stability of the definitional system derives in part from the fact that teacher expectation is set by earlier reports. Studies suggest that teacher expectation may become a self fullfilling prophecy which influences the learner's performance. Robert Rosenthal, Lenore Jacobson have studied this.[1] Given the previous discussion of the ways that teachers set interaction, these results should not be treated as extraordinary. In addition, the individual insofar as he reflects on past experience, when he counstructs the meaning of a situation also tends to define the new situation in conformity with the way it was defined in the past. This is not always

the case, and the potential remains latent in any situation that it may be defined differently, but on the whole familiar behaviors and definitions prevail.

But the problem for the individual in constructing a new image of himself in the school setting is the same as problems faced in the construction of any identity; therefore, in this chapter we will focus on identity construction and transformation as a problem that develops over the life cycle. From a logical standpoint the previous chapters (especially II, III, and IV) have dealt with the social interactional elements present in the clasroom that affect the learner's image of himself. In this chapter we will be concerned with the development of the individual over the course of his life, especially those processes that lead to the learner's construction of an image of himself in terms of what he can and can't learn and know.

In general, the problem of taking on <u>any</u> identity, whether it be that of adult, learner, ethnic group member, worker or whatever, is the problem of the individual creating an image of himself that somehow accounts to him (however adequately) for his behavior vis-a-vis the expectations and behaviors of others. In the case of becoming an adult (perhaps the most significant identity shift that an individual may engage in in our society) the problem, from the point of view of the individual, is one of constructing an image of oneself with respect to the culturally patterned expectations of others with regard to adulthood. The transition to adulthood presents a number of problems that the individual must cope with that are similar in their configuration to problems encountered in any identity transformation. Therefore, we

will begin our discussion with the transition to adulthood. After some consideration of the role of culture and other elements in the process we will return to the problem of the development of learning identity.

While adulthood appears at first glance to be a relatively well defined identity constellation, containing an age component that makes the behavioral expectation fairly obvious, a closer look reveals that the expectation is by no means unambiguous. For example, we usually associate excellence of performance with adulthood, yet the history of music contradicts our usual expectation. Mozart was composing at four, Hayden at six, Liszt was playing in public at nine, Verdi at ten, Shubert at twelve, Wagner was conducting at seventeen. One of the conclusions that one is drawn to from this evidence is the fact that the ability for music can develop fairly early in an individual's life. No doubt, given the preponderance of evidence that exists for precocious music genius, that this is the case. But what is especially interesting about this phenomenon is the fact that we expect virtuosity from very young people, <u>if this virtuosity has to do with music</u>. How many other abilities remain dormant, when they could be realized in the early years, because it is not expected that young people are capable of "adult" performance in these other areas remains a matter that is open to speculation. What should be apparent, however, is the fact that the cultural expectation, in this case that young people are capable of making excellent music, is an important component of the set that is adopted by most individuals with respect to what they can do.

To say this is to affirm what the anthropologist accepts

as second nature: the the culture provides the set around which the individual constructs his image of himself and of the possibilities of action that exist for him.

Oscar Lewis' Five Families is one of a number of anthropological works that deals with the role of subculture as it affects the way individuals come to define the opportunities for action in the world around them. Each of the five families represents a variation in terms of the potential life choices that are available to family members. Within the framework of Mexican culture each individual constructs an image of a realistic course of action based on the potentialitites presented by his or her subcultural world.

Even when the choices are unrealistic, that is, they are not likely to lead to the fulfillment of aspirations, the individual is "unrrealistic" within a framework that is set by his milieu. The fact that one's life would be radically different if, for example, one were to move closer to the city, may be such a minimal part of one's awareness that it may never realistically enter into the calculus of available options. To an outsider an alternate course which would resolve some particular life dilemma may appear as an obvious solution, yet an insider in a given milieu may never come to exercise this or other options because the cognitive field that he has constructed in interaction with significant others may make it impossible to entertain these alternatives.

The acquisition of culture presents the individual with dilemmas that are "built in" in the sense that each individual in the culture must come to terms with certain issues that are focal concerns in the culture. While the manner in which these issues are resolved (or remain unresolved) in an

individual's life varies depending on a number of factors, the fact remains that each individual as a participant in a culture must confront the focal problems of his culture.

Even where these problems are denied by an individual, the denial constitutes behavior that has been culturally framed. For example, the denial of status heirarchy practiced by persons in our own culture, as in wearing of informal clothing in settings calling for identification of status by appropriate dress is in itself an acceptance of a "frame" presented by the status system. The disavowal is itself an acceptance of the "frame" presented by the status system. The disavowal is itself shaped by the culture; the individual recognizes himself and is recognized by others as involved in a disavowel or denial of the status system.

One of the key issues that each culture must come to terms with is that of how to mark and facilitate transitions from one identity to another. A central problem that all cultures face is that of accounting for and marking life cycle transitions from birth to death. These are changes in expected behavior and on the social-psychological level they are changes in identity that derive (in part) from the process of becoming chronologically older.

In western culture a number of observers seem to be in agreement that a principal problem that is built into the culture and consequently into the individual's construction of his own definitional system is the problem of the transition to adulthood and the resulting uncertainties about adult identity. Anthropologists have long noted that the transition to adulthood, is a particularly difficult period in our culture because the expectations associated with childhood

are at great variance with those of adulthood, while at the same time the culture presents few well defined steps that the individual can make use of to mark the transition to adulthood.[2] Adulthood as defined by behavior that is expected from the individual in western societies, amy be attained with respect to some roles at a relatively early age, yet one may be chronologically quite old and still be required to act as if one were a child. For example, a married couple may be required to assume child like roles in the presence of either set of parents. As we have noted the process of taking on the identity of adulthood in our culture makes an interesting focus for the discussion of how learning identities evolve because it reveals something of the dilemmas associated with the construction of any identity.

Erikson suggests that in our culture the individual enters a period of "psychosocial moritorium" during adolescence.[3] Because we have no clearly delineated rites to mark the status passage into adulthood and because being an adult is such a complex problem for the individual, this period is necessary to allow some time for the individual to try on various roles before becoming committed to an adult identity constellation.

This problem that the individual faces is one that is generated by the culture. As Aries[4] demonstrates the concept of childhood is a historical development in western civilization. In Medieval society the concept of a separate period of dependency is restricted to the relatively brief period of infancy. In Medieval society, as soon as the indicidual was able to live without the constant solicitude of his mother,

he was admitted to full participation in all aspects of adult society. Aries shows how these Medieval conceptions are gradually replaced with the notion of childhood-- of a period of time after infancy, during which it was necessary to instruct and educate the immature individual.

It is this concept of childhood that sets the adolescent crisis characteristic of many lives in our culture. Each individual must come to terms with the status of childhood as a member of that group insofar as the group is defined by all those participating in the culture. While this way of categorizing the life cycle is created, that is, it is specific to a particular culture and is only one of a number of potential ways of categorizing the life cycle, the individual takes this set for conceiving of development for granted.

In this way each individual assumes the cultural set in constructing his own identity. Given the fact that the set is taken for granted, that is, it is assumed as the reality, as the way developemtn takes place, rather than as one potential way of characterizing development, it becomes easier to explain why the adolescent crisis is so pronounced in western culture. The individual encounters difficulty because in assuming the set that dichotomizes the life cycle into periods of childhood and adulthood the individual is presented with little that he can do to himself in order to effect the transition from one status to the other.

This is not simply a problem of there being few"markers" in the culture in the sense that each individual is presented with few cues to measure his own progress toward attainment of the new identiy. It is also a problem of individual activity, of identity construction. Assuming the cultural set presents

the individual with alternatives that are reinforced by others, but the fact remains that it is up to the individual to construct his own behavior. The individual is confronted by a dilemma that operates along the following lines: before he can come to see himself as an adult he must be treated by others as an adult. The likelihood that others will treat him in this way derives in good measure from how he behaves. Yet his behavior is a function of his own self image, which in turn is a function of the behavior of others. The circularity of this process, the fact that the attainment of the new status is tied up with a self perpetuating interactional system which predisposes the establishment of definitions in certain ways that reinforce maintenance of the definitional system, accounts in part for the difficulty experienced by many young people in establishing an adult identity.

It is precisly this kind of vicious circle that makes conscious intervention that is geared toward the transformation of <u>any</u> identity problematic. I have in mind here the expert interventions (discussed in other contexts) that are geared toward transformation of tragic identities such as those of the alcoholic, the criminal, the drug abuser or the educationally handicapped person. The intervention, from a social psychological standpoint must <u>assume</u> certain realitites about the individual. Most importantly, it must be assumed that he or she is <u>not</u> what the intervention is designed to produce. Under these conditions it is inevitable that some persons whose lives have been intervened in will confront the construction of their image of themselves in ways that make it improbable that new identities will emerge.

Given variations in the kinds of assumptions made by

interventionists which, depending on many factors (especially the presumed difficulty of transforming the particular identity in question) each intervention assumes some degree of success, as well as some degree of failure. In many instances it is presumed that the failures will outnumber the successes. In this way we can account for the taking on and maintaining of a tragic identity as part of an interactional process with a milieu that presents a dichotomized, rationalized image of reality. That is, the individual who fails a given program of intervention, while he may have defined himself in terms of some tragic flaw in his character prior to the intervention, confronts the additional problem of having interacted with a system that is designed to handle his problem and has developed a series of interactions with him which cycle with his behavior in such a way as to additionally burden him with the failure labels contained in the system of intervention. In the transformation to adult identity, when the individual cycles with interventions in this manner, the consequence may be a predisposition to define oneself in new situations in terms that may make responsible adult behavior virtually impossible.

Several key items should be noted with respect to the problems associated with the establishment of identity that have been discussed so far:

(A) The difficulties experienced by the individual in constructing a new identity derive from assumptions that he makes in interaction with a created system--with a system that <u>assumes</u> certain elements that make construction of the new identity difficult.

(B) This created system is taken for granted by the

individual--it is assumed by him and the system itself remains largely unquestioned.

(C) It is probable that as long as the major configuration of the system remains unchallenged and unchanged, the individaul whose behavior has cycled with the system in ways that make the identity transformation problematic will continue to experience difficulty in constructing the new identity.

Just as Medieval civilization presented the individual with different problems associated with growing up, because childhood id not exist as a well defined category, the formal education of the child was similarly deemphasized in medieval society with the consequence that most of the definitions that currently are assumed about learning were absent from the individual's field and were also absent in his perception of himself as a learner.

During the middle ages, formal education was essentially religious education; it was geared toward developing the skills necesary for the celebration of the mass. Primary education as we know it was non existent. Reading and writing were learned at home or in apprenticeship to some tradesman. The notions of graded curriculum and age segregation characteristic of contemporary school systems wee unkown in Medieval times.

Age segregation and the graded curriculum are only two of a number of assumptions about education that are routinely taken for granted in our society. While there is a good deal of historical and anthropological evidence that suggests that other cultures (like medieval society) make use of systems that entertain different or conflicting assumptions about how

education should take place (or that educating the young is a problem at all) the fact remains that whatever the assumptions that each system or nonsystem of education makes, there are cerain consequences that derive from making these assumptions for the individual as he goes about constructing his behavior in that setting.

In our own culture the fact that the schooling system is not questioned (that it is largely taken for granted) means that certain kinds of learning identities develop as the individaul frames the meaning of his behavior in interaction with these systems. In prior chapters we have discussed some of the processes that obtain in typical educational settings. The discussion of how deviance dialogues develop with certain students as their behavior becomes problematic for the teacher who has a need to maintain certain kinds of orderly functional behavior patterns is the case in point. This discussion showed how the individual's behavior begins to cycle with the structured behavior proscribed by the teacher. The student begins to take on the identity of troublemaker as he interacts in this kind of situation. The point is that the frame of the interaction--that which is taken for granted by each of the parties-- because it calls attention to certain factors (in this cas improper behavior) creates the potential for the expression of these behaviors and as the chapter constructing behavior suggests because the situation may require that someone perform these roles, it thereby creates the potential for the individual to assume the identity characteristic of the unsanctioned but nevertheless mandated behavior.

In much the same way, the system of differentiation--the grading system--creates the potential for the development

of learning identities as each individual measures himself against the yardstick presented by the system. In this way each of us comes to assume that we are good at certain kinds of learning tasks and not so good at others. The assumption implicit in the system--that one is to view his won performance as located on a scale of ability and a function of highly personal factors--is never questioned.

As we have discussed in connection with the transition to adult identity, in these kinds of situation where the system is taken for granted, the transition to a new identity cona become quite problematic for the individual. Again, it is a problem for the individual as he constructs his behavior, before he can see himself in a new light, he must be treated as such by others. But, the manner in which he is treated by others reflects his behavior, which in turn derives in good measure from how he sees himself. The system closes with the individual (it becomes circular) and he is trapped in a self perpetuating feedback relationship with others that makes the establishment of a new identity highly problematic.

The fact that the notion of ability exists as a rationale for behavior, the fact that ability is seen as residing in individual and produced by constitutional rather than situational factors means that the classroom setting provides an explanation that the individual can use to come to terms with his own behavior, when he experiences difficulty coming to terms with the lesson. When the individual invokes this explanation, his fate is sealed, unless some radical reordering of his perceptual field occurs. In Chapter V we have discussed how anxiety arises as a function of social situations

even though it is experienced by the individual as a highly private phenomenon. We have also discussed how anxiety makes it difficult for the teacher to gain access to the thought process of the individual, and as a consequence the individual is likely to construct an inappropriate definition of the situation and of his role in it. While situational factors may produce the initial anziety and the consequent inappropriate definition, the individual may adopt the rationale that his activity is a function of the fact that his character lacks some fundamental component which makes appropriate behavior possible.

Over the course of a life these self selecting definitions that are assumed by the learner become cumulative, so that certain kinds of experiences are systematically excluded. The exclusion is systematic because it is guided by an image of self that is always operative. Whenever the possibility for contradictory experience arises, the new facts must confront the individual's self image in order for them to be perceived as relevant evidence for a new definition of self to emerge. As we have discussed, unless something extraordinary happens, the individual will normally persist in defining each new situation in terms of previous definitions. The cumulative effect of these systematic exclusions is the development of a learning identity that becomes more and more rigid and impervious over time.

The dilemma of becoming, of establishing one's identity in a situation where interaction with others is patterned (by the assumptions implicit in the situation) in ways that make the emergence of a new identity highly problematic for the individual, creates a good deal of pressure for the

construction of a purified identity or self image.

The notion of the purification of identity is described by Sennett as follows: [5]

> The effect of this defensive pattern is to create in people a desire for a purification of the terms in which they see themselves in relation to others. The enterprise involved is an attempt to build an image that coheres, is unified, and filters out threats in social experience.

Given the previous discussion of the assumptions implicit in the school experience in our culture it is probable that many individuals are caught in dilemmas that force them to create idealized, purified self images. The situation requires that they assume responsibility for their behavior. Yet, in fact, the notion of individual responsibility for learning as it is commonly adopted in the classroom is itself a created reality. Other systems can and do make the opposite assumption. The fact that our educational system involves a graded curriculum (one that builds over time) as well as the practice of age segregation, along with many of the other assumptions made by teachers and others responsible for education that are discussed in prior chapters, tends to reinforce the notion of individual responsibility (that the <u>individual</u>, not the situation has certain characteristics that account for performance) yet as we have seen, this is by no means the only assumption that one might entertain about learning.

The fact is, however, that our system does assume individual responsibility, as such it mandates a purification of identity for some as they experience the problem of discovering who they are as learners in a situation that

may attribute certain abilities and disabilities to them even though their behavior may be the result of factors that are completely unperceived by those who attribute these abilities. Under these conditions the individual is likely to find little within himself that he may focus on as an explanation for his behavior. He may have very little sense of what it is that he must do to himself in order to perform properly. As we have seen, he may become cycled in an identity spiral, where his behavior sets off reactions in others that reinforce his original image of himself as lacking in some ability. This in turn produces behavior on his part that is much like the prior behavior. Over time the individual may solidify this position as he constructs a coherent, unified rationale for his behavior.

In order to engage in interaction with others, the individual must have some way of accounting to himself for his own behavior. Because the situation he finds himself in is derived from assumptions about learning that are exclusive of other possible ways of approaching the problem he may never come to accept his own performance in realistic terms. That is, he may never be in a positon of recognizing some of the important factors that influence his behavior, because these factors may have been defined out of his perceptual field by his interaction with others in the setting. As we have seen, it is improbable that the assumptions that call for certain perceptual exclusions will be challenged by the individual. It follows then that the construction of his own identity will require idealization; it will require that he purify his self image, so that it coheres, makes sense

(and most importantly) accounts for his behavior in terms that are consistent with the assumptions made by others in the situation. The self image that emerges from this process is one that filters out contradictory experience and further insulates the individual from potential transformations of identity.

This discussion of how the learning identity is constructed suggests how the more general process of taking on or constructing identity in many other settings occurs. Each interactional milieu presents certain assumptions about the nature of the activity and the individuals who are engaging in it. For reasons that are elaborated in prior chapters these assumptions are rarely challenged, but they inturn make it necessary that each individual construct explanations for his own behavior that exclude certain factors. As we have suggested, each individual idealizes and purifies his experience so as to account for his own behavior in terms that are relevant to the definitions operative in the milieu.

Explanations and rationales for behavior that are operative (that are taken for granted by the parties) in a given situation are always partial renditions of the situation. They always lack the additional insight of having been challenged in the light of what they assume and thereby exclude from attention. Yet the individual comes to terms with his own behavior and thereby frames the potential experience that he will have in the future in terms that are relevant to these partial definitional systems. As behavior develops the purified self image thus systematically excludes certain experience. While the definitional system that is operative

in the milieu is only capable of presenting a partial rendering of the individual's experience, the individual must construct an image of himself in interaction with this partialized definitional system; the result is the reification, purification and idealization of experience. Over time these purifications may result in a personality that is highly efficient in some areas, given the nature of some situations, it is also the case that the identities that result from these kinds of purifications may be too rigid given the performance requirements of other situations.

In terms of the development of learning identities these pressures for purification mean that the individual will assume (as an important component of his image of himself) that certain problems are beyond him, in the sense that they are to be excluded as problems which are appropriate for him to engage. The problem with a purified self image thus constituted is not that it allows the individual to function in a focused way, this function is by definition a positive element in the process.

But, especially with regard to the learning identity, the purified identity may become self defeating for the individual, because it requires a relentless, systematic exclusion of certain components of reality. It means that the individual must continaully rely on an idealized, constructed model of the world, but the model is taken for the world. That is, the world outside the individual is not allowed to enter into the reconstruction of the model.. Important aspects of the world are excluded: the learner's image of himself sets the parameters of what can and cannot be known.

The result of this process may be a virtuoso performance but is also may mean avoidance of fundamental aspects of reality. As always, the manner in which any individual follows the course outlined above depends on the unique history of the development of interaction. This discussion is intended to alert the reader to some important issues that must be confronted in coming to terms with the developemtn of learning identities and it is additionally intended that this awareness act as a corrective in the sense that some of the more self defeating aspects of the process may be avoided by taking these factors into account.

In order to give these premises about learning identity more concrete grounding I wouls like to discuss the life history of Einstein as an illustration of the process. While Einstein's life is far from typical, the history of the evoluation of his assumptions about himself as a learner or knower is quite revealing with regard to the issues discussed so far in this chapter.

Much of the discussion in previous chapters has dealt with the classroom situation as it contributes to the frame that the learner assumes. This focus has meant that the long term life cycle elements in the formation of learning identity have been ignored. The examination of some of the assumptions made by Einstein about his own activity is intended to suggest something of the process of metalearning as it develops over the course of an individual's life.

Because the construction of one's identity as a learner is a highly complex matter, the attempt to deal with this problem over the span of a person's life appears at first

glance to present such insurmountable problems that no realistic accounting of the process is possible without a retelling of all of the details of someone's life. Yet, if in fact people do make assumptions about themselves and about what they can know, then it should be possible to examine a life history in terms of the problems that the learner encounters. These problems should be a good indicator of the sets and assumptions that are being made by the learner about what he can and cannot come to know.

In light of these remarks it is possible to come to terms with the somewhat paradoxical notion that the examination of the life history of a remarkably complex figure like Einstein affords an opportunity for learning some very simple, basic propositions about the process of constructing a learning identity. This is the case, because Einstein's life work was such that it makes identifying the assumptions he made about what he could learn and know about the world relatively simple. While he did more than learn about the world, it is the process of discovery of propositions about the physical world is exactly the same process that anyone who would learn from the world around him must engage in. As such the identity that Einstein established was in good measure a learning identity, because above all else, he was discoverer. He represents on the one hand the embodiment of most of the characteristics of the creative thinker, yet as we shall see the image that he constructed of himself as knower assumed certain factors that made certain issues troublesome for him.

The most outstanding feature of Einstein's life and work is the radical departure that he made from the perspectives of his colleagues and contemporaries. The pre-Einsteinian

universe whose laws had been laid down by Newton was not only the world that was assumed by physicists, it is also the world of common sense. As we have seen in Chapter IV our everyday experience assumes that time and space have certain immutable characteristics. In order for Einstein to construct the special theory of relativity, it was necessary for him to treat as problematic certain things that everyone (including the scientists of his time) was taking for granted. Not only did he violate common sense and scientific knowledge, but he commonly assumed perspectives that were barely imaginable in his time; for example, when he regularly conceived of himself as an observer moving on an object that was accelerating at rates approaching the speed of light.

Einstein felt that his early development may have been an important factor in accounting for these remarkable abilities to call into question what everyone around him took for granted. Apparently he acquired speech at a relatively late age. He remarks:[6]

> The normal adult never bothers his head about space-time problems. Everything there is to be thought about it, in his opinion, has already been done in early childhood. I, on the contrary, developed so slowly that I only began to wonder about space and time when I was already grown up. In consequence, I probed deeper into the problem than an ordinary child would have done.

While there are a number of incidents and anecdotes that are attributed to the early years that are considered by biographers for their possible significance in the formation of the enquiring spirit characteristic of Einstein's thought, one of the most important general characteristics of most of his life was his marginality. Marginal men are people who for a variety of reasons are not included by others and do not

include themselves in the normal definitional systems that are operative in any social world. They are marginal in the sense that they stand outside the normal, usual system of expectations and they usually experience the world of others as an alien world. In some instances they are persons who may be trapped between conflicting role expectations. The ranks of innovators in all areas of human endeavor are filled with men who in one way or another managed to find themselves in marginal positions.

The bare facts of Einstein's early life reflect the marginal position he was to occupy later with respect to the established world of physical scientists, when he was developing his ideas on relativity. [7] His parents were not peasants, but they came from a rural area. A year after Albert's birth they moved to Munich. Albert's father was a businessman who suffered several failures in his businesses over the course of Albert's youth. While little is known of his childhood, several accounts characterize him as a solitary child. His family was Jewish, but they did not attend synagogue. During the primary school years he attended Catholic school in predominantly Catholic Munich. From this school he transferred to the Luitpold Gymnasium. When he was fifteen he dropped out of school and moved to Milan where his family had gone to establish a new business. After a year of visiting galleries and reading on his own in Milan, he left for Switzerland where he went back to school, first at Aarau and later at Zurich.

At the Swiss Federal Institute of Technology in Zurich, Einstein began to concentrate on the study of physics. Yet he characteristically tackled his studies in an unconventional

manner. Shunning the lecture hall, he pursued his own interests in the laboratory and much of the balance of his academic life outside the laboratory was spent reading the works of the great physicists. Fortunately he had a friend who scrupulously attended lectures and took good notes so that Einstein was able to "swotch up" the information he needed for his exams.

After receiving his degree the remainder of his time leading up to the revolutionary papers published in 1905 was spent working in the patent office at Berne. The job at the patent office, like the "swotching up" was important because it meant that he could purue his own ideas without interference from others who were important figures in physics. The patent office job meant that he was isolated from all the pressures that an academic career would have produced. This isolation may have been crucial, his early paper, "On the Electrodynamics of Moving Bodies" (1905) where he outlines for the first time his extraordinary notions about relativity was all the more remarkable for the fact that it contained no footnotes, the only reference is a word of thanks to "my colleague, M. Besso." M. Besso was a close personal friend, an engineer who worked at the patent office.

As we have discussed, it is only very rarely possible for an individual to treat as problematic what most people are taking for granted. To do so requires an extraordinary set of experiences, as well as a high degree of self confidence. Usually it is only under highly atypical circumstances that people come to hold a sceptical attitude about what is normally taken for granted. Such atypical circumstances include the various kinds of educational programs that are established to

train scientists. In technical schools scientists learn to treat certain aspects of the world as problems which require investigation. What the layman assumes as true about these aspects of the world is to be confronted by the trained scientist, not as truth, but rather as a hypothetical statement which may or may not prove to be an accurate rendering of the situation.

While training in this skeptical attitude is extended to many aspects of the world, in most scientific institutions it is rarely the case that the educational experience and early career of the scientist prepares him to treat as problematic what everyone in his discipline takes for granted. The fact that Einstein was considerably marginal especially with regard to his career as a physicist must have been an important factor in his treating the assumptions that other physicists routinely made as problems in themselves.

In accounting for the drastic change in attitude that the publication of his work was to produce in the scientific community, it is important to bear in mind the fact that Einstein was working on problems that many of his contemporaries were beginning to find troublesome. In the early decades of the twentieth century, a number of advances in the technology of observation meant that scientists were able to speculate about what were (prior to that time) uninvestigable problems of micro and macro space. The propositions that Einstein advanced had direct bearing on problems in both these areas. His special theory paper dealt with the Newtonian world of mechanics, including its propositions about planetary motion while at the same time the paper provided a framework for

dealing with the motion of subatomic particles.

His work is typical of that of many original thinkers. It demonstrates a willingness to strip away from a complex body of knowledge all but essential core problems and then to devote considerable attention to these problems, treating them in ways that were previously unconsidered. In order to do this one has to have considerable confidence in one's approach. Einstein's confidence was remarkable; an example of this confidence is found in the controversy that developed around his proposition that the mass of an object increases as it accelerates in velocity. This proposition violates common senese, yet laboratory evidence related to the mass of accelerated electrons suggests that Einstein's predictions are essentially correct. The simple fact is that our common sense observations are not applicable at velocities achieved in the laboratory.

Einstein's conceptions are difficult for us to grasp and accept, even though we have the word of many physicists that his propositions have been verified in the laboratory and we have empirical evidence of his theories in the use of atomic energy. Yet when Einstein began publishing his work there was very little direct empirical evidence for or against his theories. One of the first experiments that provided a test of his theories was designed to determine whether electrons increased in mass as they were accelerated.

The experimentor, Walter Kaufman, reported his results in 1906; he declared: "The measurement results are not compatible with the Lorentz-Einsteinian fundamental assumptions." Einstein could not have known at the time that Kaufman's results

were inaccurate, yet he refused to retreat from his position. In an article, Gerald Holton, historian of science, notes:[8]

> Even though the 'experimental facts' at the time very clearly seemed to favor the theory of his opponents rather than his own, he (Einstein) finds the ad hoc character of their theories more significant and objectionable than an apparent disagreement between his theory and their 'facts.'

This incident is important because it reveals a good deal about the way Einstein approached knowledge of the physical world. Einstein never maintained that empirical evidence was irrelevent, rather Einstein was focused on the question of understanding and making sense of nature. Making sense had to take priority over the accumulation of data.[9] This situation reveals his exraordinary self assurance. He as merely an employee of the Swiss Patent Office, who had reveived little distinction or recognition in the field of physics. He was challenging some of the basic assumptions made by most physicists and he dismisses an empirical test of his theory with the argument that although the facts seem to contradict what he says his explanation is still better than any others that have been put forward.

This quality of his thought may account in part for his remarkable contribution and at the same time it explains a difficulty that was to plague him in his later years. Einstein had a over-riding faith in his ability to understand the workings of nature. The reason he was able to dismiss this evidence (which he could not have knwon was inaccurate) was because it didn't make sense; it didn't fit in with what he considered to be the way that nature functioned. To accept the evidence would have been to abandon the image of the world he had constructed. He knew that his image was

better than that conceived by his colleagues, because he had the advantage of having called their assumptions into question and found them lacking.

This faith that Einstein had, that nature presented itself to him in such a way thet it was possible for him to discover the rules and laws that made it operate was an assumption which he apparently could not or would not question. It was a frame that set his experience, not even the "facts" as they were observed by other competent, reputable scientists could shake the assumption. Einstein assumed that nature made sense and that he could discover and understand how it did so.

The history of the twentieth century physics attests to the fact that his image was a useful and powerful onr. Because his situation was such that he was able to call into question some of the basic assumptions of his colleagues, and because what he had to say provided relevant solutions to problems these colleagues were encountering, he was able to set off major shifts in the perceptual fields of physicists. As I have argued above, without an overriding faith in his own ability to understand what he assumed was a lawfully operating universe, much of his work would have been impossible. His frame of reference that was to remain unquestioned during his early work derived in part from these assumptions about nature. The notion that nature is ultimately knowable is so much a part of the approach of someone who goes about observing and attempting to understand natural phenomena that it is not remarkable when it is taken for granted that nature somehow reveals itself in such a way that complete certainty of the workings of nautral events could be attained. The major irony of Einstein's life work is that his challenge to the

assumptions implicit in the Newtonian world view set off a chain reaction in the world of physics that ultimately resulted in a challenge to this assumption of the certainty that one could arrive at with respect to the workings of natural phenomena.

As we know, Einstein could never come to accept the principle of indeterminacy (the view that many of his colleagues would begin to adopt in the late twenties). He continued from the time the view was first propounded to his death in 1955, in a debate aginst indeterminacy that was to leave him more and more isolated as the years passed. If we try to understand Einstein's self image, his identity, this conflict with his fellow scientists over indeterminacy must stand as important evidence of what he assumed about himself as a knower. He refused to accept indeterminacy because it was in conflict with what he assumed about the world and his role as knower in that world.

The principle of indeterminacy postulated that is was impossible to know nature in any absolute sense. This view was adopted by many scientists because it was shown that any attempt to make precise observations (of the exact postion of electrons, for example) was always compicated by the fact that the measuring instruments affect observation in a manner athat always leave some doubt remaining as to the accuracy of the observation. While in most instances these observer effects are minor, as the observation is refined, more and more accuracy always produces inevitable distortions caused by the measuring device itself. It is argued that this is the case , because the observer (or his instruments) is always part of the observation situation. It follows that any

situation (because it can't be known independent of the observer) contains an element of uncertainty. This uncertain element is the absence of full knowledge of the observer's ultimate effect; this effect is never completely calculable. Most scientists have concluded from consideration of problems about the relation between the subject of observation that absolut certainty of measurement and thereby absolutely certain knowledge of nature is impossible.

Einstein never accepted this view. One must understand his denial of indeterminacy in part as a consequence of the development of his image of himself as a knower. The evolution of his career as a scientist was such that he came to adopt a highly unique perspective for his time. From the first, the development of his ideas required a strict self reliance. He was able to resist extraordinary pressures against his theories, because he was convinced of the soundness of his description of the workings of natural phenomena. He was different from most of his colleagues in that he assumed responsibility for and pushed foward a radical break with tradition. This activity required that he make some assumptions about nature. A basic premise that he assumed was that he lived in a purposeful universe, one in which "God did not play dice" with the course of natural events (as he was often cited as remarking). The key to understanding his image of himself as knower (or in our terms, the key to his learning identity) must lie somewher in this assumption that he made about how the world functioned and what he could know about it. This assumption is dramatically revealed in his conflict with his colleagues over indeterminacy.

It is precisely this major conflict that engaged a good

deal of Einsteins's intellectual life that reveals what he assumed about himself as a learner (or knower) of the physical world. He could not come to the postion of most of his colleagues because their views were in conflict with some of the basic assumptions that he was making. Because these assumptions had develped over the course of an extraordinary career and because they were very functional for him he was not in a postion to give them up. After years of proposing ingenious solutions to questions raised by proponents of indeterminacy only to have each solution answered with a fresh set of problems , he was to conclude in the face of what he admitted were overwhelming arguments to the contrary, that he took his position on faith.

Einstein's life history is particularly interesting because the issue of what could be known became a conscious subject that he dealt with in his later years. The problem posed by proponents of indeterminacy is not whether <u>any</u> knowledge is possible, but rather whether <u>ultimate</u> knowledge is possible. The fact that Einstein chose to defend ultimate knowledge meant that he was forced to maintain a position that was unacceptable to most of his colleagues.

The reason he gave for defending this unpoular view was that he felt that the problems posed by uncertainty were merely problems deriving from ignorance and that the advancement of knowledge would result one day in a clarification of the difficulties raised by proponents of indeterminacy. This explicit position with respect to what was knowable made it possible to maintain a core gestalt that was characteristic of the way he approached the world.

Above all, he assumed that there was logic and meaning

in nature that he could discover. Most of his work is predicated on this assumption; whereas, the work of his colleagues tended to reflect more the attempt to describe the world around them as accurately a possible, the "facts" tend to play a much more important role in their activities. It is this difference of approach (this difference of what is assumed as problematic) that helps to account for the difference between Einstein and many of his colleagues on the issue of indeterminacy. This debate had many of the characteristics of the earlier debate over relativity. The difference between the two situations is of course historically crucial; in the first instance Einstein was in the forefront of a movement that was to revolutionize physics, in the latter instance he was apparently fighting a rear guard action.

What Einstein assumed throughout (what I am calling a core gestalt) can be seen also as a learning identity configuration. His case is intersting largely because his identity as a knowere was constructed under circumstances that were to lead to major shifts in important perspectives; but the process of establishing an image of what he could know is similar in form to what anyone who would know about the world would go through.

What this discussion of Einstein's life and thought suggests about the process of identity formation is that over the course of the life cycle the assumptions that an individual makes about what he can know are very important in terms of the knowledge that an individual will acquire and these assumptions are also implicated to a great extent in the difficulties that will be experienced when an individual attempts to fit his knowledge in with what others know and assume about

the world. While this conclusion should be fairly obvious, and does not seem particularly illuminating, there are important implications for teaching that should be drawn from considering problems that derive from the process of constructing and maintaining a learning identity.

For example, may teachers assume that the "message" of a particular lesson is something that should be obvious to all. Yet as Einstein's life illustrates, the "facts" are not necessarily interpreted in the same way by everyone. An importatnt component of the interpretation is the image of self that the knower has constructed. As we have discussed in prior chapters, the meaning of a given lesson varies for each individual depending on a number of factors; for example, a counter group that provides an alternate reference group affects how the lesson is interpreted. In light of the remarks about Einstein, another factor that should be taken into consideration in accounting for the learner's definition of the situation is the learning identity that the individual has constructed over the course of his life. Taking this process into account should facilitate the teacher's ability to come to terms with some of the learning problems that students manifest.

One of the most important aspects of this process of constructing a learning identity is the fact that it may involve a purification and idealization of the self that is likely to lead to a closed, self fulfilling cycle of behavior. The individual assumes certain characteristics about his ability to assimilate certain kinds of knowledge. In Einstein's case it was an assumption that he could

ultimately understand and know what he presupposed was a universe that operated in an orderly, lawful manner. These assumptions may become self perpetuating as they structure the way the learner experiences each potential learning situation.

In this chapter I have not attempted to describe the variety of types of learning identities that are possible. While the milieu of the schoolroom presents a set of rationales for behavior (e.g. theories of ability) that tend to force the clustering of identity around key issues, it is important that the uniqueness of each identity by emphasized and not be compromised in the attempt to describe the process. Each identity is unique, but the process of constructing the learning identity is a similar one as each individual confronts the problem of deciding what he can know.

For example, while the tendency to idealize is characteristic of the way many learners construct their images of themselves, the degree of idealization and the specific traits idealized and purified vary from individual to individual and from situation to situation. What is important to know is not the potential universe of traits that may constitute different identities (although this information may be useful) but rather it is important to know something of the process of purification and idealization and the consequences that may derive from it.

In concluding this chapter, the rlationship between the process of constructing a learning identity and the general process of metalearning as it has been discussed in prior chapters should be made explicit. Metalearning as it was used earlier refered to the sets and boundaries that the

learner assumes in interaction with others in the learning situation. It should be apparent that the notion of a learning identity provides a means for discussing these sets as they are constructed and brought to bear over the course of an individual's life. The learning identity refers to the same process as metalearning; it merely discusses metalearning from the perspective of an individual's life history. The issues that is raised by a consideration of learning identity is: what are the consequences over the course of an individual's life of making certain assumptions about himself as a learner? As we have seen the learning identity is often very functional. It can facilitate the production of very valuable work, but it also can become self perpetuating in a manner that may be disfunctional for the individual.

The likelihood that either alternative will be characteristic of a given life depends on the specific history of interaction that an individual engages in. As we have seen, no matter what the specific history of evolving interaction is the fact remains that the process of constructing identity will involve certain basic issues--the most important of which is the problem of excluding potential experience on the basis of certain assumptions about oneself.

NOTES CHAPTER VI

1. Rosenthal, Robert and Jacobson, Lenore, Pygmalion in the Classroom, New York: Holt, Rinehart & Winston, 1968.

2. Benedict, Ruth, "Continuities and Discontinuities in Cultural Conditioning," Psychiatry I No. 2 (1938)

3. Erikson, Erik H. Identity, Youth and Crisis New York: W.W. Norton, 1968.

4. Aries, Philippe, Centuries of Childhood, New York: Vintage Books, 1962.

5. Sennett, Richard, The Uses of Disorder, New York: Alfred A Knopf, 1970, p. 9.

6. Seelig, Carl, Albert Einstein, A Documentary Biography, London: Staples Press Ltd., 1956, p. 71.

7. Clark, Ronald, Einstein, New York: Avon, 1971.

8. Holton, Gerald, Daedalus Vol. 97, Spring 1968, "Mach, Einstein, and the Search for Reality."

9. According to Holton, Einstein shifted his position on this issue over the course of his career. The priority of the analytic process apparently came to dominate his position in the later years. This shift would be in keeping with the need to purify his position vis-a-vis the emerging self image that will be discussed later. This self image was one that assumed that he (or someone like hime) could come to know fundamental truths and certainties about nature.
The early Machian influences in the relativity paper (1905) and the identification of reality with sensation would have been much more compatible with uncertainty than his later antipositivism or rationalistic realism. Rationalistic realism, with its emphasis on the "belief in an external world, independent of the perceiving subject," (Holton, p.657) is much more in keeping with the critique of indeterminacy that Einstein was to mount in later years.

CHAPTER VII METATEACHING

There is a recurrent theme that appears in many different forms over the course of the previous chapters. Put succinctly, it is the notion that learning involves a dialectic--that the process of constructing some"handle" on reality establishes at the same time the potential for excluding important components of reality. The notion of metalearning is introduced to deal with the assumptions that are made by the learner. While these assumptions provide the ground upon which any knowledge is acquired; the fact that there are assumptions--that there are unquestioned elements in any knowledge system--means that the learner is cut off from that which is potentially knowable, if he were to treat these assumptions as problematic.

In previous chapters I have tried to point to some of the assumptions that are operative in certain learning settings. As I have tried to show the important point is not that there is a given set of assumptions as opposed to some other set operative, rather the point has been that whatever assumptions are made, there are consequences that follow. In the second chapter the metalearning consequences that derive from the teacher's attempt to involve the student with the lesson by structuring and routinizing behavior in certain ways were explored.

A similar position was presented in the third chapter, but the focus was the private world that each student brings to the classroom and how these private worlds function with respect to learning. The options open to the student for disclosing his private world and the typical subuniverses of

meaning that arise in classrooms were discussed.

In the fourth chapter the typical ways that time and media are approached in classrooms was explored. In both instances the sets that are assumed by the learner as a consequence of interaction were discussed terms of how these sets are useful, but also more importantly, they were discussed in terms of how they may be disfunctional for the individual.

The thinking process itself was the focus of the fifth chapter. Thought was characterized as a dialectic process that the individual engages in as he attempts to establish meaning in a situation. The "frame" that is assumed is important because it establishes what will be considered as problematic, while at the same time it excludes certain information that may make solution of certain problems impossible (given the fact that the "frame" itself remains unquestioned.)

In the previous chapter an attempt was made to come to terms with learning as a process that operates over the course of an individual's life. An important component of this life cycle process is one's image of oneself as a knower. This learning identity develops over time and accounts for what is approached as knowable and also what is excluded as inappropriate. To some degree each individual creates an idealized, "purified" self image. This idealized image makes possible a coherent, ordered approach toward the world, but at the same time it is self perpetuating insofar are it mandates the selection of certain problems over others and thereby creates the potential for overspecialization.

There are important implications for teaching to be drawn from this discussion of metalearning. The notion of metalearning suggests that interventions in the lives of

learners on the part of teachers do not necessarily lead only to positive learning experiences. The significant element that must be taken into account in any intervention is the definition of the situation that is likely to evolve. The stategy and tactics employed by the teacher should be evaluated in terms of how the teacher's behavior is likely to produce an interaction situation that has certain consequences in terms of what is assumed by the learner about (among other things) what is potentially knowable.

One of the problems that the teacher faces is the fact that any given lesson will be met by differing definitions on the part of each learner depending on a number of variable factors. This peculiarity of interaction applies to any program to teaching and it means that any program that a teacher institutes retains the potential for the creation of an alienating set of experiences for some students. Even a program of individualization where each learner works at his own pace on problems of his own choosing retains the potential for the evolution of alienating definitions, if for no other reason than the fact that the experience of participating in <u>group</u> problem solving is thereby minimized or eliminated.

In one sense this characterization of interventions in the lives of learners is pessimistic; that is, it suggests that no "system" of teaching is possible that will completely eliminate problems and difficulties that learners experience. Metalearning suggests that in any system one should expect problems to arise and (most importantly) metalearning posits that many of these problems are generated by what the system assumes, or more precisely, by what the learner assumes as he

interacts with a behavioral system that makes a given set of assumptions.

Metalearning also implies that an important element in the development of positive learning experiences is the teacher's sensitivity to the assumptions that students are making. While this sensitivity can be facilitated by the teacher's development of his or her won awareness that assumptions are being made and of the nature of these assumptions, it is nevertheless the case that there is no systematic way of training this awareness. What is entailed is a sensitivity toward students that allows the teacher to reconstruct the perceptual frome that the student assumes.

In the social science literature this quality is referred to by the phenomenologists and interactionists as emphathy. It is the ability to put oneself in the place of the other and to begin to construct the world as the other person sees it. Fortunately each of us shares this ability; it is not a quality that is peculiar to some special group of analysts or scientists. Putting oneself in the place of the other is a necessary condition for human interaction and communication. The fact that it also makes social science possible is only of minor consequence when compared with the role that empathy plays in making understanding possible in our daily lives.

If one wants to extend knowledge to make comprehensible some behavior that is problematic, then it is necessary that one suspend (as much as possible) the meaning systems that one has assumed. In doing so, one is then in a position to come to terms with the problematic behavior more along the lines that have been established by the other person. While it is impossible to suspend one's meaning systems entirely,

it is possible to construct some image of how even the most alienated persons envision the world. When the learner's perveptions have been recreated in this way, it is then possible to return to one's meaning system in such a way as to redefine it in light of the new perceptions. The purpose then is not to discard the meaning systems that one has acquired, rhater the problem is one of opening these systems to new experience so they may be expanded and revised to meet the requirements of emerging situations.

In the few remaining pages I would like to suggest a series of strategies that teachers might employ in order to facilitate metalearning shifts. By metalearning shift, I mean to suggest that it is possible for teachers to influence interaction in the classroom in ways that make it possible for learners to change the assumptions that they make about the nature of the learning situation and consequently of their own facilities for knowing. It is important, however, that these strategies be considered within the framework specified above. That is, these suggestions should be considered as possibilities for action. They are not to be taken as <u>the way</u> one affects changes in learning. In light of the previous remarks it is important that these suggestions not be seen as an interventionist program that is to be employed in some mechanical way that further validates and reinforces any of the learner's negative self definitions.

The issues discussed in this chapter then, do not present a model of the ideal classroom; on the contrary, the situation described in prior chapters is one that requires that each teacher carry on an internal dialogue that calls into question the assumptions that he or she has been making

with the purpose in mind of explicating the role that these assumptions play in any negative definitions that learners have evolved.

One of the characteristics common to most classrooms is age segregation. Usually only the teacher is different from the others in the classroom in this regard. This fact is significant in terms of the importance that is thereby attributed to the teacher's definition. The teacher, having no person of comparable age present in the room is in a rather exceptional position with regard to the establishment of context. There are a number of factors that are correllates of age: economic status, life experience, educational level, etc. These factors taken as a whole produce status distinctions that tend to reinforce the separation of the teacher as a "special" person from the others who are present.

While each student faces the problem of weighing his definition of the situation against his perceptions of the definitions of other students who are like him, the teacher is not encumbered with this problem. No one is like the teacher, hence, the teacher's definition is rarely as amenable and open to change resulting from the definitions of others as are the definitions of the students. It follows then that students are rarely in the position of observing the teacher in a negotiation of context with persons of equal status.

In teacm teaching situations or in classrooms where aides and parents participate, there is much more opportunity for students to witness the negotiation of context. By negotiation of context I mean the process of adjusting one's assumptions about the nature of the situation in interaction with others. Usually everyone assumes that the teacher knows

the "proper" lesson and the meaning of the situation. Given the fact that the teacher is charged with the responsibility of educating the students, this assumption is not extraordinary; it is only in situations where persons of similar status are present is it usually possible for this assumption to be called into question.

> I observed an English as a Second Language class. All the students were adults. The teacher asked an aide if he would work with a group of students on a set of questions in the book. The aide started out with the book but immediately disregarded it, turning his attention to some specific problems that the students seemed to be having. (Later he confided that he felt that the book was irrelevent.) It was obvious to me that most of the students were aware that he had violated the teacher's directions. My impression was that some considered it a good idea, others not; yet it was obvious that everyone was considering the issue of how to best go about learning the subject, something that would not have occured in as pronounced a way had the aide not decided to violate the teacher's instructions.

Yet even in situations where other adults are present, it does not follow that the context will be challenged. Often adults agree on context "backstage" (outside the situation where their behavior is observable) as when team members meet to plan lessons and to discuss problems or when a teacher takes a parent volunteer out of the room into the hall in order to clarify the ground roles in the classroom. Even where there may be disagreement between a teacher and his peers, the discrepant views may never surface, because the unspoken rules of decorum in classrooms require that peers defer to the teacher in the presence of students.

In these ways, and in other ways (some of them subtle and others not so subtle) the students are excluded from the experience of constructing a defintion of the situation in the classroom. It follows that one strategy that may be instituted

to facilitate the negotiation of context involves planning the lesson (establishing the "rules" that will be adhered to in order to achieve certain ends) with students and other adults involved so that whatever activity is selected, arises out of a consensual interaction between all the parties and none is excluded from this important part of the process.

If this course is found inadequate (the mere presence of the teacher may be enough to stifle realistic consideration of alternatives) the teacher may find it useful to delegate responsibility for planning to groups of students and to abstain from the deliberations of these groups. This strategy is likely to be antithetical to the teacher's perception of self as a person who is responsible for educating the student, but this strategy is likely to be invoked only when there is a strong perception that the existing curriculum and way of defining the situation is creating more problems than it solves.

Another possibility along similar lines is the establishment of an ongoing dialogue between the teacher and his or her peers (colleagues, parents, aides, the principal, the janitor, etc.). The purpose of this dialogue would be to evaluate the ongoing program <u>with the students</u>, so that students would have the benefit of observing and participating in the negotiation and construction of the context of the learning situation. These dialogues would routinely raise questions about the <u>meaning</u> of any given activity: how it was relevent, how it was not, what an alternative course might be and the consequences that might derive from alternate activities.

The main purpose of engaging in this strategy would be

to expand the universe of persons consciously engaged in setting the definition of the situation and thereby create conditions where each student is in a better position to begin to consider the possibilities for coming to terms with what he or she has been taking for granted about his role as learner. The fact that custodial staff (janitors, kitchen employees, other non credentialed workers) are usually excluded from interaction with teachers and students in any situation that is defined as one in which meaningful learning is taking place, means that over time most students are reinforced in the view that some persons (teachers) know about certain kinds of problems (getting intellectual knowledge) whereas others (the custodial staff) know about other aspects (solving practical problems). The fact that this dichotomizing of knowing is an assumption about knowing is rarely challenged; yet it obviously sets learning identities and student behavior in important ways.

Paulo Freire whose pedagogical work has taken him outside traditional educational settings in working with poor people in South America, suggests a method which relates to the problem of creating conditions that allow the emergence of context. In Freire's view the distinction between persons defined as teachers, who deposit knowledge in the minds of other persons who are students is ultimately self defeating, because it does not help the student to learn to take responsibility for transforming the world. Freire argues that what is called for is a dialogue based on materials (pictures of real life) suggested by learners. The dialogue would decode this material in the sense that its meaning would be analyzed as a group effort. The dialogue focuses on bringing into

awareness aspects of daily life that have been obscured:[1]

> Thus, men begin to single out elements from their 'background awareness' and to reflect upon them. These elements are now objects of men's consideration, and as such, objects of their action and cognition.

The strategy proposed by Freire is applicable to traditional educational settings. An important aspect of any ongoing dialogue in the school setting would be the fact that the actual day to day experience of students would be made the focus of attention. While this situation is desirable in the sense that it is closer to the actual experiences that students are having than where the focus is some abstract body of facts to be assimilated, there are important questions that should be raised with regard to the consequences that may derive from instituting these practices in most typical classroom settings.

As we have discussed in prior chapters, one of the problems that many students encounter in developing an image of themselves as knowers in the school setting (because it is radically different from many other settings) contributes to the students perception that "academic" knowledge is different from "real" knowledge. The frame that is derived from this perception may affect performance and further alienate the student. If the teacher and others attempt to establish a dialogue about the lesson, this issue is likely to surface very quickly. The fact is that as long as the curriculum is unrelated to real life problems, any dialogue is likely to lead to further frustration, polarization and continuation of self definitions that purify identity in ways that are self defeating.

It follows then that any strategy that attempts to open

up a dialogue in the learning setting should be established concurrent with a program that is geared toward insuring that there be as little dichotomy as possible between what is learned in school and real problems encountered in the course of living one's life. This is not to suggest (as some have) that there should be an abolition of educational institutions or that education and daily life should be synonomous. There are important differences between the two. As we have already discussed, daily life is different from most extra-ordinary situations (like education) because the assumptions of daily life are rarely called into question whereas one of the central purposes of education should be to create a situation where the individual can be critical of everyday life and thereby profit from this extraordinary experience in ways that would otherwise be impossible.

One of the keys to establishing a connection between daily life and the school experience is to insure that the educational setting is as diverse in scope as the life problems that learners are likely to encounter. Innovative educators have specified a number of tactics that can be employed to insure at least some degree of relevence and diversity in the school program. [2]

If the discussion of metalearning is taken seriously, then an important component of what the learner should be doing is establishing his or her own priorities. In all likelihood thse priorities will include goals that are not readioy measured by objective techniques because they are likely to be highly subjective, unique and personalized.

But the employment of standardized measuring techniques

to evaluate progress in education tends to create pressures that run counter to the attempt to get learners to establish their own priorities. There is no simple solution to the teacher's dilemma that is posed by these conflicting educational demands. If one sacrifices standardized curriculum and measurement, one risks having not taught important skills; if on the other hand, the lesson is too rigidly determined, it may mean that students are acquiring skills, but not learning to use these skills in meaningful ways.

If we consider this problem in terms of the metalearning issues that are involved, it is possible to suggest a model of teaching that resolves the dilemma. From the point of view of the learner what is involved in terms of negative consequences is a definition of the situation that assumes the activity to be such that few positive consequences will result. The activity may be defined as "make work" or as a formal exercise that is not in itself valuable. There is no problem with the standardized curriculum if skills have been acquired in ways that will lead to their being used by the learner later in life; that is, the learner is assimilated the given skill as part of a process where he has made the assumption that he was engaging in a useful, meaningful activity. The standardized curriculum is only problematic when the activity is not valued in itself; when the individual makes assumptions about himself and the activity that are ultimately self defeating.

Given these metalearning concerns the teacher's problem is one of insuring that skills are acquired and that the process of acquisition not be one that leads to an alienating

set of assumptions, as for example, when reading is seen as an activity that one does because it pleases the teachers and parents or for other equally alienating reasons, rather than as an activity that is rewarding in itself.

Ultimately, the most important problem that any teacher faces is non-technical, imprecise and intuitive one of establishing the social psychological climate that makes it possible for each student to draw lessons from his experience that will be useful in the future. As I have suggested throughout, in creating this climate the teacher must be attentive to how each student frames and defines the situation. Whether or not the lesson is highly structured may be largely irrelevent; the important point is whether or not the student is engaging in a definition of the situation that will be useful for him in the future. Ther is no way of programming these student definitions; what is required is the creation of meaning by inventive, empathetic and resourseful individuals.

Given the ideas discussed under the general ruberic of metalearning, what would a positive social-psychological climate that is functional for learning look like?

An important aspect of the interaction between teacher and studetn in this kind of situation would be the fact that the student was engaged directly in shaping some problem--the student's activity would be oriented toward creating a finished product. In the course of this activity, when a problem is encountered it would be the student who discovers the problem and the student would take his problem to the teacher if he or she felt assistance was necessary. This characteristic of the situation is to be contrasted with the situation where the teacher assigns a problem that the

student attempts to solve. The teacher would rarely focus on teaching per se; his or her attention would be taken up with helping students find workable solutions to real problems. The teacher would teach by doing--by pursuing the solutions that capture his or her attention.

In this relationship there is no necessity to test the student's mastery. The learner's ability and disability is evident in what he does. The student would not be rewarded because he or she demonstrates skill at some technique (although he or she may) but because something interesting, useful or beautiful has been created. This is to be contrasted with the reward of having succeeded in a competitive system where one's success may be dependent upon someone else's failure.

If we look at some of the "problems" of learning that were discussed in prior chapters, there are several suggestive conclusions that may be useful. A positive social-psychological climate would rule out the "right answer" mentality. The criterion for an acceptable solution would not be that the solution fits in with a "lesson" that the teacher planned, but rather whether or not the solution works, or more precisely, how it works vis-a-vis other solutions that might be generated.

There would be no right or wrong answers, rather there would be a variety of solutions to problems. Each possible solution would be seen as useful in different ways. The fact that more than one sollution would be entertained means that the potential for alienation from the situation because the student has had unique or varying experience is greatly reduced. Specifically, the implication for classroom

behavior is that problems should be approached in terms of building solutions (note plural) based on consideration of many alternatives.

Although he or she may have achieved a high degree of mastery, the techer in a positive social-psychological learning situation is not seen by the others as infallible, and there would be no necessity to perceive any unique student perspective as a threat or to deny such perspectives.

In the preceeeding comments my purpose has been to illustrate something of what a positive learning situation looks like from the social-psychological perspective suggested by the notion of metalearning. What this model points to is the fact that when the definition of the situation is open to redefinition based on new student perceptions that arise over the course of the activity the possibilities for meaningful learning are greatly increased.

It should be apparent that the major advantage of this approach is that it avoids the imposition of the notion of "correct" perspective. As the experience with encouraging diversity in the populations of educational settings develop, it is becoming more and more obvious that the <u>assumptions made by educators</u> about the nature of reality (and how one knows the world) are different in important ways from <u>assumptions made by learners</u> who come from social groupings that are very dissimilar from the backgrounds of educators.

In general, the model of the social-psychological climate that is functional for learning that I have presented above requires that the teacher not allow his or her awareness of the potential for learning in the situation to become rigidified. In my closing remarks, I would like to suggest several

additional strategies that may be useful for allowing this awareness to remain flexible.

An important element for the teacher to be aware of is the frequency of response that is exhibited by each student. In addition to the fact that the teacher may dominate, it may also be the case that cerain students or groups of students come to dominate the interaction. In order for each student to be able to articulate his view, it is necessary that the teacher insure that the interaction not be dominated. By monitoring the interaction and noting the frequency with which each student participates, it is possible to begin to assess the potential for expression that exists.

Subgrouping students in ways that allow a good measure of movement of persons from one group to another is a possible way of discouraging monopolization of interaction. Once unique perspectives have been articulated in these smaller groupings, it is easier to encourage the student to present his views to the body as a whole. Another technique that may be useful is the employment of a seminar structure that encourages each student to lead the discussion for a certain period of time.

In addition to the frequency of response, the teacher should be attentive to the <u>mode</u> of response. Each of us communicates in a unique manner--as much as possible no one mode of communication should be allowed to dominate. Variety in language style should be encouraged. The teacher should keep in mind the linguistic principle that language is what people use; a word or phrase is only incorrect if it is not used and understood by some group of persons. It follows then that

there is no right way of speaking and writing; the conventions of language vary from subgroup to subgroup; no one is more valid than any other.

Teachers should also be aware of nonverbal communication and in as much as many students make use of this mode, the teacher should create conditions that make nonverbal expressions acceptable and intelligible to all who are present. Awareness of this dimension is especially important, because nonverbal communication is usually ignored in most educational settings, yet is may be a very important part of some communication systems.

In addition to being attentive to various ways that the situation is monopolized, making room for differing universes requires that the teacher make use of strategies that draw out the meanings that each learner has adopted. "Mirroring" is one tactic that can be employed toward this end. By asking a series of questions, the teacher can get students to feedback to one another about the meaning that they ascribe to a given situation. When one student has responded to a question, the teacher then asks another student what the first student meant. The first student is then asked if the second interpreted the response properly. Other students can be drawn into the discussion to produce infinitely variable permutations of the meaning of the situation.

Another tactic along a similar line is to create the potential for student recognition that there are multiple lessons in any activity. For example, I may see snow in a landscape, but an Eskimo perceiving the same situation would not only see snow, but certain kinds of snow with certain

with certain potentials, etc. Each situation also presents different lessons that are not simply a matter of depth of experience, as when a Rorschach elicits two different responses, each of which may demonstrate a high degree of depth and elaboration.

By illustrating the various alternatives in any given situation and thereby bringing to awareness the potentiality that is present in any given activity for varying lessons to be learned, the teacher may make it possible for some students who might otherwise withdraw into a personal, privatized world to engage in the activity and make their unique perspective known to the others.

In his book, Listening with the Third Ear, Theodor Reik stresses the fact that in coming to terms with the unconscious processes of patients it is necessary for the psychoanalyst to rely on his own unconscious as a guide. If we consider Reik's notion in terms of the discussion of metalearning, the fact that the teacher makes assumptions about the learning situation can be seen as a potential guide toward coming to terms with the assumptions made by learners. In this concluding section I would like to briefly consider the problem of how to make it possible for teachers to make use of their own assumptions about the nature of the situation in order to produce the self knowledge necessary to deal constructively with the assumptions made by learners.

Bringing one's assumptions into awareness is a very difficult problem under any circumstances. When these assumptions are bound up with an institutional setting that reinforces them, then the proportions of the problem are significantly magnified. The only advantage that the school

setting presents in this respect is the fact that the students who are present will (if approached properly) challenge one's assumptions, simply as a result of interacting with the teacher in the situation.

One way of creating the conditions for these challenges to occur is to violate the taken for granted system of expectations in the classroom. A relatively simple way of doing this is to begin coding the behavioral system by writing a description of what occurs in the classroom. This description should include an attempt to describe as many persons as possible in terms of what one sees as their essential identity--what they are really like. As much as possible these descriptions should include how one feels and what one intuits about the person or the situation. After coding the behavioral system the teacher can begin to consider alternate couses of action. For example, a student who is perceived as aggressive might be treated as if he were docile, or he might be encouraged to be more aggressive. The teacher then observes the resulting interactions with the student in terms of the alternate hypotheses that might be entertained regarding the student's essential nature. By forcing the usual, taken for granted expectations that are operative in the situation in this way, its is possible to have one's assumptions about the other person and the nature of the situation challenged. The other person always retains the potential for being more than what we assume him to be, and as a consequence, whenever we scrutinize behavior in terms of the assumptions we have made, we find that it is necessary that the process be one that does not create so

much anxiety that it is impossbile for students to reconstruct their definitions in positive ways. There is no way of stipulating how much anxiety each individual can tolerate. It is clear, however, that no significant transformations of learning identity are possible without some degree of anxiety.

From an interactional point of view, the teacher, when he or she violates expectations in this way, is creating an anomolous situation for the learner. In proportion to the dgree that the teacher is successful in violating the learner's expectations, the learner is forced into a marginal status in the classroom. He becomes an outsider because he is much less in a position of certainty about how to behave appropriately. As a consequence of this process, the learner and others interacting with him, including the teacher, are likely to experience anxiety. But as we have suggested this anxiety is necessary to some extent if one is to effect significant change.

The teacher's assumptions about the learning situation are functional; they keep the situation from regressing to a state of chaos, but as the same time these assumptions also may limit growth. We have discussed a number of strategies that can be instituted in the attempt to avoid some of the more self defeating consequences for learners that derive from this dilemma that teachers face. In the final analysis, however, it is the fact that no permanent solution to this dilemma can be devised that creates the possibility for the learning setting to be a place where creative and meaningful experience can occur.

NOTES CHAPTER VII

1. Freire, Paulo, Pedagogy of the Oppressed, New York: Herder & Herder, 1971, p. 70.

2. Kohl, Herbert, The Open Classroom, New York: Random House, 1969.