Spiders, Firesouls, and Little Fingers: Necessary Magic in University–Community Collaboration

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On the basis of extensive research on university–community collaborative education projects in southern California and southern Sweden, this article proposes two roles and a research strategy and approach as elements essential to sustained collaboration. Recognition and fulfillment of the roles of "spider" and "firesoul," while "leading with the little finger," contribute to educational anthropology by linking qualitative and ethnographic research with university and community learning, practice, and service in a process of involvement. [university–community collaboration, educational research and methodology, volunteer workers in education, communication]

In the past decade, legislatures and university regents have actively advocated and supported university–community collaboration (Brulin 1998; Regents of California 1995). As collaborative partnerships have proliferated, the challenges involved in their development and sustainability have emerged as both scholarly and practical concerns (Corrigan 2000; Sanders 2003). On the basis of our extensive and geographically distributed research on local university–community linkages built around an informal education model, we propose two roles and a research strategy and approach to collaboration as elements essential to building sustained university–community educational partnerships. We describe these roles and the approach as involving "magic" because we found them to be the nearly invisible glue that holds the partnerships together while allowing them to change and expand in response to changing contexts.

The "spider" threads a web of understanding between diverse partners by performing communicative work. The "firesoul" brings energy to the partnership's endeavors. The research strategy and approach to collaboration we call "leading with the little finger" engages university and community actors in reciprocal exchange of expertise and service. All three are elements that constitute a qualitative and ethnographic research process of involvement in coordinated but diverse institutional cultures, practices, and goals.

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The programs we have developed and observed are based on a shared model, the Fifth Dimension (5D). Developed in the 1980s by Cole and other researchers at the Laboratory of Comparative Human Cognition, University of California, San Diego, the name "Fifth Dimension" (Cole 1996) refers to the fact that education and learning go beyond the three dimensions of physical space and the fourth dimension of time, into the dimension of meaning. The 5D is an informal, collaborative teaching and learning model directed at making learning meaningful.

The 5D originated in research on the role of culture in child and human development. The original idea was to create a learning environment rich in artifacts in which young learners, ages six to 12, who were not successful in school could experience success. Each 5D is a partnership between a university or college and a community institution. The university provides supervised students to the community as labor as well as programming that mixes play with collaborative exploratory learning. The community institution provides space, equipment, and supervision of activities as well as a teaching, learning, and research environment for college students and researchers.

According to Cole (1996), the 5D model shares similarities with Brown's (1992) concept of a design experiment. As in the case of Brown's design experiments, 5Ds represent an "attempt to engineer innovative educational environments and simultaneously conduct experimental studies of those innovations" (Brown 1992:143). Following Vygotsky (1978), to be valid, those experimental studies are best made outside the laboratory, in real-life settings. The 5Ds differ from Brown's design experiments in being locally codesigned while using a shared open structure that allows for different program goals, rules, roles, and tools across settings and across time. The 5D adaptations are expected to evolve as the participants and the local contexts change.

Although each adaptation of the 5D model is unique, there are underlying concepts derived from the cultural psychology of Vygotsky and, later, Cole that inform the 5D's approach to teaching and learning. All 5D programs are governed by three principles: (1) to be sustained, educational innovations require an innovative context; (2) barring severe biological impediments, all children can learn with guidance; and (3) local cultures (both institutional and those of the individuals participating) and mainstream academic culture can be accommodated in productive social learning contexts. Educational partnerships based on the 5D model are operated in community settings after school and in school by more than 50 university–community collaboratives across the United States and in Australia, Brazil, Denmark, Finland, Mexico, Russia, Spain, and Sweden. Impacts of 5D partnerships include enhanced in- and after-school programming for community organizations, enhanced learning

for children and adults, and cooperative research that has had policy implications.[1]

Participants in 5D projects often have different social, ethnic, economic, and cultural backgrounds as well as different motivations and goals for their participation. All adult participants in 5Ds are interested in child welfare and education at some level, but the diverse work practices and institutions that engage adult participants as well as their diverse life experiences present both potential resources and barriers to building and sustaining partnerships. Our work with multiple 5D projects since 1996 has provided us with ample evidence of barriers to university–community collaboration, including miscommunication, conflicting goals, unreliable finances, and lack of time and human resources. We also have evidence of sustained and expanding collaborations. This evidence generated the research question that guided the present study: What factors or elements contribute to partnerships' ability to overcome barriers to sustained, productive collaboration?

In the 5D project in southern California, several community sites are associated with one university. Cooperative qualitative research conducted at these sites included collecting, archiving, and analyzing data from field notes, participant observations, reports, e-mail exchanges, interviews, and documents. Changes over time were plotted on matrices similar to the time-ordered matrices described by Miles and Huberman (1994) to detect sequences of events that correlated with significant change. Multiple forms of data from these sequences then were analyzed for patterns and emergent themes. On the basis of this approach, (Cole 2001) suggests that "dynamism," or the ability of the collaboratively run projects to respond to both the diverse cultures represented and the changing contexts in which the sites operated, played a role in sustainability. A similar analysis of change over time (Nocon 2000) suggests that successful collaborations were supported by the attentive presence of individuals who traveled between the partner institutions, listened to diverse partner voices, and translated the diverse goals, needs, and perspectives for other members of the partnerships. This research points to the importance of physical presence in the institutional spaces linked by the partnership. Another element that emerged from analysis of the dynamics of the multiple sites over time was the positive effect of the presence of certain individuals who provided significant amounts of high quality, but unpaid, labor to the sites (Nocon 2000).

Beginning in 1997, teams conducted research in the new 5Ds that had opened in association with one university in southern Sweden. Several researchers used observation, participant-observation, and videotapes as data for microanalysis of children's play and learning at computers. In 1998, Nilsson (2002) began systematic use of ethnographic methods while testing the 5D design as a tool for change in a local school partner's context and practice. In the process of developing a school-based

5D, collecting data on the site and the school, and making the data available to the school partners as a tool for change, Nilsson developed an approach she calls "emergent action ethnography." In this approach, which shares some features of the participatory inquiry of Heron and Reason (1997), ethnography is used to develop understanding of the actions of participants as they relate to contexts and practices in which actions are coproduced. Action research in this approach represents research with potential for collaborative development of the practice as well as new knowledge. The approach led to codevelopment of coordinated practices based on commitment to long-term mutual involvement and emergent shared understanding among the collaborating partners.

Method

Cole has been working with the southern California 5Ds since the early 1980s. Nocon began work with these sites in 1995. Nilsson made an extended visit to the southern California sites and university in 1996. In 1997, Nilsson and colleagues developed and began working with sites in southern Sweden. In the ensuing years, Nocon and Nilsson spent several weeks per year working with the Swedish and California projects, respectively. Cole made limited trips to visit the Swedish project and all three of us visited other 5Ds that were running nationally and internationally. Exchange of information across the growing network of national and international sites was supported by a listserver, videoconferences, and professional meetings.

We selected the sites for this study, all in southern California and in southern Sweden, on the basis of a "combination or mixed" strategy that combined critical study of confirming and disconfirming cases and convenience (Miles and Huberman 1994). The earlier work in southern California and in southern Sweden had been conducted as separate system case studies. From those case studies categories emerged: in southern California, the need for a role that provided attentive presence, listening, and translation as well as evidence of the positive effects of persons who went above and beyond their paid roles in the partnerships; in southern Sweden, the productivity of an approach that encouraged mutual learning, emergent understandings, and codevelopment of the partnership. Because these emergent categories represented elements that appeared to contribute to sustainability of productive collaborations, we wished to elaborate on our initial analyses by seeking exceptions and looking for variations in comparative cases. Cross-case analysis of the two system case studies would permit logical generalization of the elaborated categories. Conducting this cross-case analysis and further data collection on two continents was made convenient by ongoing exchange of data and researchers.

Although the two 5D systems had similarities, there were differences that would facilitate comparisons. In addition to the transcontinental

geographic and cultural differences, the two systems were associated with very different universities and different academic programs. The 5Ds in southern California were associated with the departments of psychology and communication and a human development program at a research university that ran regular practicum classes. Students combined three hours of site time with three hours of class time in studying development theory. In Sweden, the 5Ds were associated with a small technical university and a program that focused on the sociology of work and computer use. Only one class per academic year sent students to the sites. The students had little preparation in child development and were committed to approximately 10 hours of flexible site time, versus 30 hours in southern California. Other differences included the goals of the sites and the demographics of the participants. In southern California, the sites focused on training researchers and providing children with programming to enhance problem solving skills, native language and English-as-a-second-language, and computing skills. In Sweden, the sites focused on training software designers and mediating change in school practice while enhancing children's computing skills. The participants in southern California were ethnically diverse and lived in a large urban center. The participants in southern Sweden were far less diverse (although there were both immigrant and refugee participants) and lived in a small city in a rural province. In spite of these differences, the two systems shared the 5D model as a frame and used similar artifacts in similar participation frameworks, which engaged more experienced learners with less experienced learners in collaborative play and exploratory learning.

To conduct our cross-case study of these two systems, we engaged in co-operative inquiry as described by Reason (1988) and Maughan and Reason (2001). We agreed on the focus of our joint analysis of data from earlier studies. We triangulated that data with new observations and interviews conducted in the comparative systems. As participant-observers in related projects, we reflected critically on our biases and roles as cosubjects, and we continued to be fully engaged in what were at once local and global projects. In addition, we tested our emerging understandings by exposing them to others working with the international 5Ds, seeking their constructive criticism and comments on the relevance of our emergent categories to their work.

Sites

Our southern California sites in this study include the original 5D, which has operated in a Kids Club since 1987. Partners in this site include the local and regional Kids Club, an elementary school, and a junior high school. In 1990, a Spanish–English bilingual 5D called La Clase Mágica opened in a local church (Vásquez 2003). Community partners in La Clase Mágica include an active parents group, the local Catholic parish,

local and regional units of a federal preschool program for children from low-income households, and the regional Kids Club. In 1996, the multilingual Magical Dimension opened in a local elementary school. Community partners included the school, the local elementary school district, and the local Kids Club. When the Magical Dimension closed in 1999 because of the school's need to use the computer lab in which it was housed, the elementary school, the school district, and the Kids Club continued their collaboration by jointly developing a homework club. The partners have recently developed a hybrid homework club–5D that has returned to the school.

The university partner in the three programs described above is an interdisciplinary social science research laboratory that brings together scholars from different departments at the university as well as visiting scholars from around the world. Undergraduate and graduate students from classes taught by the laboratory's researchers participate at the program sites as part of a practicum course in human development or independent studies and theses.

In 1996, representatives of the programs, along with researchers and community volunteers, formed the Coalition for Community Education to jointly seek funding to sustain the three programs. The Coalition succeeded in helping to sustain the programs first by securing donations and grants, then through the community partners' creation of budgetary line-items in their own institutional budgets that could be used for site supplies and salaries.

During 1996, researchers from a program called People, Computers, and Work at a small technical university in southern Sweden adapted the 5D model to their local context. The goal was to expand undergraduate education about learning and computers through field research and community outreach. The community partners included the Learning Lab (an independent instructional technology training and development unit), the Infocenter Library at the university, and the local municipality. In January 1998, one of the Swedish researchers and staff from a local elementary school opened a 5D site at the school. In addition to the school, other partners included the local high school and the Learning Lab.

In all the partnerships described above, the university-based researchers asked the other parties to participate in codeveloping adaptations of the 5D model. The parties who would become the community partners had no explicit motivation for participation other than general interest in collaborating with their local universities. The university partners needed field sites for teaching, research, and outreach. Neither the university partners nor the community partners knew very much about the institutional cultures of the others. Consequently, the communicative processes involved in developing the programs included tolerating periods of adjustment, negotiating information exchange, negotiating schedules and differing priorities, organizing and reorganizing site operations, and ongoing problem solving.

Necessary Magic in University–Community Collaboration

Our cross-case analysis of data from our earlier studies as well as analysis of new data collected to test the generalizability of our emergent categories illustrated that the two roles that emerged from the southern California 5Ds were relevant to the collaboration process in the southern Sweden partnerships. Similarly, the research strategy and approach that produced sustained collaboration in Sweden was evident in the California partnerships. When these elements were present, the partnerships not only were sustained, they thrived. When the elements were missing, the partnerships struggled, some partners left, or partnerships disbanded. When we presented our findings to our colleagues working with 5D partnerships in Spain, Denmark, North Carolina, and northern California, they found our emergent elements of sustained collaborations to be both recognizable and relevant to their work. We believe these concepts are relevant to all who work with university–community collaboration and to the educational anthropologists who study these partnerships.

Spider

In addressing the challenges inherent in collaboration among diverse partners, Star and Strauss (1999) describe articulation work as getting things back "on track" in the face of the unanticipated contingencies. Schmidt and Simone's solution is the use of "coordination mechanisms" or specialized artifacts, "which, in the context of a set of conventions and proceedings, are instrumental in reducing the complexity of articulation work and in alleviating the need for ad hoc deliberation and negotiation" (1996:160–161). Although our experience suggests that the concepts of articulation work and coordination mechanisms are useful, we find them inadequate to describe the university–community collaborations we studied. Because of changing partners, changing funding, and numerous other contingencies, our systems were in a state of constant flux, or a perennial state of emergence. Consequently, there often was no "track" to get back on; rather, the "track" had to be codeveloped with a significant amount of deliberation and negotiation. Second, because of the diversity of our community partner agencies and the individuals that represented them, our projects required some individuals to spend significant amounts of time learning the social, and sometimes regional and national, languages of the partners. Prior to and then coincident with articulation and coordination work, these persons had to act as translators. We call the role these persons filled that of the "spider," who metaphorically travels the threads of a network, gathering information from the different points and acting to coordinate interaction or smooth functioning within the network. This person can be conceived as a facilitator of articulation, deliberation, negotiation, and coordination in the partnership. The following examples illustrate this need to which the spider role must respond.

At a California Coalition meeting problems arose with the social language of "research":

> [A non-university Coalition member] said that you had to watch out for [the university researcher], she documents everything and holds you to your word, which, by the way, was admirable. He said that he had run into [the researcher's] work in the past. Someone had shared some of her field notes with him and he was surprised at her comments. [The researcher] asked what and when. He could not give specifics. But, he did say that that had caused him to start bringing a tape recorder to the meetings. This exchange was good-natured. He was smiling and laughing as he spoke. I never did see a tape recorder. Then something came up about another Coalition member's activity pushing the Coalition to perform and she said, "Oh great, now I'll end up in someone's dissertation as 'that pushy woman.'"

On the basis of this and similar discussions, which we translated to mean that the community partners felt left out of the "research" conversation, the southern California researchers began to share research reports and selected (sometimes also edited) field notes with the community-based Coalition members on a regular basis. However, translation was again required. Students, and even well-meaning researchers, often wrote things in field notes or reports that were considered threatening or offensive to community partners. Ongoing translation tasks included instructing students to focus on actions and not personalities and helping community partners relate to a single field note as an isolated, subjective comment that did not speak to the researchers except as part of a potential trend. This focus on observed behaviors sometimes limited what students might write, but we discovered that they were adept at "back-channeling" (or sending in a different format) information that was sensitive but compelling. This very real issue surfaced regularly, as it did when a teacher working with one of the 5Ds became reasonably concerned that a comment in a researcher's field note, sent to the site listserver, might appear negative to her principal. The researchers also used backchanneling.

A different but related problem contributed an unanticipated solution to the field-note sensitivity issue. In southern California, the researchers' culture of communication, (high volumes of words in hard copy or e-mail and open communication, or "sharing" of field notes and reports) overwhelmed some community partners with the sheer volume of the material and its level of detail. With few exceptions, the community partners requested that the university stop sharing notes. What some researchers construed as a lack of interest in collaboration needed to be translated as the community partners not having the luxury of time to read volumes of "raw" data, because that was not within the purview of their jobs. Additionally, the community partners did not translate electronic communication as "presence," an element that community partners in both California and Sweden found essential to sustain the collaboration.

These complex needs for spider work most often fell to the researchers, who often found themselves ill equipped. The lack was not so much one of tools, however, as of time for what amounted to facilitated communication. Star and Strauss (1999) point out that communication work (spider work) is most often an unaccounted cost in project design. In the 5D work, funded primarily both in southern Sweden and southern California by grant monies, the role of a spider or project facilitator whose primary task is to be present and listening to potential and collaborating partners, is very difficult to fund. However, our experience suggests that it is absolutely necessary, a requirement most likely for the university partners who initiate the collaborations. This point is made abundantly clear by two California community partners:

> **H:** Y' know, what was missing in the translation . . . what's missing is the implementation, is the practitioners' understanding of these ideas and why they're important.
> **P:** And, if the person that runs the site doesn't understand it. How are they gonna orient anybody?

Firesouls

Based on a five-year study of adult-organized youth programs in three major and distant U.S. cities, McLaughlin identified "fire in the belly" as a key characteristic of successful leaders. She describes those with "fire in the belly" as people who were passionate about the young people they worked with and their shared community. Those with "fire in the belly" described their involvement in terms of a lifetime mission. "They subscribed to a view that although they may not be able to change the community, they could change people and touch youngsters' lives" (McLaughlin 1993:64).

In our work in Sweden and California, we have seen people who bring a special energy to their work with the 5D programs. They often fill the explicitly defined and funded role of site coordinator. These individuals share an orientation that is evident in a difference in the "sense" of the projects when they versus other capable but less engaged persons fill the same role. They not only bring a nebulous energy to the sites, but also observable changes in attendance and program content. Borrowing from a Swedish term, we call this role that of the "firesoul."

Earlier ethnographic work with the southern California programs led us to question why some individuals dedicated significant volunteer labor to the 5D projects. Interviews with ten of the most active participants suggested that, like McLaughlin's leaders with fire in the belly, some individuals shared a passion for the people they served in their work; similar to a lifetime mission, most expressed this as motivation to "do the right thing" or "change the world." Later interviews with nine of the most active 5D participants in southern Sweden led to a particularly interesting comparison. Two site coordinators, identified by their peers as

especially engaged, shared similar characteristics, in spite of key differences. The California site coordinator was from a minority group, spoke a minority language, and had only eight years of formal education. The Swedish site coordinator was a member of the dominant ethnolinguistic culture and a university student. What the women shared, however, was consistent with McLaughlin's characteristics of those with fire in the belly. Both were mothers with children who attended the 5D sites in which they worked. Both saw the programs as directly benefiting their children and other children in the community. Both were from the local community and were passionate about the positive impact that the programs and their work with the programs would have for their communities.

These two women regularly went far above and beyond their job descriptions and pay. In an interview (conducted and transcribed in Spanish, then translated by Nocon, who is bilingual and biliterate in Spanish and English), the California site coordinator said she was not paid for all her work, she was *mediopagada* (half paid). After laughing, she elaborated:

> If we are talking about how much we have received and how much we have given, well, I tell you, it is a polemical idea that they don't pay as much as we give, no? But, if it is in the area of learning for ourselves, or interaction, one thing—and I come to this as a mother, as a mama!—I can say that I have learned so much in the program in terms of learning about computers, learning about how to work with children, how to begin to make decisions so that in some way we can help support our children in the future, to make them known, because many times information doesn't come to our community. You could say that this is a very distant goal, but the goal comes from that, here, true? We are preparing ourselves for the future . . . in order to be able to help our children and youth.

About her perspective on her work:

> One doesn't take it as a job or an obligation . . . one takes it more . . . I, for me it is like a rest, truly, sometimes I'm here till 8:00 at night, the day flies by, the day flies by me I feel . . . I go home and I'm not tired.

The Swedish site coordinator, when asked her impressions of the 5D, said:

> I'm very interested also in the social aspect of it. How can children in, for instance [this town], take part in the Fifth Dimension? How can we offer them something? How can we offer something to their society? Sweden? [this town]? How can we have an effect upon the school? . . . Can we . . . invite teachers and different organizations so . . . not to force them to think like we, but so they can get ideas and inspiration from how we look at learning for example.

When asked specifically why she worked with the 5D, she responded:

> Because I'm very interested in it, and as I said before, I can see a future in it. I want it to be sustained.... I want it to stay. I want it to be here and to grow, both for social things and because I am interested in working further on it... to study learning and cooperation and so on.... I mean, I hope I can do that in the future, but... well, that's why I'm interested in it. It's a poison! I can't... It's a poison! I can't stop it! [laughter].

Their interviews suggest an orientation that brings these women to the 5D work and takes them beyond. For both, the orientation is directly associated with their communities. This is also the case with two Swedish firesouls, without whom the school-based 5D would not be running. Both of these individuals were teachers, and at different times, vice principals at the school. Both did significant liaison work with the teachers at the school to encourage them to participate in the program and to have their students participate. Both spent long hours codeveloping the program design and materials. One of these individuals was bought out of 50 percent of her teaching obligation by the university to take on the role of researcher. She brought equal enthusiasm to that role, fulfilling both the roles of firesoul and spider.

All four firesouls described here mixed their work with volunteer labor in a manner that allowed them to bring special energy to the programs in which they participated. In fulfilling the role of the firesoul, these persons increased numbers of site participants, developed new materials and activities, and contributed directly to the development of new 5Ds.

Leading with the Little Finger

In spite of the researchers' assumptions of peer or near-peer status and exchange of expertise, the onus of gentle persuasion fell on the researchers who initiated the 5Ds rather than the community partners. We think of this gentle persuasion as "involvement" as opposed to "intervention"—involvement in the community that could not be short-term, as in a design experiment but, rather, had to be long-term, as in peers building a partnership that linked the university with its community partners in ongoing and evolving practice. Although this point deserves considerable attention, it is beyond the scope of this article to address it here, except to say that this emergent understanding, developed in the process of building and doing research with the 5D, led to our understanding of what we consider to be a necessary approach in university–community collaborations.

Developmental work undertaken from a sociocultural-historical perspective can be usefully compared to Vygotsky's concept of the "zone of proximal development" (henceforth ZPD), in which learning takes place in the metaphorical space between the child's actual developmental

level and the child's near potential development as the child is guided by an adult or more capable peer. The concept of the ZPD has been expanded to the development of organizations and institutions by Engeström (1987), who uses the spatial metaphor to describe the distance between the current practice of an organization and an improved practice. This suggests a developmental process through which a collaborative endeavor improves as the participants learn. It also assumes more knowledgeable peers or experts. In the work that Engeström and colleagues describe, the researchers are invited into the sites and often paid for their expertise by organizations or groups within organizations that have identified problems in their practice. This is not the case in the 5D programs described here.

The obvious challenge, and perhaps ethical dilemma, that university researchers with unsolicited designs for innovation face is how to communicate to adults that change is in their interest. In the cases of our 5D programs, we were not asked to intervene. In both Sweden and California, the researchers were being charged by our universities' governing bodies to become a force in local and regional development through collaboration with local organizations. The challenge was sustaining and expanding developmental work with partners who had not invited us in and who did not necessarily embrace university-initiated development efforts, without incurring distrust or animosity.

Our Swedish colleague began by treading lightly. She approached her research with the 5D as a way to guide the school staff members toward productive dialogues about work practice and pedagogy. For example, the 5D work had to be coordinated with parties outside the school. Therefore, parts of the structure and work practice in the school had to be adjusted to these new circumstances. Feeling that her presence in the school implied change, she tried to guide school staff "from behind," meaning that the steps taken had to be the school's, although the challenge to take the steps came from a representative of the university. The researcher became, in effect, a link between the status quo and a plausible new work practice, which required the school staff to take on and build on what her research work offered. If they did not, the collaboration would die. If the researcher pushed too hard, however, her "advances" toward the school could be spurned, as have the advances of many ivory-tower researchers who are viewed by teachers as intrusive users who disappear when their research is done.

The researcher's approach involved being present and attentive to the needs and concerns of the school practitioners, as is evidenced in this field note:

> After breaking up I went to the break room and encountered one of the teachers. She looked at me and asked something,... I felt she wanted to start a dialog. The teacher that had said something about not building walls between teachers and people writing about school issues came and repeated herself. I pretended I did not understand, taking

granted, and then [the first teacher] said something like "this is sensitive." She clapped her chest and said, "yes this is sensitive for teachers."

The excerpt illustrates teachers' sensitivity to the criticism to which schools and teachers are often subject. Overt suggestion about how teachers should change would have made dialogue impossible. Instead, by remaining present, listening, and communicating when asked, the researcher gently persuaded the community partner that change was beneficial, as the following excerpt illustrates:

> [The principal] said immediately that he wants to continue with the 5thD [5D]: "It has become a part of our activity here" and that they would finance the site coordinator themselves.... [The vice principal] said that there is no "talk" any more among the teachers that "[the children] are sitting there in front of the computers" and that the 5thD has become accepted. [Teacher A] she said "has always been a driving force but also [Teacher B] has accepted it now." There is no resistance anymore. I said it might be due to the seminar. [The principal] claimed that everybody now knows what we are doing and what the 5thD is all about.

The school's appropriation of the 5D suggests that receptive conditions for a continued dialogue about pedagogical issues developed. This in itself represents a move into potentially developmental space, or a ZDP.

We call the Swedish researcher's approach "leading with the little finger." The metaphor suggests extending a weak part of the hand, which the other must grasp willingly to be led gently along a path. In formulating a "little finger" research strategy and approach to collaboration, a sociocultural-historical approach is useful. By perceiving the activity in the school as culturally and historically constituted, the focus is transferred from the individual teachers' behavior to the school's traditions and methods of working. The researcher's task is not to try to change behavior directly, as in action inquiry or action science, but to start a dialogue about these traditions in relation to the prevailing circumstances. The starting point for the dialogue has to be based on knowledge of the organization or institution and its conditions, or as ethnographers say, the researcher has to understand the Others on their own terms.

In a southern California example, the presence of ethnographers who were leading with the little finger cast attention on a potential barrier to continued collaboration, competing institutional goals. The Kids Club regularly hired students from the university lab to staff the 5D as Kids Club employees. On the one hand, hiring prior and current students from the lab reduced the need for extensive training in the 5D, something club personnel felt was beyond their expertise. Additionally, the university was often more successful in recruiting students to be site coordinators than the club was in filling the post. On the other hand, those with affiliation with the lab were often employed by both the club and the lab, and, as they were students, sometimes they felt it in their

best interest to forward the lab's priorities, even when these conflicted with club priorities. On the basis of the ethnographers' reports, the lab, in contrast to earlier policy, began placing student researchers at the 5D site to work in coordination with the 5D site coordinator hired by the club. The site coordinator had responsibility for running the site, and the student researchers assisted the site coordinator in the development of materials and took responsibility for data collection. This clear division of labor reduced personnel problems and opened up dialogue about the need for the university's collaboration in developing the club's other educational programs in ways that would coordinate with the 5D.

The modest but real developmental gains described above were a result of collaboration and were not designed from the start. In both the Swedish and California cases, presence and attentive listening to the community partners helped the researchers learn about, among other things, resistance, conflicts, and the significance of understanding institutional cultures. Our Swedish and California experiences suggest that peer guidance in terms of leading with the little finger is a way that university educators and educational anthropologists can interact with practitioners and workplaces to contribute to mutual learning and productive change.

Discussion

On the basis of our work with university–community collaboration around the 5D, we propose three elements as essential to creating and sustaining collaborations. One link between the leading with the little finger approach and the two roles, spider and firesoul, is their usefulness across contexts in solving problems challenging the collaboration process. These three elements are further linked as elements in an approach characterized by involvement, rather than intervention.

In the case of the spider, the role is dedicated to attentive presence, listening, and the labor of translation, deliberation, negotiation, coordination, and articulation. We have evidence that the role can be operationalized. We have funded spiders in extensions of the 5D in southern California, and the Swedish project has successfully blended membership roles in the case of the teacher-researcher site coordinator who performs the spider role. Planning for the role of the spider in collaborative projects accounts for the real labor costs involved in the communicative work that is essential to maintain the webs of meaning in complex systems.

We have defined the firesoul as the role filled by persons who bring a special orientation that motivates them to go above and beyond the explicitly defined actions required of them in their paid roles in the partnerships. Because the role of the firesoul is assumed by those with a special orientation to the work, it is unreasonable to plan on the highly motivated engagement that the firesoul brings to projects. To do so would mean that the project to develop and be sustained must

depend on uniquely oriented volunteer labor. To require this can be reasonably understood as planned exploitation of people whose performance does not merit formal acknowledgement or compensation. Yet herein lies a dilemma. In our work with the 5D projects, we have identified firesouls as well as their enhancing effect on the sites. To ignore the role of the firesoul is to render it invisible and make its real effect appear magical. Therefore, we maintain that firesouls are not created, but discovered. Once a firesoul is identified, however, she or he can be nurtured.

The firesouls who volunteer their unpaid labor are apparently doing so for compensation that is not monetary (Nocon 2000). In exchange for their volunteer, or unpaid labor, there is a high degree of freedom regarding what extra effort they give. Trying to codify this could be read as trying to end exploitation, or alternatively, trying to place highly motivated engagement with work under scrutiny. Research and theory in the area of civil and civic engagement (Clary and Snyder 1999; Schudson 1998) suggest that the most effective way to plan for the magic of firesouls is to make work with university–community projects hospitable to those with firesoul tendencies. In the 5D work, this has been done by paying people a living or better wage to do what they love and are inclined to do anyway while helping them fulfill other more personal goals that motivate their altruistic engagement. This is, however, particularly challenging, because of the diversity of individual goals. Therefore, the researchers and other partners who benefit from the firesoul's energy must be attentively present and listening, that is, involved, to understand how best to nurture the firesouls.

We have defined leading with the little finger as leading quietly from behind by encouraging dialogue to understand the current situation of our partners and research subjects. As in the case of the firesoul, the question of whether leading with the little finger can be mandated or planned is more challenging than the case of the spider.

In creating openings for firesouls, are we exploiting people, often women, whose work is traditionally undervalued? This question deserves more serious consideration than we can provide here. However, a similar moral dilemma is associated with leading with the little finger. Are we manipulating our community partners when we make our researcher-owned developmental goals for our collaborative projects less visible?

In our research with the 5D partnerships, we employ a methodology that is respectful of the needs and perspectives of our community partners and based on an ideology of mutuality and respect for distributed expertise. And although the question of whether an approach informed by the ZPD is negatively manipulative is beyond the scope of this article, we have rationalized our approach, which is similar to the participatory approach to action research described by Heron and Reason (1997), coming to understand it as the suppression of our research goals to first listen and learn the world of the research subjects and

community partners with whom we later co-construct a collaboration characterized by shared and coordinated goals.

Conclusion

Our aims in this article have been modest. On the basis of our extensive and geographically distributed work with university–community collaborations built around the 5D project, we have described and defined two roles and a research strategy and approach to collaboration that have been essential to our work. Leading with the little finger, like the translation work of the spider and the nurturing of the firesoul, requires on the part of the university partners who initiate collaborations with community partners a willingness to become and stay involved. Leading with the little finger is slow work. The translation, negotiation, deliberation, articulation, and coordination of the spider take time, as does nurturing the firesoul. We submit that the gains are worth the time invested because attentive presence, listening, and involvement build relations that lead not just to sustaining collaboration, but to learning, development, and improved practice for both university and community partners.

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Note

1. See http://www.uclinks.org and http://www.5d.org for examples.

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