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CHAPTER 2

A Utopian Methodology as a Tool for Cultural and Critical Psychologies: Toward a Positive Critical Theory

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Introduction

This chapter offers an introduction to a program of research, teaching, and community development that can serve as a model for what we refer to as a *positive critical theory*. *Critical theorizing* has roots in several corners of the humanities and the term means different things across discourse communities. Our use of the term marks our attempt to supersede those forms of criticism that offer no possibility for remedy or redress within the reach of people who don't benefit from reading academic texts.

We reject, for example, the position of the "negative dialectician" Theodore Adorno, who denounced "concrete and positive" suggestions for social change. Adorno's criticism of reform efforts, which he viewed as sad attempts at "administrating the unadministratable," was in a word, paralyzing. Adorno thought such reforms would inevitably "call down the monstrous totality of repression upon themselves," and reinscribe the status quo (Bronner & Kellner, 1989, p. 275). Adorno's equally bitter rejection of the notion that theory and practice might productively converge is conveyed in his announcement that "no practice can ever be radical enough" (1984, p. 24); practice will never escape its dulling effect on theory.

Our project violates both of these provisos. The term *positive critical theory* is intended to reflect our emphasis on constructing and sustaining alternative arrangements to those decried in critical pedagogy, communication, technology studies, and the communities within which we work. While such efforts may be expected to fail, as Adorno asserts, they provide a crucial means through which we can deepen our understanding of the world, and an empirical basis for

critiques of our own theorizing—essential goals in constructing theory as well as in reorganizing practice.

Our discussion is located at the juncture of several critical theory discourses. We begin by reviewing the work of key theorists of communication and technology studies to frame what might be called a "standard critical theory" approach to our research area. In that review, we take up recent work on access to technology, literacy, and social justice.

Bryson and De Castell (1996) study women's access to new information technologies. The authors seek exceptions to the rule that women and girls are marginalized in educational contexts where new information technologies are prominent. Their project is to document practices, policies, and contexts that are supportive of women's access to, and development of, competence in using new information technologies.

Stuckey attempts to unmask and redirect "the Violence of Literacy" (1991). She argues that in both the theories and practices of research and intervention, literacy programs and mainstream research on illiteracy fail to take seriously social class as a controlling factor in framing literacy and illiteracy.

Giroux's *Border crossings: Cultural Workers and the Politics of Education* (1992) offers strategies for practicing critical pedagogy to round out our brief survey of a landscape upon which to construct a positive critical theory. With these theorists and "calls from the field" in view, we describe and critically analyze our own project, which derives from a model activity system called the "Fifth Dimension."

The Fifth Dimension model, explored at length elsewhere (LCHC 1982; Cole 1996; Nicolopolou & Cole, 1993), is our way to bring adults, adolescents, and children together to learn and play within educational activities during the after-school hours. We describe an example of how community institutions and institutions of higher education can collaborate to provide the resources to create and develop new Fifth Dimension adaptations.

Such partnerships can only be sustained if they effectively identify, share, circulate, and enhance the resources of all participants. We conclude with a critical assessment of our own success and failure to theorize, implement, and sustain Fifth Dimensions as alternatives to dominant practices in terms of the notion of a positive critical theory.

Review of Key Theorists

Communication research

One of the seminal texts in the history of the field of communication is Lazarsfeld's classic overview of the purpose and direction of critical theory in the then-emerging field of communication. Looking ahead

(and at the recent past), deeply troubled over the use of media channels (radio, advertising, and cinema) for political propaganda and mass persuasion, Lazarsfeld outlined his strategy for critical communication studies with four points of entry: (a) it should be informed by a theory about prevailing trends toward a promotional (advertising-based, privatized) culture; (b) it should involve special study of any phenomenon expressing and contributing to the trend; (c) it should track the valorizing of homogeneity that resulted; and (d) it should offer remedial possibilities (1941, p. 13).

Interdisciplinary critical communication studies

Subsequent critical communication research had a broad mandate to investigate the relationships between communication media, trends in culture, politics, and economics, and individual and institutional behavior. Critical communication scholars have generated many cross-disciplinary theories and methods of inquiry with ethical and institutional commitments different from those of the mainstream programs that Lazarsfeld referred to as "administrative." Administrative communication research often takes interdisciplinary forms, but remains interested in promoting technologies, methods, and content sought by practitioners and governmental and corporate clients of radio, electronic, and print forms of entertainment and persuasion.

An example of the persistence of this critical/administrative division within the field of communication is present in the clash between those who celebrate and those who condemn new communication technologies. Pool's *Technologies of Freedom* (1983) is representative of research that finds democratized access to a free flow of information, expanded educational opportunities, new jobs, hobbies, fantasy realms, and easier living associated with these new technologies. Critical voices question this bounty, wondering if we are finding only new ways of "amusing ourselves to death" (Postman, 1995) by embracing more effective delivery mechanisms for the entertainment values that anesthetize citizens against their proper concerns. Critics following this line of argument focus on the erosion of privacy (Schiller, 1989, 1996); the neutralization of real political debate (Herman & Chomsky, 1988), the loss of jobs and whole occupational categories to automation (Shaiken, 1985); and the rise of an amorphous "service economy."

Technology and education

Noble (1977) connected the proliferation of research and development in science and technology sectors in the United States, including communication technology, with the rise of corporate capitalism. His book established an important model for tracking and evaluating the forces, arrangements, decisions, and compromises that inform

present-day relationships between technological innovation and higher education. Noble suggested that we interpret technology as social production rather than as a "thing." This move was crucial to understanding the foundation upon which (and machinery through which) research-and-development came to shape the character of American universities during the latter half of the twentieth century.

According to Noble, partnerships between educational institutions and private concerns evolved in a way that provided a humanitarian facade for capitalists who invested in new knowledge, the future, and learning for their own sake. These partnerships were also a source of income for basic researchers to build up their facilities independent of the uneven, shrinking operating budgets of their own institutions.

The resulting norm, Noble suggests, is that corporations save or write off millions of dollars while setting the agendas of public universities, prioritizing research that promises lucrative returns on the investments in the marketplace. After Heidegger (1977), scholars of new technologies cannot escape the research question, technology for what—to support what ways of being in the world? Noble's analysis supports the conclusion that science and technology have developed mainly as instruments for capitalist expansion, with education funded in a hierarchy determined by the serviceability of its subject matter to those interests.

In the end, Noble warns, social scientists, the public, non-hard-science users, affluent consumers, and others come to believe that the power of technology lies at our fingertips, and exult in our increasing reach through the Internet. Yet we have accepted arrangements that can only deepen our reliance on private, corporate control, and therefore implicate us in *their* "designs."

Twenty years later, what has been learned about how these public-private alliances are playing out, and the status of alternatives? Conley and the Miami Theory Collective of Oxford Ohio ask, "What is the position of technology in the humanities, especially with regard to a rapid transformation of the experience of space and time?" Their book contains familiar allegories of simulated worlds being "about forms of death," and ends with a noncommittal postmodern paean to the multiple seductions of cyberspace. The Internet is celebrated as the locus of opportunity for "rechannelling productive modes of singular and collective becoming" (1993, pp. xi-xiv).

Some of the articles in that volume have a definite critical tone, such as those on computer technology as it bears on warfare, sovereignty, and law in global conflicts. These articles critique the effects of hi-tech numbness and information overload as well as the feeling of "narcotic modernity" that characterizes technophile populations, and the dangers inherent in ignoring effects on the environment that are linked to computerization.

That volume does not give us the comprehensive assessment of the interplay between an agenda and the forms of knowledge and technology that Noble's work launched, but it is representative of the genre of the middle ground that is increasingly adopted across fields that have technology studies as their major concern. That is to say, the jury is still undecided about what is enabled and what is denied to individuals and groups in the Internet age.

Gender: Learning to make a difference

In their article "Gender, new technologies and inequity," Bryson and De Castell tell us that their research began with a critique of a familiar discourse of optimism about computer technologies. They expected resistance to implementing gender-equitable pedagogies and curricula, but still underestimated the pervasiveness of support for existing gender arrangements at all levels.

Bryson and De Castell faced censure and noncooperation from project sponsors and gatekeepers on basic issues of project design and implementation. The authors trace this resistance to the fact that they asked difficult questions and dealt with the hard and embarrassing facts of gender inequity with respect to access to new information technologies, despite their interest in finding exceptions to the rules.

The researchers call for identification of contexts and practices that focus on the inclusion of girls and women using new information technologies. Their methodology explicitly emphasizes maximizing the likelihood of optimal outcomes, as well as the use of principles, practices, and relations contributing to competence rather than focusing on explaining failure (1996, p. 125).

Bryson and De Castell report the conflict between themselves and research subjects and other project participants stemming from resistance to gender-equitable practices on several different fronts. They encountered little collaborative research on community and equity. They experienced their students' resistance to feminist ideals and discussions of gender equity (pp. 132-133). They also had to deal with the scrutiny of their sexuality. In an e-mail exchange about their recent progress, the authors say, "We positioned ourselves as researchers and yet once identified as lesbians we could no longer occupy that identity position."

Echoing Adorno, earlier they had written,

> Learning to make a difference is a project doomed to fail. Let's consider why: school contexts are a) highly resistant to change b) locales where scripts for the enactment of appropriate gender identities are always already entrenched in an exquisitely fine tuned dance of heterogenesis." (p. 120)

Two years into the project, Bryson and De Castell reflect on the work.

> Whereas we began . . . with the goal of creating productive links between school based and non-school based organizations, what we have learned is that by narrowing our sights to a single school community, and accepting the narrowness of having created a microclimate, we have been able to accomplish many of the goals with which we started our work. It just leaves us with a much less exciting set of stories to tell, and without any of the outputs that scientists expect, like models, bullets etc.

Literacy, illiteracy, and community

Stuckey, an implementer and critic of adult literacy programs and author of *The Violence of Literacy* argues that literacy programs and those who implement or study programs targeting illiterates fail those they purport to serve. She emphasizes that barriers to social mobility persist for literacy program participants following acquisition of reading and writing skills. The numerous programs Stuckey reviewed were "designed as if to fail" (1991). She concludes the literacy programs often do more violence than good in their premises and promises.

One of Stuckey's criticisms of research and reform targeting illiteracy is that scholars and policymakers assume illiteracy to be the cause and not the consequence of institutionalized poverty and social injustice. Stuckey dares to interrogate literacy as a universal good, a skill attainable by all given the right opportunity, an index of democracy, and of progress in a society. Such formulations are, for her, aspects of the myth of a classless society "doing the bidding of class."

Politicians point to literacy as an avenue to social mobility that any individual can walk down, while routinely discriminating against groups who speak nonstandard English. By cutting funding and by rolling out programs that cannot cope with heterogeneity in the goals or needs of their clientele, policymakers and implementers can appear to be "addressing the problem" without opening the field of inquiry to the intractable problem of class conflict.

Stuckey argues that a definition and standard of "literacy" couched in the rhetoric of "upward mobility" is decidedly a white middle-class standard, a red herring that draws attention away from the real sources and consequences of poverty. This tactic makes it possible to ignore the possibility of multiple literacies, or to question the way skills are valued and devalued in ways that covary with the race and gender of the people who exhibit them.

Stuckey's experience as a literacy worker and her research on the impact of adult literacy programs leads her to conclude that (1) literacy programs usually fail to accommodate the basic realities of the lives of the illiterate, (2) most programs are located outside of target communities, and (3) programs are typically staffed by volunteers (preprofessionals on their way to something better—elderly women, retired teachers, and charity groups). When paid, literacy work is done by a low-waged/ high-turnover corps of literacy "scut workers" who burn out or move on when funding dries up as a matter of course. Stuckey's advice to "literacy workers" is to make connections between the marginality of their own work and the experiences of the brown and black people from the underclass who remain subject to the historical machinery of discrimination that adult literacy programs do not dismantle.

Critical pedagogy

For Giroux, a critical pedagogy is potentially radical when it aspires to rewrite the relationship between theory and practice as a form of cultural politics, whether this practice is teaching, scholarship, introducing new educational technologies, or research. There is an affinity between Giroux's relational approach; Noble's view of technology as social production; and Stuckey, Bryson, and De Castell's examples of gender inequity reproduced in the norms of research.

Giroux's goal is "a pedagogy that proceeds from a respect for the complexity of the relationship between pedagogical theories and the sites in which they might be developed" (1992, pp. 3–4). Critical pedagogy must also work in the "spaces between binaries" (p. 24), inherited from universalizing-prescriptive approaches to theory. Borrowing from critical work in modernist, postmodernist, and feminist traditions (p. 73) Giroux calls for attention to pedagogy as connected to the practices of scholarship, ethics, relations between the self and the other in research, and implementation of new approaches.

Giroux is also concerned with understanding "difference" in an ethically challenging and politically transformative way rather than suppressing difference. What practices does Giroux propose? Starting points are breaking down disciplinary boundaries, and engaging in critiques of the notion of reason to discover some of the ways in which people take up subject positions out of habit, intuition, desire, or affect.

In Giroux's discourse of possibility, the role of "imagination" and the "not yet" are key ideas for teachers confronting their own social and political locations, as transformative intellectuals. It is quite a challenge to verbalize what we want to happen, how we want things to be. Doing so generates reflection on the gaps between one's ideals and the practices that we are invested in even as we critique them.

One example could be taken from the ideal of "imagination" and the possibility of "occupying border locations." Bryson and De Castell have remarked in conversations with the authors that it is difficult to "imagine oneself" out of harm's way to avoid being a target for routine violence. Furthermore, they ask, who really believes it is desirable to embrace "occupying border locations"? The reality for those who are not "tourists" at the borders, those who have to live in the schism, is an exhausting series of confrontations with chaos and double standards.

Summary of classic critical theory

This selective review of a landscape of danger and possibility in the high-tech 1990s is not very different from Lazarsfeld's initial take on the field in the 1940s. The privatizing forces, commercial interests, and "enframing" tendencies of communication technologies (now with microcomputers and the Internet) are ever poised to overshadow democratization of access, and educational or noncommercial content.

Persistent inequity in access to new communication technology for the poor, women, and other minorities points to a lack of focus on user competencies, goals, and community ownership in the development of literacy oriented programs (Greenwood-Gowen, 1992). Stuckey, Bryson and De Castell, and Noble each offer some insights into why this is so, and what happens to alternatives.

Our own approach, which has been realized over many years, shares the key concerns of all the theorists we have cited. Like Adorno, we expect to fail. But that does not mean the effort was theoretically or practically insignificant. One does not ineluctably reinscribe the status quo. Here, we side strongly with Giroux's emphasis on the need to reorganize the relations of theory and practice. Like Stuckey, we view the benefits of, and paths to, literacy as represented in educational discourse as highly problematic.

Like Bryson and De Castell, we have taken as our focus a knot of interlinked issues that confront the people in our region, centering on transformations in technologies that mediate work, education and community life. These issues can be cataloged as a set of binary relations. But we see them as Engeström (1987) does: as potentially generative contradictions. They include intellectual work vs. play, university vs. community, inschool vs. after-school, researcher vs. subject, theoretical vs. practical, teaching vs. research, male vs. female, white vs. nonwhite, and monolingualism vs. bilingualism.

Our way of addressing these binaries while seeking to create and sustain conditions that supersede them has been to grow a special hybrid form of activity we call the "Fifth Dimension."

What is Fifth Dimension?

It is a little difficult to characterize a Fifth Dimension briefly because it is designed as a strategy for occupying border locations between the binaries just listed. In brief, it is a specially designed activity system that mixes play, affiliation, learning, and peer interaction (Cole, 1996). The activities occur in community settings during the after-school hours and are linked to university practicum courses. The local activity system includes computer games and programming environments, non-computer-based games, and other activities. Telecommunications access affords local and regional interaction between participants at project sites. There are currently more than a dozen adaptations of the Fifth Dimension model in the United States, and several in Europe and Mexico.

Interestingly, the term Fifth Dimension is usually used by participants to describe the most visible aspect of these community-university collaborations—the places and times when the "site" is running, when children are using its special artifacts, moving through the maze, writing to the Wizard, and so forth. The Fifth Dimension in this context denotes the physical location and the special form of activity within community institutions where children interact with researchers, undergraduate and graduate students, other children, and community institution personnel in ways that differ from those when and where the Fifth Dimension is not in effect. Being on school grounds in the computer room after school in the Fifth Dimension becomes different from being there at other times; and being at the Boys and Girls Club or the YMCA "for the Fifth Dimension" invites different forms of participation than being anywhere else in the facility.

A basic characteristic of Fifth Dimensions conceived at the community site level is that they differ greatly from one another in ways that are entwined with local conditions. The Fifth Dimension at our local school feels different from the Fifth Dimension at the Boys and Girls Club across the street. Each creates its own idioculture (Fine, 1987).

Our own interest includes the developmental transformations that occur within the activity "at site" in the community setting, but extends to intermediating levels of activity produced by institutional routines that constrain and enable the joint formation of Fifth Dimensions. We are especially concerned with documenting phases in internal dynamics that undermine or realign the ability of universities, colleges, community institutions, and clubs to form synergistic relationships.

A prototype (caveat emptor)

Recognizing that these activity systems exist only with respect to local constraints, we are frequently asked for a normative description of

the model. What follows should be taken as a sketch of some key conventions that have developed across numerous adaptations of the prototype.

In a prototype Fifth Dimension system[1] (local names for them vary), a dozen or more six–to fourteen–year-old children encounter a large variety of off-the-shelf computer games and gamelike educational and entertaining activities. A Fifth Dimension room usually contains both Mac and DOS machines, low-end and high-end, at a ratio of one computer for every two to three children.

The computer games and other offerings are part of a make-believe activity system, a play world, whose conventions mediate the way in which activities and games are experienced by the children. We try to avoid single-player, "arcade" style games, often called "twitch games," because the Fifth Dimension play world emphasizes skills that such games don't often cultivate. Some of the non-computer-based activities include origami, chess, boggle, mancala, and producing materials for the World Wide Web. The activities are arranged so that there are several types assigned to each room in a tabletop or paper-drawn maze.

Games are not played bare-handed, however. "Task cards" or "adventure guides" accompany each game or activity, to help participants get started, to specify expected achievements, and to provide evidence necessary for obtaining credentials as an expert. Task cards are developed by adults who look for ways to highlight and combine the educational and playful moments embedded in an activity or game proposed for inclusion in the maze. Researchers, students, or site coordinators play the game and identify opportunities that invite children to reflect, think strategically, cooperate with someone more or less skilled, and document their experiences in writing.

The task cards provide a variety of obligations to write to someone in the Fifth Dimension (the Wizard, or another child), to look up information in an encyclopedia, or to teach someone else what has been learned. Task cards are developed at "beginner," "good," and "expert" levels. Each level of play requires a combination of choice, chance, and consequences.

A Wizard

There is a "real make-believe" bigendered Fifth Dimension Wizard who is alleged to have created the Fifth Dimension. S/he lives in the Internet, writes to the children, chats with them via modem, and acts as their patron. The Wizard, (names for these totemic electronic entities vary) has a home page, and helps the children gain access to the World Wide Web, where they too have a home page that displays their creative work. Each Fifth Dimension has special ceremonies (e.g. birthdays for the Wizard) that promote interaction with other Fifth Dimension sites in other locales around the country and the world.

The Wizard is an important mediating force in the Fifth Dimension, giving both children and adults someone to appeal to when help is needed.

The children

Children typically visit a Fifth Dimension on a drop-in basis. Some children spend four to six hours per week of their after-school time participating in the Fifth Dimension, while others may only come once a week for a few hours. Opportunities and constraints vary across locations, seasons, populations and sites. Girls outnumber boys in some Fifth Dimensions even where larger setting activities are dominated by boys. In other places, boys are in the majority. While ages six to twelve are dominant in most Fifth Dimensions, the systems tend to include preschoolers and high schoolers as they grow.

At some locations, adults expect the children to participate regularly in the Fifth Dimension and arrange for them to do so, while at other sites children are free to choose if and for how long to participate, with homework, basketball, and reading as some of their alternatives. Many children enter the Fifth Dimension directly after school or homework sessions, and remain there until their parents or school transportation services take them home.

A site coordinator

In our model system, there is a "site coordinator" who greets the children and supervises the flow of activity in the room. This person is trained to recognize and support the pedagogical ideals and curricular materials that mark the Fifth Dimension as "different"—as a different way for kids to use computers, as a different way for adults and children to interact with each other. The site coordinator monitors the balance of education and play in interactions between children and undergraduates.

A site coordinator may be employed by the community institution, and may have taken university courses that support the Fifth Dimension, but this not the case everywhere. Arrangements for funding the site coordinator position vary—sometimes the partner university or college provides research or outreach funds that cover the salary to help grow a Fifth Dimension in a setting with modest resources. In other cases, site coordinator salaries can be absorbed into the operating budget of a club or school.

The undergraduates

In addition to the presence of computer games and a mysterious Wizard who writes to them and pays attention to their progress through

the maze, the chief draw for the children is the presence of university and college students in the Fifth Dimension who are there to learn and play with them. In our model, an important feature of the Fifth Dimension is that the participating college students are enrolled in an intensive research methods course focused on fieldwork in the community and on the confrontation of theory with practice.

At the University of California, San Diego, the university course associated with student participation is an intensive, six-unit class that emphasizes deep understanding of basic developmental principles, familiarity with the use of new information technologies for organizing learning, and methods for collecting and analyzing the processes that undergraduates help to put into play. Students are treated as, and act as, junior researchers. They write detailed clinical field notes after each session with the children. These notes are read and critiqued by the professors and by their teaching assistants.

The class meets twice weekly to discuss assigned readings and to evaluate the scholarly articles they read at the university for their fit with their own field experiences with the children. Students also discuss their work with students in other Fifth Dimension-linked courses in the UC system through the UC system's Distance Learning network. Finally, the undergraduates write papers tracing the development of individual children, the relative effectiveness of different games, differences in the ways in which boys and girls participate in the activities, or other developmental topics.

Superseding binaries

In this "play world" we try to organize opportunities for practical experience in transcending "business as usual" on as many levels as possible. Giroux's notion of exploring alternative subject positions through imagination is a mainstay of the Fifth Dimension. Success in the Fifth Dimension requires children and adults to cooperate and to use multiple dimensions of their life experience and talents in their journey through the maze.

It is difficult for everyday and arbitrary forms of hierarchy, exclusion, and segregation to be effective in such a setting. We see this feature as an embodiment of Giroux's pointer toward ethics in research and pedagogy. An explicit exploration of "difference" is made possible through our blending of learning and play, the real and the imaginary.

Having characterized the Fifth Dimension prototype, we can return to the discussion of the major binaries that we deal with in our work and how we attempt to supersede them: intellectual work vs. play, university vs. community, in-school vs. after-school, researcher vs. subject, theory vs. practice, teaching vs. research, male vs. female, white vs. nonwhite, and monolingualism vs. bilingualism.

University vs. community. A boundary routinely exists between the priorities and motives of academic researchers and those of community members who participate in activities of interest to researchers and to other university people. The Fifth Dimension as a joint activity is constructed on the border of in-school (research and educational activity) and after-school (recreation and community well-being), requiring members of both "worlds" to invest in its survival and regular repair.

Consider, for example, the implications of a concept of university "outreach" that implies that one side exerts effort—traffic flows from the entity that possesses "resources" (the university) to a distant other entity (the underserved), which has a "need." Our understanding of outreach is that it is a process of bridge construction, requiring the alignment of university and community resources and interests. Traffic must flow both ways across the bridge for it to be a relevant structure in the long term.

In-school vs. after-school. A related example of how the Fifth Dimension model promotes dissolution of binaries concerns its origins and its present status. The model was originally designed to offer not merely after-school, but nonschool activity. The idea was to provide children (especially those who weren't succeeding in school) with resources and forms of guidance that evolved from a critique of school practices like tracking students, teaching by drill, and testing for memorization. Evidence of this critique is the Fifth Dimension's emphasis on nonauthoritarian older peers; culturally relevant modes of instruction; multiple modes and goals for problem solving, and the mix of friendship, play, and intellectual work. By 1994, Fifth Dimension adaptations had taken hold on school grounds after-school, and in some cases in classrooms during the school day, blurring the school/nonschool boundary.

Researcher vs. subject. The binary "researcher vs. subject" is destabilized as Fifth Dimension researchers position themselves as members of the subject population—actors in the systems we grow and study. Theoretical and practical academic instruction are blended as we simultaneously deal with implementing the activity (staffing, organizing, and getting technical equipment in place) and developing theoretical tools to analyze data gathered from the sites, courses, meetings, and e-mail exchanges. In many cases, Fifth Dimension implementers have gone on to conduct evaluations of the project, and in some cases, people who entered the project as outside evaluators have gone on to start Fifth Dimension adaptations in their own communities.

Stereotypes: gender, ethnicity, and language use. Another set of constraining dualisms that reinforce and coconstruct each other are those associated with gender and ethnic stereotypes. We undermine the logic of stereotypes by modeling anti-essentialism through the behavior of

the electronic entity that each site develops as its patron, mascot, and correspondent. The entity assigned to each Fifth Dimension is male and female, ageless, and often multilingual. Dubbed El Maga, the Wizard, the Wizardess, Proteo, Golem, Volshebnik, Zarfen, and so forth, the "entity" sends provocations, observations, and challenges to support participants' reflections on their own role conflicts and assumptions about sex, gender, race, and ethnicity in working with, and observing, diverse groups of children and adults in community settings.

For the citizenry of the Fifth Dimension, appropriate behavior for children and adults is not cast in terms of sex roles, sex-appropriate knowledge, or a single preferred language for expression. The use of ethnicity labels as markers of "otherness" is challenged by intersite activities, the omnipresence of bilingual artifacts, and cocelebration of special holidays across sites.

Undergraduates in the practicum courses study peer group and cross-age power relations and the politics of representation in their coursework. They compare their experiences in the Fifth Dimension with the literature on sex-roles and gender, Attention Deficit and Hyperactivity Disorder, minority achievement, bilingual education, and other issues in human development. This process often prompts students to confront their own investments in gender and language biases, providing occasions to reflect on their own experiences of empowerment and disempowerment in technology, language use, and gender relations.

At the University of California, San Diego, women outnumber men among the students taking the practicum courses. Our students frequently report that participating in the Fifth Dimension occasioned their first experiences of using computers or their first opportunities to use computers for something other than data entry or word processing. Playing games with children, moving between platforms, authoring fieldnotes, sending and reading e-mail, using the World Wide Web, and trouble-shooting involve a range of easy and difficult tasks and frequent role shifts from teaching to learning. This flexibility in combination with the ethos of exploration and play in the Fifth Dimension helps to hold the interest of both self-professed "computerphobes" and experienced users.

Undergraduate fieldnotes reveal moments of fruitful discoveries and anxieties around language issues arising from participating in bilingual and bicultural sites, such as La Clase Magica.[2] Monolingual and bilingual participants are encouraged to explore a realm where playing, speaking the language spoken at home, speaking the language spoken at school, and intellectual achievements co-occur. It is useful for the undergraduates and the children to experience an environment where first and second languages are drawn upon to solve different kinds of problems.

Ageism and the equation of "older" with "more expert" are also undermined, because adults are enjoined to have fun while being educators and more expert children are all around. Expertise is situated, distributed, and jointly mediated. This is possible because authority and discipline is distributed in the Fifth Dimension (through the Wizard, the site coordinator, the constitution, the maze, etc.). The rules of engagement and roles (learner, teacher, and helper) are less rigid than those encountered in settings that position adults as *de facto* authorities and children as receptacles for instruction.

By participating in a Fifth Dimension play world, children and adults discover that seniority and authority in this realm are a function of familiarity with its artifacts and processes. Young people learn to teach older newcomers. Visiting researchers accustomed to observing adult interactions with children in traditional classrooms frequently remark on the contrasting ease with which adults interact with children in the Fifth Dimension.

Cycles of Reflective Practice: Implementing the Methodology

The strategy we refer to as "positive critical theory" requires the embodiment of theory in the normal institutional/social life of a community. Not just any community will do.

The ideal solution has been to ground our activities in a "hometown" where we are both citizens and actors. As actors, we work at the university where we create and try to sustain forms of activity which, according to our academic theories are "good for children." As citizens, we walk our dogs in the morning, support the library, participate in community activities in our respective neighborhoods, participate in election time discussions with neighbors, and complain about the way the city is run. Consequently, we occupy multiple subject positions with respect to the key people and institutions (community clubs and universities) we are seeking to connect.

The researchers' self-consciousness of their multiple positions allows for amplification of feedback on all the ways in which, having positively "prescribed" reality, our theory of the processes involved underrepresented reality to an embarrassing degree. That is, we test theory in practices located in the criss-cross of values and culture of the researchers' own communities. Those communities will decide the value of our efforts.

How does such an intervention get underway?

Phase one: Identify problematic areas

First, researchers identify problematic areas in their own community. The issue should be one for which the researcher believes she has relevant knowledge. The researcher is a participant in fashioning existence proofs that the requisite activity to address the issue can be assembled.

In our analyses of institutional forces that constrain individual and social development, and in an effort to build sustainable alternatives, we often locate the rationale for our work at the crossroads of three local concerns.

Pressure on children and parents. There is a shortage of places for a majority of children to go after school that provide for their immediate safety and for their ability to cultivate opportunities to engage in learning for a variety of purposes. There are even fewer places where they might interact with other children and adults around information technologies in ways that are intellectually and affectively beneficial. There is a contradiction between a household need for two incomes and provision of childcare at home.

Concern about ethnic conflict and academic achievement. There is a growing split between resources and needs that communities have and what the public sector, the private sector, and tax base provide for and demand of their inhabitants. While watching public resources dwindle, members of ethnic minorities and low-income groups increasingly view the institutional norms and missions of colleges and universities as out of touch with their day-to-day lives.

For example, parents from communities where achieving a college education is the exception and not the rule continue to sacrifice and plan for "college," hoping that higher education will make a difference for someone in their family. The idea that colleges and universities might form relationships and presences within community institutions is rarely expressed. Institutions of higher education are typically seen as places for their children to escape to, not as local partners.

Pressure on colleges and universities. Universities and colleges are increasingly seen by their local communities as inaccessible, indifferent, and out of touch with the general public. At the same time, universities are being pressured to address themselves to a constituency far more diverse than they have historically been willing or able to accommodate. There is also increased demand from undergraduate students and from their prospective employers for forms of higher education that include opportunities to combine, not merely to decide between, learning associated with theory and learning through practice.

For example, on the one hand, programs in education and human development are criticized for promoting idealistic theories that don't address the daily goals and problems of exhausted parents, teachers, and social workers. The general public believes that degree inflation is limiting their access to good-paying jobs, while colleges become wealthy and self-serving "degree mills" that matriculate students with no experience of putting theory into practice in the "real world." These institutions are also blamed for producing radicalized students with few skills valued by conservative employers.

On the other hand, faculty members and researchers in programs and departments that offer "fieldwork" or require practical tests of theory are at often at odds with colleagues and administrators who devalue "applied" work in communities, questioning the research value and publication rates of studies coming from these labor intensive activities.

These and other local problems require the first phase of research to involve extensive participant observation, interviews, document collection, and use of ethnographic research to map such barriers. The goal is to uncover, understand, and historicize these types of conflicts as they play out in local settings.

Phase two: Joint activity

In the second phase, the researcher enters into joint activity with community members to create an alternative set of practices that constitute an hypothesis about changes needed to overcome the problem that has brought them together. In our case, it is a nexus of problems focused on children's experiences in the after-school hours.

The Fifth Dimension serves as the occasion for collaboration between universities, colleges, community centers, and schools in several U.S. cities and towns. Our research design picks up where Stuckey concludes—that successful literacy programs ought to focus on communities as a locus of sustainability.

Stuckey indicts the "literacy profession" for its failure to see community members as having resources to offer, defining the poor as always in need of ideas and management by the middle class. By entering into relationships of genuine exchange and cooperation between community and university members, we have been able to organize and sustain opportunities for learning that flow bidirectionally across generational, linguistic, gender, and ethnic and institutional lines.

As designers and implementers of educational interventions, we struggle to recognize and redirect counterproductive patterns in the process of coordinating community and university agendas. It is difficult but worthwhile to try to normalize circumstances and opportunities for children and adults to make common cause with people they ordinarily avoid.

A central premise of our network of community and university partnerships is that by joining together to create a Fifth Dimension, the parties can do together something that they cannot easily do on their own. Stuckey's work resonates with our interest in learning from how community members define their own diverse resources and needs. In Bryson and De Castell's work, we recognize familiar experiences of going against the grain of business as usual. Their work also

bespeaks the wisdom of distributing the work of documenting and interpreting sources of resistance to, and acceptance of, challenges to the status quo.

The process of creating new practices is invariably arduous, and requires careful attention to the establishment of trust, reciprocity, a commitment to mutual understanding, and a willingness to repair misunderstanding. People agree at the outset that they are in it for the long term.

Phase three: Evaluation

The third phase involves evaluation of two aspects of the second phase: Were the hypothesized alternative practices in fact created and if so, did the hypothesized changes in the problem situation come about? If the researcher/community team fails to create the needed new forms of practice, the research recycles at this point, requiring revisions of the theory of activity creation. If the new forms of activity are created, but do not have the desired effect, the research recycles to determine what was wrong with the hypothesized theory in the first place.

Assuming a new Fifth Dimension adaptation is underway, we have several ways of evaluating the effectiveness of its constituent parts that are respectful of diversity across adaptations.

Person-computer interaction. It is ideal if children and adults are using software and hardware in ways that allow them to reflect critically on their activities, to work cooperatively, and to communicate their problem-solving strategies to others. The key mediating structures in Fifth Dimension adaptations are provided by task cards and interaction with undergraduates.

Fifth Dimension site. We expect a Fifth Dimension to be a place where rules and roles of learning and play are organized differently than in the surrounding context, and where this difference is valued by children and adults. Despite differences across Fifth Dimensions around the country and in diverse institutions, universal among them is the creation of a culture of collaborative learning which, mixed as it is with play, is a pleasure for all of its participants, young and old. It is this mixture that attracts children to the Fifth Dimension and provides it with the extra enrichment needed to convert "playing computer games" into something with a good deal more social and psychological potential.

Undergraduate instruction. Fifth Dimension-linked undergraduate courses are labor and time intensive, yet across the system, undergraduate and graduate student evaluations of the courses are consistently positive. Undergraduates frequently comment in their fieldnote reflections on the significance and relevance of course issues and requirements to their other educational and life experiences.

School effects. We have consistent evidence from sites where we can obtain data from treatment and control groups that participation in the Fifth Dimension positively influences children's development of academic skills (mathematics, reading, writing, and computer use) and social competence (Blanton, Moorman Hayes, & Warner, 1997; Schustack 1997). There is also evidence that schools themselves change as a consequence of hosting Fifth Dimensions (Underwood & Taub, 1998).

Funds/publicity. We pay special attention to how community leaders and participants represent and demonstrate their interest in our university-community institution partnership. For example, there are three sites close to each other in neighborhoods north of our university. Area community leaders (parents, Head Start staff, and club program directors) have declared themselves a "Coalition for Community Education" devoted to raising funds and community awareness to support the continuation of Fifth Dimension after-school initiatives.

This coalition has been successful in attracting significant financial support. Meanwhile, local philanthropists, university administrators, and politicians have funded, endorsed, and commended the academic and community directors of Fifth Dimension adaptations throughout the state.

Dissemination. Several dozen scholarly articles have been published about the efficacy of the Fifth Dimension approach to sustainable after-school programs from data gathered by the Fifth Dimension network. Print and television media outlets have featured the Fifth Dimension as a model after-school program. Also, a half hour documentary has been made about the local history and origins of the Fifth Dimension model and an hour-long program about the statewide spread of Fifth Dimensions aired in the fall of 1998.

Phase four: Dealing with failure

Phase four represents the "hereafter" of ordinary interventionist research. Insofar as they are successful, Fifth Dimensions don't go away; they continue to exist in dynamic relations with their institutional and community environments. However, the birth and growth of a Fifth Dimension does not confer immortality.

The research cycle of utopian methodology ends with social criticism: we address the conditions that make an ostensible social good impossible to maintain. It is a crucial part of our work to study the process of failure of Fifth Dimension adaptations to sustain themselves, and to document the ways in which institutions extrude them over time through "business as usual."

As Adorno said, the best intentions of individuals are usually no match for the existing institutional barriers to cooperation and access.

For over a decade, we have documented some of the same intractable, cynical, and divisive processes at work that Stuckey associates with the failure of mainstream literacy programs.

Diversity is somewhere else. In one such case, failure came within two years of start-up because the mission of a Teacher's College was delimited to the classroom. Even as the leaders of this institution viewed themselves as having a strong record in community service and outreach, preservice teachers and their mentors were doubtful that something pedagogically complementary or significant (much less transformative) could come from rearranging their system to put college personnel and students in the local community in the after-school hours. A practicum course for this Fifth Dimension was approved for only one semester per year. Ultimately, this college preserved its customary approach to "diversity" and cross-cultural education. Its leaders seemed less interested in the ethnic and linguistic diversity of neighborhoods surrounding the campus than they were with encouraging an appreciation of diversity through missionary work oversees in Asian countries.

Rank and risk. Sometimes a would-be implementer is too junior in academic status to bend rules or to reinterpret their institution's mission statement.

Conflict between innovation and business as usual can be seen, for example, in the waves caused when a junior person pushes for a course-load reduction or for a change in a course description to make a "practicum" course intensive enough for significant community involvement and not for short-term "tourism." The frustration and career hazards for the junior academic who takes on this kind of work in an indifferent or hostile academic setting are significant.

As daunting as this prospect is at the start of a career, it is no less damaging to the senior scholar who must grapple with the fear that years of time and effort can be erased in a matter of months when bureaucracies are left to run their course.

This issue is similar to that faced by Stuckey's literacy scut workers who take on exhausting challenges at one or the other end of the labor market, moving up, moving on, or burning out more often than they stay with the work. In some academic circles, resources and legitimacy can be marshaled when an implementer points to the larger network of Fifth Dimension colleagues participating in research and implementation throughout the country, but at other times this larger context has no resonance.

Finally, the leading cause of death for Fifth Dimension programs is that an ostensibly enthusiastic institution cannot provide material commitments to support the desired form of activity when the initial funding is gone. This major step in sustainability is the hope and the failure of many university and community partnerships.

Each case of failure is frustrating, but is extremely valuable for our research program.

Informing Critical Theory

There are elements of our work that we think suggest possibilities for critical theorists interested in reforming educational practice and policy. These elements include insights gleaned from participating in a distributed consortium of implementers and evaluators of the Fifth Dimension projects as well as findings from evaluators about social and intellectual benefits of participation in the Fifth Dimension and the importance of local variability in Fifth Dimension cultures.

The Consortium

In some cases, Fifth Dimension implementers are evaluators of data from their own site and from other sites. Having many roles in the project helps cultivate appreciation for the diverse perspectives and backgrounds of colleagues. This kind of arrangement starts from the opinion that collaboration and interdisciplinarity are good, to risky practices such as confronting traditional professional biases (toward individual scholarship and disciplinary chauvinism) by taking risks through academic collaboration.

As a national and international consortium, we create and exchange resources and data as a matter of necessity. Learning to participate in this network of opportunity and responsibility requires cooperation from members of different statuses and interests over time. Conversations on the "x-mellon" listserve[3], joint production of annual reports, and face-to-face meetings expose consortium members to a variety of possible questions about units and levels of analysis for looking at data. With a data inventory that ranges from Cloze test scores to painstakingly coded videotapes of undergraduate/child computer interaction, the choices of what to look at are daunting. Members of the consortium often stay close to their initial issues and methods, but are ever aware of alternative interpretations of their work and different uses for their data. This experience of nonhierarchical research interest, mutual visibility, and self-conscious choices in research practices are features we think contribute to critical theory.

The organization of learning in Fifth Dimension Sites

Our colleagues from the Institute for Research on Learning (IRL), Ito, McDermott, and Greeno (1998), have evaluated Fifth Dimension activities from the standpoint of how opportunities for learning are organized differently than they are in schools. The critical theory

reviewed in this article offers examples of dysfunctional and damaging processes and dichotomies in education systems, calling for alternative arrangements. Our colleagues from the IRL were charged with looking at the Fifth Dimension to see if and how it embodied an effective alternative to formal learning environments.

They found that the Fifth Dimension mediates the social and cultural space between entertainment and education, helping kids to engage in recreational and voluntary activity while engaging in practices that foster intellectual mastery. They also found that the Fifth Dimension allows people of varying ages, seniorities, and backgrounds to take turns being expert and beginner with respect to different tasks. Finally, they observed that social relations are negotiated between players in the system, with kids and adults both displaying knowledge and jockeying for position. In each case, the Fifth Dimension strategy offers something other than the either/or setup that creates haves and have-nots.

Language and culture in Fifth Dimensions

Another way in which our work contributes to critical theorizing aimed at educational policy and reform comes from the findings of another evaluation team, interested in the use of language and culture in Fifth Dimensions. In an era when English-only legislation and assaults on affirmative action are sweeping the nation, it is valuable to be informed about the promising work of our colleagues Gallego, Rueda and Moll (1997, 1998). They used Language Assessment Scales and the Ace Reporter computer game to document children's maintenance of Spanish language skills and children's increased ability in the use of English language skills through participation in the Fifth Dimension.

These researchers also discovered through comparative analysis of the participation structures of several sites that a common set of Fifth Dimension characteristics is shared among all sites, but that local adaptations characterize each site's cultural "personality." Definitions of success and failure are quite different in the Fifth Dimension play world. There are many ways to succeed and fail in the Fifth Dimension, as it offers many different incentives to participate, "absorbs" failure, and makes opportunities for "success" widely available.

Site enculturation is an initiating ritual as well as a continual and renewable process requiring knowledge of constant local adaptations. The children's community or native language (English, or Spanish) does not determine the language used during their participation in the Fifth Dimension. The language of the home and the language of intellectual achievement are not set apart from one another.

These are only a few of the insights we have gleaned so far. Our utopian methodology of putting theory into practice, and developing practice into fine-tuned symbiosis with local rhythms of institutional life *and death,* gives us insight into principles of learning in addition to helping us guide efforts toward strategic propagation of the model. The more these systems take root and grow in different settings, the more opportunity we have to see what difference they can make, for whom under what conditions and for how long. In such varied climates, we can only sustain these model systems if we regularly reflect on the signs of trouble and likely paths to success as steering points for the larger system.

Notes

1. Variations on this "normative description" appear in Cole (1996) and in Brown and Cole's chapter in Underwood and Taub (1998).

2. La Clase Magica (the Magic Class) is the name that parents and children gave the bilingual/bicultural adaptation of the Fifth Dimension model that was started by Olga Vasquez (Professor of Communication, University of California at San Diego) in the Catholic mission St. Leo's in a neighborhood called Eden Gardens near Solana Beach, CA.

3. The "x-mellon" listserve is an active bulletin board and archive of over eight thousand messages (and counting) exchanged among researchers and implementers of the model systems in the Distributed Literacy Consortium. X-mellon stands for "from Mellon," meaning A.W. Mellon Foundation, one of the two major funders of the initial work in the 1990s (the other being Russell Sage Foundation). The Laboratory of Comparative Human Cognition (LCHC) has many listserves and discussion groups currently in operation, with titles that begin with "x", such as xlchc, and xmca, for the list that is associated with issues of interest to the readers of the journal *Mind Culture and Activity*.

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