

The proposed research project is a study of children's learning and development in context; a study of the redefinition of learning and development in a community undergoing dramatic change. I have been visiting this community -- Willow Run, in Washtenaw County, Michigan -- where conceptions of what children can and should learn in the local schools are changing as part of a response to the planned closing of a nearby auto assembly plant that has provided secure and well-paying employment for many years. Willow Run faces challenges that are, unfortunately, typical of this country at this time. It is a poor community, looked down on by its neighbors, and its children already pose many challenges to the local schools. But there is optimism and determination in the air, and I'm keen to see what happens.

Changing Views of Learning and Development

Developmental psychologists have begun to realize that the endpoint of human learning and development is not a natural or objective feature, but reflects the values of a particular community. Kaplan (1967, 1984) has pointed out that determination of learning and development requires specification of an endpoint or outcome towards which the person is moving. And Bruner (1985) has noted that the choice of such an endpoint is always a political choice, because it is "a value judgment about how the mind should be cultivated and to what end," and this involves "a decision about an ideal, about how we [conceive] what a learner *should* be in order to assure that a society of a particularly valued kind could be safeguarded."

If the endpoint of development is socially defined, then when the valued ends of mature participation in the social order are contested, so will be the character of learning and development. So, too, will be conduct and character that is considered deviance and failure. And to the extent that a society embodies fundamental contradictions, human development will be a conflictual and contradictory process. The contradictory character of democratic capitalist society has long been noted, but we have only recently started to grasp the implications of this for our theories of human learning and development, and the practices of schooling. The commercial and political realms involve distinct sets of values, and place competing demands on institutions such as the school. The values of participation in democratic institutions are different from, and conflict with, the values of involvement in commerce and industry.

Public schools in the United States have always been pressed to meet the demands of both business and politics. Since at least the beginning of this century they have been seen both as training workers to suit the requirements of industry and commerce, and as socializing the disparate elements of American society, especially immigrant groups, into a common culture. These may seem at first glance to be reasonable demands to make of a public institution, but it has become apparent that there is a significant tension between them. This tension can be seen in the pendulum swings of educational reform over the past century. The tension can also be seen in the conflicts

and resolutions of classroom life; as individual teachers struggle to find workable solutions to the competing demands of curriculum and control (cf. McNeil, 1986).

In times of significant change in the organization of both business and government, schools come under still greater pressure. Global recession has motivated relocation of jobs on an international scale, concessions by organized labor, and a change in the organization of the workplace. Politically, the end of the cold war has led to violent regional conflicts abroad and a realization at home that deficit spending justified by the need for a strong defense has greatly increased inequities of income and opportunity.

Whether or not these changes require that the structure and activity of schooling can and should be rebuilt (though I believe that they do), at the very least our theoretical understanding of learning and development must come to terms with the complexities of the modern world. We can no longer view the developmental process whereby children become mature and productive adult members of society as an unproblematic, "natural" activity whose endpoint is clear, and whose outcome is determined only by the aptitude of the individual child and the efficiency of the schooling they receive. We must construct theories that locate development in the social interactions of children with their peers and significant adults, and we must try to understand how these interactions are constrained and constituted by the institutions and communities in which they take place. The work proposed here is an attempt to move in that direction. What is planned is a detailed investigation of learning and development as they are experienced and understood in the schools of a community that finds itself at the center of major societal tensions and historical changes. In such a site we can observe the active renegotiation of learning and development, and the changing practices of schooling that are associated with this redefinition. I believe and intend that this work, though it is guided by (and will hopefully inform) abstract developmental theory, can have links back to the practices and people of the community being studied, especially the children who live there.

"Willow Run is America!"

"Willow Run," the name. What does it mean?

"It's a quiet stream that flows into the Huron River and it's a gracious chapel nearby. It was a place where Indians camped and hunted and where pioneers cleared the forest, built their cabins, settled and farmed the land.

"Willow Run was a camp for boys where they learned to farm, to live in the open, to work and love the land.

"The name stands for the giant plant first run by Henry Ford, where B-24 bombers were built to help gain victories in World War II; then run by the Kaiser-Frazer Corporation where cars were built and where the C-119, known as the 'Flying Boxcar,' was built for the U.S. Army; now the great plant where the General Motors Corporation builds hydramatic transmissions for its cars.

"Willow Run is a fine airport that is known to travelers and pilots around the world.

"Willow Run is a community of temporary homes where thousands of the people lived who built the bombers that helped win the war, where thousands of veterans who fought to win the war came to live with their wives and children, so that they could continue war-interrupted educations, the community often being called the 'second campus' of the University of Michigan at Ann Arbor.

"Willow Run is where every family has a yard where children can play and there are no signs at the rental office saying 'No Children Allowed.'

"Willow Run is a name that sings of pioneers of many kinds, the pioneering people who built the bombers, then built the products of peacetime at the place where people learned to live together in harmony, to go to good schools, to learn to be good citizens of a community of which they could be proud.

"Willow Run is not only the place, it is the people, their spirit; the spirit of pioneers.

"Willow Run... Willow Run is America!"

Anyone who learns the history of Willow Run feels compelled to tell its story, with emphasis on its transition from bucolic tranquillity to industrial commotion. I quote here the opening pages of "The Story of Willow Run" (Wilson, 1956), apparently written for the local school children. I've quoted at some length because Wilson catches all the major turns in Willow Run's history, because she expresses poignantly the defining role of both industry and community, and because she makes the important point that Willow Run is in many respect essentially American, though it is representative now in ways quite different from those Wilson points out.

Willow Run is a small residential suburban community located in eastern Washtenaw county, in the southeast corner of the state of Michigan. (See maps in Appendix A.) Located 30 miles west of Detroit, the community measures 16 square miles and has a population of around 18,000, in 6,209 households. Median household income is \$21,305, significantly lower than the median figure for the state as a whole: \$32,117.

Willow Run *is* its school district: the community does not exist as any other political entity. (Summary statistics on the school district will be found in Appendix C). It straddles, for instance, two townships. Yet the people living in Willow Run have a strong sense of their identity. One important reason for this is the existence of the nearby Willow Run automobile plant and the connected Willow Run airport.

The Willow Run community is a child of twentieth century state-regulated industrial production, born of a union between the war-time demand for complex fighting machines and the efficiency gains of centralized production, and the power of the federal government. The community was created and shaped to meet the needs of large scale industry, first the military-industrial complex, then the equally massive automobile manufacturing industry. The massive bomber plant designed and managed by the Ford Motor Company was purchased in 1953 by General Motors, who have operated it continuously since then. Without these two industries

Willow Run would not exist, but the first is long gone and by fall of 1993 the presence of the second will be greatly diminished. In February 1992, G.M. announced that it will be closing the Willow Run assembly plant in August 1993. The reaction was one of shock and outrage. This is a time of challenge and redefinition for the residents of Willow Run, and much of their attention is currently focused on their seven schools.

These circumstances, distressing though they are, provide an opportunity for the study of the practices in which learning and development take place in school with an attentive eye to the social, political and economic context in which these practices are located. Willow Run would not exist had it not been to satisfy the demands of large-scale government regulated industrial production, and yet today the people of Willow Run feel they have been tricked and abandoned as these demands change along a track whose direction is now a familiar national, indeed international, one.

A judicious integration of statistical and interpretive analyses will be used for this study. District statistics and surveys will provide an overview of the schools and community. Interviews with children, teachers, parents and others, and observations in the schools and around the school district will provide information about the perspectives and concerns of different community groups, the interpretive frameworks they bring to bear on school events, and the way these embody the conflicting demands that business and democracy place on the institutions of public schooling. The work will begin at Kettering Elementary School, and then move to the other six schools in the district over a period of several years.

Kettering Elementary School

Kettering Elementary School is one of the Willow Run school district's five elementary schools. Located at the south end of the district, closest to the G.M. plant, Kettering has a teaching staff of 15, and an enrollment of around 220. Of these students, 60% are Caucasian and 40% African-American. Kettering has a new principal, Dr. Janice Brown, hired by the Willow Run Superintendent, Dr. Youseff (Joe) Yomtoob, with a mandate to foster change in her school.

I've visited Kettering over the past year on the coattails of two programs that several of my colleagues here in the School of Education have helped the teachers implement: a work-sampling approach to student evaluation, and a project-based science program. The former introduced the teachers in 1st through 3rd grade to portfolios and to observation checksheets. The latter involved a group of teachers in 2nd through 5th grade collaborating on a "Lighting a Building" project in which students designed and assembled scale-model buildings (a mall, houses, a zoo, Kettering School) and wired them for batteries-&-bulbs lighting.

It has been fascinating to trace the changes these programs have gone through over the last year. The teachers have had to put into practice the "Kettering creed" that they all respect

differences and they have begun to learn how to reconcile different perspectives and address divergent concerns. For example, at one meeting a concern was expressed over "ownership" of the work the students were then engaged in. Some teachers felt that the art teacher was the only one having the pleasure of seeing the student-designed buildings actually being constructed. They also found the project taking far more time and effort than they had anticipated. But at an open-house at the end of the year, with the local press, the superintendent, and members of the school board present, along with all the students and their parents, the mood was one of celebration and shared accomplishment.

The children were given opportunities to work in small-groups, and found they had to learn to cooperate, respect differences, and organize their activity. Some of the buildings were destroyed several times over in frustration; children became angry with one another. But some children built more houses at home, without the teachers' assistance, and others discovered the concept of π (pi) as they measured the circumference of the school's pillars and tried to figure out the radius for their scale model.

Parents became involved, too. Some of them came to cut foam-core board in the art room, since the knives were too sharp for the children to use. Many of them came to conferences with the teachers who'd used work-sampling, to discuss their child's progress. At the start of the year some expressed a concern that if students not be given grades then their chances for entering college would be endangered. The principal voiced in response her concern that parents not adopt the wrong attitude to what the school was experimenting with. By the end of the year her worry seemed to have gone.

The principal of Kettering is taking seriously the slogan that we are all learners, most of all those of us who teach. She has intelligence and an air of conviction. The parents I've spoken to are pleased with what's happening at the school, and the district is aiming to make Kettering a lead player in their plan for "systemic reform" of all the schools.

And the children? One little boy I spoke to as he dropped by the principal's office told me casually of the fact that his father and the fathers of both his step-brother and step-sister were all in jail, and that his mother was considering leaving the area before any of them were released. I am only beginning to get a sense of the lives of these children, but they surely should be the beneficiaries of any reform efforts that the Willow Run community can muster. The good news is that it seems able to muster a good deal, and I anticipate that the story of Willow Run will turn out to be one of success.

To return to the more academic language with which I began, the circumstances at Willow Run provide the opportunity to observe an effort being made to redefine the endpoint of learning and development and, with that, to change the organization of the community schools. How these changes get played out in the classroom in the day-to-day exchanges and negotiations between

students and teacher remains to be seen, as does the effect on this of the diverse interests of parents, business, and local, state and federal government. I find myself unable to resist this chance to study development as a situated and locally negotiated construct.

I also believe that research of this kind, although formal and abstract-seeming, can facilitate practice. I hope that my role in Willow Run will not *only* be that of observer; I hope that by identifying the disparate perspectives and concerns of those involved in the changes there, I can help facilitate those changes that seem to us all to be most likely to help the children. Their future is the community's future.

This detailed description of my research plans begins with a discussion of the changing ways in which the interests of business and the concerns of democratic government have influenced public schools in America over the past century. I then consider how adequately different theories of schooling explain the way the pendulum has swung between these two concerns, and conclude that the best explanation is one that sees an essential tension between business and democracy.

With a few notable exceptions, this tension has gone unexamined when researchers have entered the school classroom and considered in detail how children learn and develop, because children have typically been assumed either to be passive recipients of an imposed ideology, or to be autonomous cognitive processors. Next I review briefly work in social theory that suggests that children's development must be thought of as a dialectical process where the active construction of persons goes hand in hand with the reproduction of the social order. The role of specific social institutions such as schools must be a central part of this account, as must the different positions that people come to occupy in society, and the different perspectives and concerns they have as a consequence.

The next step is to apply this rather abstract conceptualization to the study of a concrete setting. I suggest that Willow Run is a good site for such a study because with the closing of the General Motor's assembly plant at Willow Run the community faces changes that are characteristic and illustrative of the nation's economic and political restructuring of the past ten years or so, viewed by many as a crisis. "Characteristic" in the sense that many other communities face similar changes. "Illustrative" in the sense that the changes highlight the tension between economics and politics. My view here appears to be shared by community residents and by the local and national press.

Furthermore, the community response to these changes centers in large part on its schools, supporting the suggestion that schools must respond to economic and political change, and increasing the interest of this community to the researcher. In Willow Run there is a move to redefine what children can and should learn in school. The ways in which school personnel, students, and parents respond, the ways the definition gets negotiated and played out in the

classroom, and what this means for the survival and identity of the community, are all questions that call for study.

Such study must, in my opinion, adopt an interpretive approach: it must aim to describe and explain the way what is happening in the community is understood and interpreted by the people themselves. It should locate these "emic" accounts in an "objective" picture of the community that is provided, in part, by statistical means, but it cannot do without them. I end this proposal by describing the kinds of material I propose collecting, and the kinds of analysis to be conducted.

Public Schooling, Business, and Democracy

Since their inception, public schools in America have served the dual function of training workers and shaping good citizens. Education has been viewed as a means to social mobility and a source for the inculcation of democratic values, but also as the way to prepare the next generation of workers.

Historians of education describe a rise and fall of business involvement in education over the course of this century (Timpane & McNeil, 1991; Carnoy & Levin, 1985). In the late 19th century industrialists turned to schools for a supply of labor for factories, to socialize students into appropriate values, and to help modulate the labor supply. Industry strongly supported the call for universal schooling and vocational education, especially seeking an institution that would socialize immigrants into U.S. culture. Around the turn of the century, businessmen and professional educators became the majority of school board members (80% by 1916 in a sample of 104 cities; Bowles & Gintis, 1976, p. 190). Vocational curricula, vocational counseling, and tracking meant that children from different social backgrounds tended to receive preparation for different kinds of occupation. The method of financing education through property taxation, established in the early part of this century, tended to reinforce this, as did segregated schooling.

The depression of the 1930s was a time of economic crisis triggering change in a variety of social institutions. It initiated a loosening of business control over public schooling and a call for reforms: protection of freedom of expression in the schools, more equitable funding, programs for disadvantaged, handicapped and bilingual students, desegregation, and elimination of gender bias.

By the 1950s the majority of school board members were again businessmen and professionals, who considered themselves stewards of the public schools and business management the model for school administration. There was general consensus that an important role for education was the preparation of students for productive work, and the design of curriculum, testing, counseling and placement assumed this agreement. The expansion of public schools that occurred after World War II had the support of business.

The 1960s saw dramatic changes in the context of educational policy making, as new issues of educational equity, due process, and representation became highlighted most dramatically in

urban districts, though elsewhere as well. Parents and community groups became organized, the legal system was involved, as were state and federal agencies. As issues like desegregation and busing came to the fore, business leaders became frustrated, and began to appreciate that there were significant costs to their involvement in educational policy. Over just a few years they dramatically reduced their participation in policy-making at both the local and national levels. From the 1960s to the late 1970s, business interests focused more on the universities than the schools. It is no coincidence that at this time there was no shortage of qualified entry-level workers, as children of the post-war baby boom left school, and many women reentered the job market. Businesses became more concerned with the cost of schools in the form of taxation, and could afford to pay little attention to the quality of schooling. Business opposed local school bond issues, and lent strong support to state statutes limiting taxes, in California, Massachusetts, and elsewhere.

As the 1970s drew to a close, changes in labor supply and demand caused business leaders to renew connections with public education, in cities such as Minneapolis and Dallas, and in states such as California, Florida, and Mississippi. This change was not disinterested:

"Neither an abstract devotion to the importance of schools in society (to prepare employees, citizens, and consumers), nor local interest in communities that were 'good places to do business,' nor even contemporary theorizing about corporate social responsibility had been sufficient to rekindle that interest, but a growing concern about the quantity and quality of labor was.... Spot shortages of labor were beginning to occur, and many industries began to contemplate the need for painful choices: raising entry-level wages, substituting technology for labor, or exporting jobs to new locales here or overseas. The business community realized that with the need to fill existing jobs already apparent and more complex jobs on the horizon, it could not afford numerous educational failures in the schools" (Timpane and McNeil, 1991, p. 3).

In sum, the involvement of business in the organization and management of public schools was challenged in both the 1930s and the 1960s. An increased concern with political issues led in both periods to moves towards increased democratization of schools and a relative retreat on the part of business. Since the early 1980s the pendulum has swung back, with an increasing involvement again of business, and increasing attention to business needs on the part of educators.

Theories of Schooling and Society

A variety of theories have been proposed to describe the relationship between public schools and society, but most of them fail to explain the pendulum swings we have just described.

The "progressive education" view assumes that education is a moral enterprise in which children are introduced to forms of social organization that will shape their subsequent participation in society. The proper kind of schools would lead societal transformation, rather than simply reproducing the existing social order, inequalities and all. Dewey and Cremin are among those who have held such a view.

In the "critical progressive" view schools are still viewed as at least potentially autonomous institutions, but are seen as being, in their current organization and operation, oppressive and deadening rather than humanizing institutions. Far from providing opportunities for success and social mobility, they subjugate children to a technological, mechanistic attitude, institutionalizing failure and reproducing the worst aspects of a sexist, racist and inequitable workplace. This view has been held by Kozol, A. S. Neill, and Illich, among others. Neither of these first two views tries to explain why schools are as they are; they focus on proposing what they could be.

In the "functionalist" view schools are considered institutions that serve society by preparing workers with appropriate training, attitudes and values. They have taken over a function served in traditional societies by family, church and community because of the transformations of work that have resulted from industrialization. School structure and practices correspond to the structure and practices of the typical workplace: hierarchical organization; a division between management and labor; and rote, repetitive work.

The "critical functionalist" view tries to answer the additional question of how the organization of schooling has come to correspond to that of the workplace. The state plays an ideological role, and its institutions function to reproduce the class structure of the relations of production of a capitalist economy. They thereby legitimate an economic system in which there are inherent inequalities and exploitation. Preparation for the workplace takes the form of emphasis on individual competition, hierarchical organization and positional authority, and learning for grades. Such a view has been held by Althusser, and Bowles and Gintis. These views make it hard to imagine how schools could be other than they are.

The "critical autonomy" view is held by Apple, Giroux, Willis and others who have argued that a simple functionalist correspondence account of schooling fails to capture the dynamic struggle unique to schools. Culture and ideology are actively constructed in school, so that the ideology of the larger society is not reproduced by means of a simple top-down socialization, but is actively challenged, contradicted, resisted, and often reproduced ironically rather than directly. The institution of school has a certain autonomy, and embodies specific contradictions, in the form and content of curriculum, in teaching practices, and in the ideological content of administration.

The Tension between Capitalism and Democracy

The nature of these contradictions can be found in the pendulum swings between a predominance of concern with business interests and a predominance of concern with issues of democracy. Both business concerns and political concerns are acting upon public schools, but in contrary or conflictual ways. The result is a continuous process of change in public schooling. Carnoy and Levin (1985), for instance, propose that the relationship between education and work is a "dialectical" one, held in tension between the "imperatives" of capitalism and those of democracy. "The school is essential to the accumulation of capital and the reproduction of the dominant

relations of production, and it is valued by parents and youth as a means to greater participation in economic and political life" (p. 4). This conflict results in "internal obstacles to the functioning of institutions" such as public schools. Carnoy and Levin propose that such an account is necessary to explain a paradox they consider central to schooling: "how the public school can at one and the same time be an institution that reproduces the unequal class relations of capitalist society and an institution that is more democratic and equal than the workplace for which it prepares its students" (p. 3-4). They thereby capture an aspect of each of the theories of schooling reviewed above.

Two Moral Syndromes

The suggestion that business and politics involve different interests and values and as a result place conflicting demands on the institution of schooling receives some support from analyses like the recent one by Jane Jacobs (1992), who argues that commerce and what she calls (following Plato) "guardianship" amount to two distinct moral syndromes.

The first, the "commercial" syndrome, "stresses the avoidance of force and fraud, recommends openness to novelty, praises inventiveness, thrift, investment-mindedness, accepts the value of comfort and convenience and the utility of competition." The second, the "guardian" syndrome, "stresses prowess, obedience to authority, loyalty, the rightness of vengeance, the legitimacy of deceiving one's enemies, fortitude, resignation to fate, respect for tradition, and exclusiveness. It also emphasizes leisure and display rather than production or trading."

The suggestion that the morality of production and commerce differs from that of government and politics is a compelling one. Jacobs provides us with an exploration of a moral pluralism that seeks the basis for systems of value -- the conditions of their possibility -- in the material conditions in which they are located. And Jacobs suggests that a "division of labor" between the two syndromes is necessary, though different ways of arranging this division will meet with varying success. Schools provide an arena where this division of labor is problematic, because they are public institutions that must employ democratic principles of access and operation but must also operate in a cost-effective and efficient manner, and because the education of children and young adults must serve to reproduce both the political and the economic spheres of society. At a meeting of business and education professionals (4-27-93) a local superintendent talked of the competing demands parents and employers place on the schools: most parents expect their child to be prepared for a 4-year baccalaureate degree, while only 20% of jobs will require this kind of education. The job skills considered most desirable by surveyed Michigan employers are the absence of substance abuse; honesty and integrity; ability to follow directions; respect of others; and punctuality. The least desirable skills are math; social science; natural science; computer science; and foreign languages! He was well aware of the ironic contradictions at play here.

Inside the Black Box

"Our public schools have evolved historically as organizations serving two potentially conflicting purposes: to educate citizens and to process them into roles for economic production. To accomplish the first, schools have the role of supplying students with information and with learning skills. The results can be unpredictable because children's intellects and skills develop in way that we cannot predetermine. For the second goal, schools process students through stratified steps leading to predictable, marketable credentials for the workplace. The steps, and some of the outcomes, can be managed, controlled. Thus the school is organized to be in conflict with itself" (McNeil, 1986, p. 3).

The institution of school can be seen as a space for working out the conflicts that arise from the inequalities of a capitalist economy and organization of work (Carnoy and Levin, 1985). The tension between social efficiency and equal opportunity (to frame the conflict in just one way) can be seen in the historical pendulum swings in education policy debates over the past century. These contradictions can also be seen in the relations between teachers and students in public school classrooms, but a surprisingly small amount of research on the social reproductive function of schools has stepped inside the "black box" of the classroom. McNeil's (1986) work describing the tension between control and curriculum is a rare example. She describes how teachers often sacrifice the quality of curriculum in order to maintain control over students. Students' lack of engagement in their work is then interpreted as indicating a need for still greater control of 'misbehavior.' Concern with 'management' takes priority and defines rote memorization as 'learning.'

The Production of Persons

The "black box" has gone unexamined because the schoolchild is typically viewed as either a passive recipient of facts and values, or an autonomous learner whose culture is irrelevant. To understand classroom practices adequately we need a different way of theorizing about children's learning and development in an institution like the modern public school. This requires breaking with the individualism and organicism of much previous theorizing in developmental psychology (Dowd, 1990), as well as with the top-down socialization of much sociological theory. What is needed is an account of learning and development not as the individual subject's construction of cognitive structures (a genetic epistemology), but as the social production of persons through concerned participation in social institutions, a production that necessarily goes hand in hand with the reproduction of those institutions (a telic ontology). This must be a "critical" analysis in the sense that it seeks to articulate the conditions for the possibility of the generational continuity (and change) of a human society. The program of research described here will build upon a series of studies of "development-in-action" in which we have approached children's development not as the logical unfolding of cognitive-developmental stages but as a situated accomplishment: as the product of adults' and children's interactions in everyday settings (cf. Packer, 1983, 1985a, Packer & Richardson, 1991, Packer & Scott, 1992).

The general shape required of such an account of development has become clear over the past twenty years. There have been many contributors, only the work of a few of whom can be reviewed here. It has become evident that we seek an account of the mutual constitution of person and social order that goes beyond the social construction of *knowledge* of that order (cf. Dannefer & Perlmutter, 1990). Socially constructed knowledge about the world is an important moment of this dialectical process, and Berger and Luckmann (1967) drew upon the social phenomenology of Schutz (cf. Schutz & Luckmann, 1974, 1983) to emphasize that "society as subjective reality" had been neglected by a sociology which failed to appreciate how human conduct is guided by "whatever passes for 'knowledge' in a society" (p. 3). But this knowledge is significant only as it partakes in a material process whereby "a taken-for-granted 'reality' congeals for the man in the street" (p. 3). In accounting for learning and development we must attend to the material reproduction of the social order and the social production of personal identity at the same time as knowledge is shaped.

Such an account also requires an adequate conception of social structure. We must attend to a social order within which people occupy different positions, and as a result hold different and conflicting perspectives and concerns. The social system of democratic capitalism cannot be understood without analysis of the distinct social positions it defines and is defined by. These shape development directly and indirectly (Dowd, 1990, p. 150). Explicating the mutual constitution of person and social world requires both recognition that the person is *situated* within this world and so has knowledge of it that is partial and from a particular perspective, and recognition that *practice* is the point of emergence of both tacit knowledge and social structure, so that our conception of the person is not limited to that of "knower." The *desiderata* of such a theory are, first, a recovery of the human subject "as a reasoning, acting being"; second, the avoidance of a "relapse into subjectivism" by an explication of the *constitution* of consciousness (Giddens, 1976). In Giddens' account social practices are organized recursively, so that structure is both medium and outcome of the practices it organizes via "feedback relations of unintended consequences" (Giddens, 1982, p. 10).

It is important to maintain a distinction between the social order as a whole and social institutions that make possible particular social relations (Thompson, 1981). A culturally and historically informed developmental theory must attend to the character of the *specific institutions* that have arisen for the business of producing persons, and the *cultural fields* which are supported within them. The dynamic interplay of human agents -- students and teachers -- and regulative state institution -- school -- is well-captured by Willis (1977), who attended to the way schools serve to reproduce labor power. As Willis describes it, "The state school in advanced capitalism, and the most obvious manifestation of oppositional working class culture within it, provide us with a central case of mediated class conflict and of class reproduction in the capitalist order. It is especially

significant in showing us a circle of unintended consequences which act finally to reproduce not only a regional culture but the class culture and also the structure of society itself" (p. 60). Willis describes how the 'misbehavior' of students in an English midlands comprehensive school involved a rejection of the school's emphasis on upward mobility and led the school to reproduce ironically the very class divisions the staff believed they were overcoming.

So learning and development can be viewed as the results of a dynamic interaction between children and adults in (and outside) institutions like home and school (and interactions among children in adult-designed environments like the school playground; Packer, 1993). Learning and development are not just cognitive; they involve construction of new ways of being in the world; new ways of understanding oneself. And they involve a reproduction of the social order: schools are self-perpetuating institutions at the same time as they aim to bring about change on the part of students. Students and teachers occupy different positions in the institution and in society, and so have different perspectives and concerns. And the institution of school is both provided with resources and a certain autonomy by society, and has constraints imposed on it, especially in the form of demands from the spheres of business and government.

Combining the Abstract and the Concrete

This rather abstract conceptualization of the way children learn and develop provides a way of studying and analyzing a concrete setting. Such an analysis will provide a concrete demonstration of the abstract account, will extend and elaborate that account, and will bring to light concrete details of human development and social reproduction in a way that can have practical benefits as well as theory-building power.

What site to pick for such a combining of the abstract and the concrete? Willow Run is a site that provides a unique opportunity to study a community in transition, where the renegotiation of the aims of education and the goals of schooling is taking place on the levels of both policy and practice, as part of a transformation of the relationship between schooling and business in this small community.

The Life and Times of Willow Run

History is not typically the province of a psychologist, but the history of Willow Run cannot be neglected. Bronfenbrenner and Crouter insist that "Developmental researchers have been carrying on a clandestine affair with Clio... the muse of history.... It is time we embraced her as a legitimate partner in our creative scientific efforts" (Bronfenbrenner & Crouter, 1983, cited in Elder, Modell & Parke, 1993). I am no historian, but I suppose that in a good history one should hear people's voices, and so I've turned to local documents -- books, newspapers -- as well as academic accounts of the Willow Run area. I quoted earlier from "The Story of Willow Run," a romantic tail

told to school children. Given the opportunity to summarize local history, even a local planning document of the same era waxes poetic:

"Near an old Indian trail, called the Sauk-Fox Trail, eight miles east of Ann Arbor there was a favorite camping ground used by Indians over 150 years ago. A stream called Willow Run flowed through this wooded area into the Huron River to the southwest. Today this trail is Michigan Avenue, U.S. Highway 112, and the camping ground the site of Willow Run Village, a community with a history of fast development and change....

"World War II changed the face of this quiet rural area. Summer of 1941 saw the construction of the Willow Run bomber plant that was to build nearly 9,000 B-24 Liberator bombers in the next 24 months, and the Willow Run airport of six runways. The bomber plant began hiring workers to meet the employment needs of up to 100,000 workers. From all over the country, from farms and cities the workers came. To meet the urgent demand for nearby housing the Federal Public Housing Administration (FPHA) finally stepped in...."

(Parkins, Rogers & Associates, 1959)

In 1940, months before the attack on Pearl Harbor, the Roosevelt government awarded Henry Ford the contract to build the B-24 bomber - the "Liberator." "Willow Run was where Henry Ford promised to build a better bomber, to build to cheaper and to build it once an hour" (Hampson, 1993). The plant was constructed on land Ford had been acquiring since the 1920s and on which in 1939 he conducted a boys' camp ("Camp Willow Run") to train and discipline the sons of local farmers to be "better citizens, better men" (Wilson, 1956, p. 19) by raising and selling vegetables. (Incidentally, Ford also purchased the one-room schoolhouse, Willow Run School, and remodeled and reopened it.)

Designed by Albert Kahn, and costing \$65 million, this was the largest war plant in the world. Situated on 446 acres of land, its factory floor space covered 67 acres, totaling 3.5 million square feet (compared with 2.8 million square feet of office space in the Empire State Building). The plant's central feature was an auto-style assembly line of the type Ford had pioneered at Dearborn in 1914, but this time three-fifths of a mile long. The first 30-ton B-24 bomber was completed on September 10, 1942, and another rolled off the line once an hour (actually every 63 minutes) at peak production in March 1944. (The previous B-24 bomber factory in San Diego had produced only one plane a day under optimal conditions.) Each completed bomber contained 1,250,000 parts, 30,000 of which were unique (a wartime Ford sedan contained a mere 15,000 parts), had a wing spread of 110 feet, carried a bomb load of 4 tons, and had a speed of over 300 m.p.h.. Charles Linbergh called the factory "a sort of Grand Canyon of the mechanized world" (Hampson, 1993), a Ford executive said it was "the most enormous room in the history of man," and President Franklin Roosevelt named it "the arsenal of democracy" (Bordin, 1988). Total production of 8,685 planes was completed on June 28, 1945.

Willow Run began as an industrial plant without an infrastructure. The development of housing, roads, stores, schools, and other facilities had a unique logic defined by the needs of the

bomber plant. At its peak production, in June 1943, 42,331 workers were employed at the plant, but Ypsilanti, population 12,000 at the time, was far too small to provide all the workers needed. A "double super-highway," expressway I-94, was constructed to encourage workers to commute from Detroit, but the plant drew workers from all forty-eight states in the U.S., as well as Canada, Hawaii, Puerto Rico and Latin America. These workers needed to live nearby. Local businessmen in Ypsilanti and Ann Arbor were extremely reluctant to permit construction of permanent housing for these workers for fear of causing a post-war housing glut and a shortfall in housing prices, so workers lived in tents, shanties, and trailers.

Eventually the government financed construction of temporary residential dormitories and apartments, along with three schools. An investigating committee of the U.S. Senate, chaired by Senator Harry Truman, proposed as a compromise that the Federal Public Housing Commission would construct strictly temporary housing in the Willow Run area. This public housing project -- Willow Village -- opened in 1943, on land purchased in Superior and Ypsilanti Townships. Temporary dormitories and apartments, along with two trailer parks with nearly 1,000 trailers, provided housing for 15,000 people: more than the population of Ypsilanti. Two small shopping centers were also built, as were a laundry, fire and police departments, and a motion picture theatre with 1,200 seats.

The Congress approved funds for the Federal Works Agency to build schools in communities where there were new war plants, and so on July 22, 1943, School District #1, Fractional, Ypsilanti Township, Willow Run, Michigan was created. The term "fractional" referred to the fact that the new school district lies in both Ypsilanti and Superior Townships. The first superintendent of schools was appointed in July 1943, and three new schools (Spencer, Foster and Simmonds) were opened by November. State financial aid was based on the 335 pupils registered in the district in May 1943. By the end of the year 2,000 children were registered, although the aid was not augmented. So the Willow Run community grew up next to the massive military-industrial facility of the bomber plant designed and managed by the Ford Motor Company. It came to maturity serving the needs of the equally massive auto manufacturing industry, in the form of the General Motors Corporation. After the war the Kaiser-Frazer auto company purchased the plant and constructed several hundred single family homes. In 1953 General Motors bought the facility for \$26 million and converted it to production for their hydramatic transmission. They have operated the Willow Run facility continuously since that time, and in doing so contributed to the creation of a new middle-class of well-paid industrial workers. Michigan auto workers were the highest paid industrial workers in the country.

The following was a typical story: "Robin dropped out of Willow Run High School and began working at the plant in 1978, when she was 18. It was a time when a job in the auto industry represented good pay without the need for a high school diploma" (Eshenroder, 1992).

In the 1970s the Big Three inaugurated the "Southern" strategy of moving plants to the south and Mexico to reduce wages and avoid unions. The failure of this strategy in the face of economic crises and Japanese imports is succinctly summarized by Kenney and Florida (1993, p. 316):

"During the 1980s, GM's share of the U.S. auto market fell from 47% to 35%. In 1986, GM announced a \$1.23 billion cost for the closing of 11 assembly and components plants. Between 1987 and 1988, it eliminated 40,000 white-collar jobs, 25% of total. In November 1990, GM announced another \$2.1 billion restructuring charge to close 7 of its remaining 36 assembly plants in the United States and Canada. A year later in November 1991, GM announced a sweeping retrenchment of its North American operations, including plans to close 21 additional manufacturing plants, massively cutback capital spending, and eliminate 74,000 jobs. In January 1992, Wall Street downgraded the status of the company's debt, stating that 'The proposed realignment program will be insufficient to make GM fully cost competitive in the global industry'."

And on Monday, February 24, 1992, G.M. announced a series of planned plant closings that included shutting the Willow Run assembly plant, a major proportion of the Willow Run facility, in August 1993. They had decided to consolidate production in their Arlington, Texas plant.

"American Dream Put on Hold At Car Plant Doomed to Shut"

This was the headline of the first of a series of six articles on the Willow Run closing in the New York Times. That first front page article, published on Labor Day, 1992, began: "The day a General Motors manager stood on a stage at the Willow Run assembly plant here and told 2,000 workers the line would shut down forever by the fall of 1993, Chuck Kehrer watched as the man next to him bolted for the nearest trash can and threw up." The planned plant closing has brought significant stress to the lives of the plant workers and their families, and to their friends and neighbors throughout Willow Run and the surrounding communities. The Times article highlighted these effects on the lives of the workers: "The cars can be produced somewhere else. But what the workers fear cannot be transplanted is the way of life that has been built around their plant in Ypsilanti. Willow Run means picnics, Christmas parties, bowling leagues and the union" (Rimer, 1992a).

These psychological sequelae were also the focus of a series of articles in the Ann Arbor News, titled "Lives on the Line." An editor's note set the tone: "The Willow Run assembly plant will send an economic shock through the area when it closes next summer. But the reverberations will be felt one family at a time. In this continuing series, The News is profiling four families whose livelihood depends on the plant. We'll be following them over the next year and a half as they face the uncertainty and upheaval of a plant closing" (Editor, May 11, 1993).

The Ypsilanti Press covered the closing announcement intensively. The principal of Kaiser Elementary was reported talking of the way the news had upset her students. "Many, many are

expressing anger at President Bush. One said if he could get his hands on the president, he'd give him two black eyes" (Miller & Kauth-Karjala, 1992). The Detroit News carried a banner headline: "Blue Monday."

The Ann Arbor News carried on its front page a quote from Willow Run school district superintendent Dr. Joseph (Joe) Yomtoob: "We were getting encouraging news, so we were feeling good about it. It's very bad, very, very bad.... I don't know what else we can do... just keep supporting our people."

Three men from the plant, all in their 40's, died of heart attacks in May and June of 1992. Workers have attempted suicide, substance abuse has increased, as have reports of domestic violence. A local social worker described the stress from the plant closing as "like a brick hitting you in the face. You're so stunned you don't even know you're bleeding" (Rimer, 1992e).

Aids to Michigan Governor John Engler (Republican) were reporting as saying he was "bitterly disappointed" by the news.

The auto plant closing will also cause unemployment in a variety of associated businesses. The Institute for Community and Regional Development at Eastern Michigan University estimates that the 4,000 jobs lost at Willow Run will lead to loss of an additional 12,000 jobs across the state within 3 years (Cracy & Hogan, 1992).

There are no clear figures available to show how many of the workers who will lose these jobs live in the Willow Run school district. But workers living in Ypsilanti Township received from G.M. in 1990 payroll amounting to \$178 million, and the township was paid property taxes totaling \$4,250,000 (8% of its tax base), of which \$800,000 went to the Willow Run school district. Most of the shortfall will be made up by the state, since Willow Run is "on formula," but if families leave the district decreased school enrollment could force teacher layoffs and reduce programs (George, 1992), as could a drop in property values.

The Bigger Picture

"We're not smart enough to see what's happening to us. It's bigger than Willow Run. It's Willow Run first, then the state of Michigan second, and then the United States. We've got to say enough is enough" (Jerry Clifton, bargaining chairman of UAW Local 1776 at the Willow Run assembly plant, quoted in the Ann Arbor News, May 13, 1992).

The Willow Run plant closing gains much of its impact from the fact that it is just part of dramatic international economic and political changes. Capitalism has long been appreciated to be a form of economic organization prone to periods of crisis. It is a system of "creative destruction" (as Schumpeter put it), dependent upon continuous innovation, and "innovation exacerbates instability, insecurity, and in the end, becomes the prime force pushing capitalism into periodic paroxysms of crisis" (Harvey, 1990, p. 106). One such crisis has occurred over the past twenty years, with a shift in the way capitalism operates, one that amounts to an "emergence of more

flexible modes of capital accumulation, and a new round of 'time-space compression' in the organization of capitalism" (p. vii). This change has involved "a transition in the regime of accumulation and its associated mode of social and political regulation" (p. 121). In short, both the economic and political spheres whose conflicting demands are felt by public schooling are undergoing dramatic change.

Henry Ford provided the paradigm for modern production and the related role of government. Ford's introduction in 1914 of the five-dollar, eight-hour day for workers on his automated assembly line -- in Dearborn, Michigan, incidentally -- occurred around the time when businessmen were taking positions on school boards in large number. Fordism required that the state employ fiscal and monetary policies to curb business cycles, develop infrastructure, and provide basic social services, including increased expenditure for education. Functionality, efficiency, and stable growth were the watchwords. "What was special about Ford... was his vision, his explicit recognition that mass production meant mass consumption, a new system of the reproduction of labour power, a new politics of labour control and management, a new aesthetics and psychology, in short, a new kind of rationalized, modernist, and populist democratic society" (Harvey, 1990, p. 126). Government involvement in the economy and the expansion of consumer credit, especially for housing (Willow Village, among many others), was an essential part of this.

But in the fordism of the 1970s and 80s slumps in productivity were countered with layoffs and dismissals, which in turn led to decreased consumption and demand for goods, in a vicious cycle. Conversely upturns caused a tightening of the labor market, rising wages, inflationary pressures and a squeeze on profits. (This contrasts with the Japanese system where long term employment guarantees and an export orientation provide stability, and education is a form of social consumption that at the same time provides a skilled and remarkably adaptable workforce across all segments of society, despite continued existence of other problems; Kenney & Florida, 1993).

The sharp recession in the 1970s marked the end of the fordist mode of economic and state organization. Economic restructuring and social and political readjustment have followed. "Flexible accumulation" has replaced the rigidity of mass production with flexible production, newly emerging industries, accelerated innovation, economies of scope, and concessions from organized labor. Capitalism has become newly organized with the help of greatly increased information flow and a complex global financial system. This "new model of production organization" has been described as having five elements: "(1) a transition from physical skill and manual labor to intellectual capabilities or mental labor, (2) the increasing importance of social and collective intelligence as opposed to individual knowledge and skill, (3) an acceleration of the pace of technological innovation, (4) the increasing importance of continuous process improvement on the factory floor and constant revolutions in production, and (5) the blurring of the lines between

the R&D lab and the factory" (Kennedy & Florida, 1993, p. 14). There has been much speculation about the implications of this for schooling.

Michigan is still in the early stages of this economic transition. The state continues to have one of the highest unemployment rates along the eleven largest states in the country: 9.1%. The automobile industry, of which Michigan has a 33% share of domestic production, hit bottom in the first quarter of 1991, when annual sales fell to only 11.9 million units, 21% below 1986 levels (Crary & Hogan, 1992). Two thirds of the inhabitants of the state of Michigan live within 30 miles of Detroit, and since at least 1920 the region has been heavily vested in the automobile industry. But for several decades this industry has been moving jobs out of the area, and this trend has increased in recent years. During the 1980s Ford reduced its employment in the state by about one-third, and both G.M. and Chrysler reduced employment by about 40%. As a result, while employment growth from 1979-91 was 20.6% for the U.S. as a whole, growth for Michigan was only 6.5% (Crary & Hogan, 1992, p. 66).

There is less consensus on the character of the change in the political sphere. On the political front we find state institutions struggling to respond to cultural and moral pluralism, as a variety of minority groups have broken with the mainstream and fractured consensus on many social issues. Individual political representatives and the political parties have discovered that they must appeal to multiple special and regional interests. At the same time, it has become apparent that the entitlement programs that have fostered equality of opportunity and cushioned the poor from the worst consequences of economic downturn can only receive continued funding at their current levels if the U.S. deficit is reduced and economic growth is enabled. Government finds itself supporting the interests of industry in order to be able to sustain its social programs and even its own operations. For many, the most convincing political candidates are businessmen like Ross Perot. Commentators agree that contemporary politics assigns high importance to charisma and 'image,' in a "triumph of aesthetics over ethics" (Harvey, 1990, p. 329).

These changes in both business and government, this transition in the regime of accumulation and its associated mode of social and political regulation, are placing new demands on America's public schools. New skills and attitudes are required of young people entering the workforce, the job-market these young people must confront has been redefined, and changing forms of participation in political representation are called for.

Willow Run Responds

In Willow Run, new attitudes are evident towards both business and government. A strong distrust of both Washington and the Big Three has arisen. Ypsilanti Township has sued G.M., saying closing the plant would break promises the company made when it received \$14 million in tax abatements. A county judge in March ordered G.M. to keep the plant open, and the state Court of Appeals is expected to hear G.M.'s appeal late in June. In May G.M. notified the state and

Willow Run Township that it still plans to close the plant between July 2 and July 9; federal plant-closing legislation requires companies that employ more than 100 workers to give 60 days' notice of a shutdown. The relationship has changed between Willow Run and the industrial giant they have been serving, and from whose presence they have been benefiting, for so long. G.M. is being held to its contractual obligations to the community. Willow Run residents have lost their trust, and they are angered at being, as they see it, betrayed, since G.M. seems to have selected the Arlington site on the basis of factors other than those it said it would consider: union cooperation rather than cost. (In terms of Jacob's two syndromes, the community is holding the company accountable to an ethics of commerce, interestingly.)

The government is blamed for failing to stop what Willow Run residents see as a general trend on the part of business to move its production facilities wherever labor is cheapest, breaking communities to do so. The local political stance has swung to the left. Michigan auto workers were Reagan Democrats, but no more. Just after the presidential election, 1992, the New York Times provided this capsule summary of the state's voters:

"Michigan was a swing state considered vital to Mr. Bush's re-election prospects. It suffers from a beleaguered automobile industry, which hurt Mr. Bush. But Mr. Clinton's support was eroded by Mr. Perot, according to the polls. The Reagan Democrats, blue-collar workers whose disenchantment with their party led them to support Ronald Reagan and Mr. Bush, were important to the state's 18 electoral votes. Many who lost their jobs making cars in recent years returned to the Democratic fold. But the Bush re-election campaign was helped by strong Republican organizational support from Gov. John Engler. Mr. Bush won the state in 1988 with 53.6 percent of the vote. The candidates campaigned intensely in the state. President Bush made his final visit here on Sunday, and Governor Clinton visited Monday. NBC projected a Clinton victory at 8:30 P.M.."

Political activity in and around the Willow Run plant has greatly increased. In the presidential elections the union local endorsed Tom Harkin, then Gerry Brown, and only then Clinton, but voter registration was high, motivated by a desire "to make sure George hits the unemployment line before I do" (Rimer, 1992c). The Detroit News explained: "Most workers expressed anger and disgust, particularly at President George Bush. They figure he played a part in steering work to his home state of Texas because it will play into the U.S.-Mexico free trade agreement now being negotiated and it offers a lot more electoral college votes than Michigan" (Katz & Basheda, 1992).

Young people have become more politically aware, too: "Josh, a sixth-grader at Edmonson Middle School and a student of American karate, has recently become interested in union activities. After the Willow Run announcement, he accompanied his parents to a UAW-backed rally at Willow Run High School that featured Jesse Jackson. He also has spent some time picketing local Kroger supermarkets in support of striking workers there. 'I'm worried that there won't be any more unions in America in the future,' he says" (Eshenroder, 1992).

If big business and government can no longer to be trusted to manage the transition to a new form of production, the community figures it must shoulder the burden. Several organizations within Washtenaw County have put out a call for what one of them describes as "crossing to the new economy" (Michigan Future, Inc., 1992). Michigan Future, Inc. is a "non-profit, non-partisan citizens group" which sees among its "strategic tasks" the need to "provide the new learning demanded by the new economy in our schools and adult training programs." They explain:

"Michigan schools did an excellent job of preparing us for the mostly unskilled, mass production factory and office jobs of the Old Economy. The classrooms we attended looked like Old Economy workplaces. We sat in industrial rows, moved to bells, and learned mainly by memorizing. We were trained to take orders.

"But as we've seen, the emerging New Economy demands employees who can solve problems with fellow employees without being told what to do by a supervisor or foreman. It demands employees who can keep learning new skills and master sophisticated technologies. The new economy requires very different schools and ways of learning -- schools where students learn by working together, and where teachers coach students instead of telling them what to do" (Michigan Future, Inc., 1992, p. 17).

(Appendix C contains a discussion worksheet on "educational development" used at a Town Meeting organized by this group.)

The focus on "learning to learn" dovetails with the new "mission statement" adopted after G.M.'s announcement by the Willow Run school district (see Appendix C). This statement lays out a "vision" that "includes developing adaptive lifelong learners who... have the ability to contribute to and grow with an ever-changing technology based society;... demonstrate responsible citizenship; and are concerned, caring compassionate adults." One dimension to the changes initiated in the local schools is undoubtedly the 'politics of image' mentioned above: Superintendent Yomtoob was headlined on the front page of the Ypsilanti Press today, June 14, as I write this. The headline runs, "Willow Run crafts new image" and the article begins:

"Some say image is everything. For several years, Willow Run Community Schools suffered from a negative image due to financial difficulties, aging facilities and its curriculum. But changes instituted during the tenure of Superintendent Youseff Yomtoob have moved Willow Run in a different direction. 'When I came here (to Willow Run), we set three goals for ourselves. The goals were higher achievement, financial stability and positive image,' Yomtoob said.... Willow Run's negative image posed a problem attracting families and encouraging growth in the community, Board of Education Trustee Clifford Smith said. For the past five years, red bear stickers bearing 'I Love Willow Run' have become Yomtoob's trademark. His style and openness is credited with some of the success of the school district" (McMillan, 1993).

The politics of image is an important part of an effort to reposition Willow Run, perhaps as a dormitory community for white-collar workers, including university and state government employees. School improvement may attract families with children to the area, where house prices are low but there is easy access to Ann Arbor, Detroit, and even Lansing, the state capital.

Superintendent Yomtoob says that "our school district offers the best value in the county" (Miller & Kauth-Karjala, 1992).

But more is changing than image alone. Willow Run school district is requesting funds from the Michigan State Department of Education to facilitate a "systemic initiative" in reform of the district's schools. At the school level significant changes are taking place. At Kettering Elementary School a new principal, refurbished facilities, a computer lab (still without equipment, however) and new playground equipment (some of it stolen before installation, however) provide a setting in which there is hunger for new instructional and assessment programs. But adopting a mission statement is one thing; changing the instructional practices whereby children learn and develop is quite another. The children who attend the Willow Run schools come from families whose values are often at odds with those the mission statement assumes. Two-thirds are the children of first and second generation Appalachian whites who came to the area to work at the bomber plant, many of whom are now unemployed. Sixty percent of students receive free or reduced lunch, meaning their families are at or below the poverty level. The principal of Kettering Elementary tells me she is typically in weekly contact with the Department of Social Services, the sheriff, and the juvenile system. She describes many of her students as lacking the basic skills to survive in an institution like a public school. They are very capable children, she says, but skills like the ability to work in teams, to solve problems, and to resolve conflicts must be taught them at school. Her contact with parents has shown her that the values important to the school often contrast with the values parents hold, especially around the issue of conflict, which the parents see as a way of life. At home, children are taught to deal with conflict physically, not verbally.

My sense is that many of these students have experienced the conflicting demands placed upon the school as a choice between conformity and free-expression. In the typical classroom, what the teacher has come to see as reasonable and legitimate control is experienced by at least some of the children as unreasonable and numbing conformity. What these children experience as reasonable free expression is interpreted by the teacher as misbehavior that calls for increased control and discipline. It remains to be seen whether classrooms in which project-based learning, for example, is introduced can successfully transform this culture. The aim of this curriculum approach amounts to giving children an opportunity for expression in and through engaging classroom work. It remains to be seen whether the children will experience things this way, whether new forms of resistance will emerge, and whether new interpretations of school failure and misbehavior will develop. Will the students find new meaning in their schooling, or will they exploit changes in classroom organization such as work-groups and hands-on activities?

Outline of a Research Design

My aim thus far has to been to accomplish two things. First, to establish that Willow Run is a special place; unusual and yet representative. Willow Run is a place where the relationship of schools to industry and government has become highly visible, because it is deeply problematic. And Willow Run is seen as a symbol of national change and of a national problem by people both within and without the community. The response of this community will be read by people around the country as diagnostic of the ability of the working middle-class in America to respond to the changing conditions that have arisen during a fundamental shift in the organization of work and the economy, and of the involvement of government.

In short my first aim has simply been to show that the schools of the Willow Run community school district are worthy of study. My second aim has been to sketch out the interpretive framework by means of which I plan to study them. My main thesis is that the context -- economic and political -- in which the history of the Willow Run schools has placed them is causing changes in the practices of schooling: specifically, changes in the way learning and development are defined. But by "causes" I do not mean the material causation that can be studied by treating "context" as an independent variable, as is typically done (an informal survey I conducted at SRCD this year confirmed this). I am talking about a "constitutive causality" (Packer, 1993b) that operates by making certain courses of activity possible (but not inevitable), and others unlikely (but not impossible).

Such an effect can only be studied by paying close attention as a researcher to the way people *understand* events. One of the main points to be made about the study of human phenomena - human action and institutions, and their products -- is that what is being described and explained by the researcher has *already been understood and interpreted* by the people themselves. One complaint lodged against empirical-analytic research has been that it treats the way people understand their world only as 'opinions' or 'beliefs' about a reality which it aims to describe quite independent of those beliefs (if it considers them at all). If the way people understand the human world is *constitutive* of that world, then the description of any human phenomenon is radically incomplete if it fails to include an account of how it is understood by the people involved with it.

What is required here is an examination of the various formal and informal exchanges and interactions that occur in the everyday life at school of the students of Willow Run. These everyday exchanges must be located in the larger institutional organizations that both constrain them and make them possible. This is an ethnographic study in the sense that it is an investigation into the ways and methods of "folk." Observations will be conducted in classrooms and other school sites, and interviews conducted with school personnel and students.

First Phase

So one important phase of the research will be **to characterize selected participants' perspectives on everyday school events**. Interviews will be conducted with selected teachers,

students, parents, and local figures in commerce and guardianship roles, in which they will be asked to give narrative accounts about everyday events in and around the schools, and explain the significance of these events (events such as the fortuitous discovery of pi, mentioned earlier). These interviews will be recorded and transcribed. (Informed consent will be requested from adults, students, and the parents of students, and all persons interviewed will be assured whatever degree of confidentiality they wish.) The analysis of interview material will articulate the viewpoint the interviewee is speaking from, the perspective from which they view the events discussed and which organizes the way they talk about it. Techniques of narrative and argument analysis will be used to identify this organization.

More detail on this. An interview transcript is a written (and so 'fixed,' cf. Ricoeur, 1971) record of discourse. Two main modes of discourse are generally distinguished: *narration* and *argumentation* (Kinneavy, 1971). Narration is the recounting of events linked into a story, while argumentation is the advancing of a claim or an opinion about something that involves an appeal to reasons or grounds. However, these two analytic approaches should not be taken as ends in themselves; the general goal of interpretive research is to grasp and describe the particularities of a person's point of view on a phenomenon of interest, and the identification of elements and structures of argument and narrative are only steps along the way towards this goal.

Argument Analysis. The analysis of argument builds upon the account of its structure and basic elements described in Toulmin (1958) and Toulmin, Rieke & Janik (1974). Toulmin undertook an examination of the sentence-by-sentence organization of argumentation in discourse, and distinguished the following elements: "claims" or "conclusions"; "grounds" from which a claim follows; "warrants"; "modal qualifiers"; "rebuttals"; and "backing" for the warrant. The backing is part of the "field" in which the argument is located. An argument analysis of an interview transcript articulates the chains of justification so as to understand the field in which these arguments make sense, and the "practical context" or "rational human enterprise" (as Toulmin puts it) that the interviewee is situated in. Figure 2 in Appendix B shows the basic elements and structure of an argument.

Narrative Analysis. We are "story-telling animals" (MacIntyre, 1984) and we understand our own actions, and the actions of others, primarily through narrative. Narrative is a structure that endows events with an overall sequence and significance. The power of narrative is recognized now in anthropology (Geertz, 1988), history (Hayden White), psychiatry (Spence, 1982), psychology (Bruner, 1987) and philosophy (MacIntyre, 1984; Jonsen & Toulmin, 1988).

Narrative can be defined as the recounting of one or more real or fictitious events, logically and chronologically related, caused or experienced by actors, communicated by one or more narrators to one or more narratees. The elements of a narrative are "plot" (the "what" of a narrative); "discourse" (the "how" of a narrative); and "theme" (the more general and abstract ideas,

issues and concerns that the narrative is about). A plot has the following elements: "agents"; "action"; "goal"; "setting"; "instrument"; and "trouble". An interpretive analysis of a narrative requires identifying the elements of the plot and describing its organization, and then identifying from what *point of view* the narrative is told. What *point* is it making? What is it trying to impress upon the listener? We must read past, or through the narrative to discover the point of view, the perspective, the concern, of the story.

Second Phase

A **second** phase of the research is **to document the cultural work accomplished in students' school interactions**. Interaction among students and between students and teacher amounts to "cultural work" (cultural because it provides shared ways of behaving; work because it is given effort and attention), in which knowledge and skills are acquired and in which identity is shaped. This cultural production goes on with the support and within the constraints of the school, viewed as an institution which is the target of the concerns and interests of a variety of constituent groups located at different positions inside (and outside) the community. Audio-recordings (and occasional video-recordings) of classroom interactions and other public events such as school board meetings and open-houses will be transcribed and analyzed using an approach similar to conversation analysis (Levinson, 1983; Nofsinger, 1991).

Interaction Analysis. Social interaction also requires interpretation if it is to be understood. Observations and recordings of interaction provide a "text-analogue" (Ricoeur, 1971) to which an interpretive analysis can be brought to bear in order to describe the "person production" that takes place. Observations are often subjected to a content analysis which records only their surface features: acts are coded as though they require no interpretation, no attention to context, and as though people's words and actions are always unambiguous. But when people interact together they actively redefine the context of their activity, and negotiate the meaning of their acts. This work requires interpretation in order to be understood.

The study of social practices must take good account of the fact that participants in practical activity inevitably understand that activity from different perspectives, bringing to it different concerns and interests. The scientific study of school practices must try to grasp as many as possible of the different perspectives and concerns involved. This requires a method of investigation that doesn't decontextualize the practices, but considers them as situated accomplishments of the people who engage in them.

The enclosed article (one of several I have published on interpretive research, in addition to teaching classes on this topic both at Michigan and at Berkeley) provides an explanation of several features of this kind of analysis, and an illustration of its application to a rejected child's behavior on a preschool playground. These features are (1) that understanding a phenomenon requires practical involvement with it, (2) research should be conducted in everyday settings, (3) action must be fixed

before it can be studied, (4) interpretive analysis is guided by the foreknowledge of the researcher, (5) coding schemes misrepresent action by abstracting it from context (6) interpretive analysis builds from the accounts of specific cases, (7) going beyond the individual case is a matter of comparison, not aggregation.

Third phase

Next, participants' perspectives or interpretive schemes must be considered with respect to their location within the dynamic process that is schooling in Willow Run. This process is never grasped as a whole by those who participate in it, but techniques of objectification can be employed by the researcher (Bourdieu, 1991). One such technique to obtain an overall picture of the passage of students through the Willow Run schools, and the kinds of "product" they amount to as they leave the school system, is the use of quantitative measures generated by the schools themselves. Graduation rate, dropout rate, rate of transfer between schools, attendance statistics, detentions, suspensions, etc. provide quantitative indices of the "process," while achievement scores, grade point averages, aspirations and attitudes surveys provide quantitative indices of the characteristics of the "product." (See Figure 1, Appendix B.) Changes in these indices over time add a historical dimension to the analysis.

The **third** phase, then, is **to objectify the overall "process" and "products" of schooling**. Some of the specific questions to be asked include: What are the numbers of students who exit (in various ways) the Willow Run schools and enter the labor market? How many graduate; how many drop out? How many families move from the neighborhood? What are the gender, class, and ethnic characteristics of these students? What are the skills of these students, in terms of achievement test scores and grades? What are their aspirations, values, and opinions about the schooling they have received, and the jobs they are seeking? What jobs, if any, do they obtain?

This objectification of the school system will guide selection of specific locations within each of the schools for examination of the concrete forms of interaction and exchange that young people are engaged in during their years in the Willow Run schools, both inside and outside the classroom. What tacit definitions of learning and development are embodied in these interactions?

Our detailed study of school practices will begin in Kettering Elementary School, since we have been visiting Kettering over the past year and the staff and of the students are familiar with us, and because Kettering is leading some of the changes in the district. Over subsequent years our study will move to the other schools in the district, probably focusing on students making the transition from elementary to middle, and middle to high school (cf. Mitman & Packer, 1982).

We should then be in a position to put the pieces together, and answer the question: **How are the conflicting concerns and competing demands placed upon the Willow Run schools reconciled?** Who are the different outside groups with an interest in the schools? (Parents, administrators, business, church.) Who are the different groups within the school?

(Administrators, teachers, students.) These are abstract definitions - who are the concrete persons and groups of whom the students and teachers are themselves aware? What are the issues these groups express concern with? What positions do they occupy? What perspectives do they have? What is their grasp of schooling, and what it produces? How do the specific classroom practices we observe, and the "products" of these practices, reconcile these concerns? How do students and teachers negotiate the accomplishment of these practices? What institutional sanctions and resources are drawn upon?

And to take a last step backwards, to view the finished product of our planned investigation in its larger context, the reconciliation achieved by the Willow Run schools will hopefully provide lessons for other communities struggling to change in order to survive in the face of the transformations of our time.

A note on the validity of interpretation

A question often asked about interpretive research concerns "quality control" in the interpretive process. This is a complex topic (Cf. Packer, 1989.) and only the surface can be scratched here. Each interview narrative and episode of interaction has many of the characteristics of a written text: one of these is that its parts can only be understood with an appreciation of how they fit into and constitute the whole; however, at the same time, identification of the character of the whole depends upon a reading of its parts. This is the well-known "hermeneutic circle," and at first it seems vicious, involving circular definitions. In practice, however, one begins with a general, preliminary sense of the whole structure and proceeds in an alternating manner to progressively articulate parts and whole, correcting the general picture as necessary (cf. Heidegger, 1927/1962; Gadamer, 1960/1986; Ricoeur, 1976; Taylor, 1971/1979; see Dreyfus, 1991, p. 200 and Caputo, 1987, p. 61 for the clearest explications). The internal consistency of the interpretation is one criterion of validity, but clearly how one begins is important. Interpretive inquiry assumes that the "objective" researcher is a myth: researchers should be explicit about the "foreknowledge" with which they approach the phenomenon studied. I have tried to begin such an explication in this proposal. But in addition interviews and observations provide a kind of evidence unavailable to the interpreter of literary texts: people are constantly interpreting and responding to each others' actions, and these responses provide evidence about the categories the participants themselves employ to make sense of their interaction. And the interpretations generated in such an analysis can be discussed with the participants themselves.

Because interpretive analysis attends to the way people experience and understand their activity, and not just to objective descriptions of that activity, it is a mode of research that can become participation. I plan to work *with* the staff and students at Kettering, helping them solve problems that arise in their own practice, rather than simply treating them as raw material for the construction of abstract scholarly articles.

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