

How Does a Community of Learners Maintain Itself? Ecology of an Innovative School

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This article asks how a community of learners maintains itself with the inclusion of new generations, each of which must explore the issue of what the community is about. An example of how new parent volunteers joined an innovative public elementary school is used. Four models of community maintenance defining the relationship between the community and newcomers are described and analyzed on the basis of observational studies of an innovative school and review of the literature.

The purpose of this article is to discuss how a community of learners maintains itself with the inclusion of new generations, each needing to explore the issue of what the community is about. I consider this issue using an example of how new parent volunteers joined an innovative public elementary school organized by parents 20 years ago in Salt Lake City, Utah. I argue that personal and communal development mutually constitute each other. Through the personal development of the newcomers and more experienced members of the community, the community maintains itself. This process has both reproductive and productive aspects (Lave and Wenger 1991). On the one hand, the newcomer learns the community ways of doing things, but, on the other hand, the newcomer propels her or his own agendas and needs. The synergy of personal and communal development guides the development of community practice. The main question discussed here is how a community with a distinctive educational collaborative philosophy maintains itself through the process of incorporating new members (the "filter," "funnel," "linear," and "ecological" models).

This article is a by-product of several investigations of the innovative school that my colleagues Barbara Rogoff, Jacquelyn Baker-Sennett, Cindy White, Nancy Bell, and I launched in 1991; my experience of being a parent volunteer in this school for two years; interviews with the OC community members; OC archival documents; surveys of the parents; questionnaires of parents and teachers; and personal communication with parents, teachers, children, and the principal (Baker-Sennett et al. 1992, 1993; Bartlett et al. in press; Matusov 1996, in press; Matusov et al. 1997; Matusov and Rogoff 1997; Rogoff 1994b; Rogoff et al. 1996). In a way, this article is a theoretical consideration, which emerged from and is illustrated by author participation in the research.

The OC is an innovative public school program that has a coherent philosophy differing from most other schools in Salt Lake City. The OC Program emphasizes activity-based learning, parent participation, adult and child direction of learning plans, and a problem-solving curriculum. OC families are primarily white, with a wide spread of middle socioeconomic backgrounds and a diversity of religious backgrounds. Parents (known as “co-ops” there) are required to commit three hours per week per child in the classroom for active guidance (plus out-of-class preparations of activities and parent and committee meetings). Thus, one common feature of the families in this program is their time commitment to and involvement with their children’s school education.

Newcomers Learning a Collaborative Philosophy of Practice

One of the problems that many new parent volunteers seem to face in the OC is that the educational philosophy of the school is very different from the teaching philosophies they experienced in their own traditional schooling in the past. To illustrate the differences between the OC collaborative philosophy and traditional one-sided approaches to teaching and learning, I will focus on one issue: how a traditional teacher at an adult-run school and an OC teacher manage the whole class interaction with the children. I would like to use my own experience to illustrate this issue because, as a traditional teacher with an adult-run philosophy in a traditional school for six years and as a participant and researcher of the OC community for six years, I have had the unique opportunity to observe and reflect on their **differences**.²

When I initially observed an OC classroom, I could not understand how many of the OC teachers guided children in the whole classroom discussion. I noticed that the OC teachers tried to **find** creative questions to support discussion with the children. However, as a traditional teacher, I also was rather creative in asking my students questions. The difference between them and me seemed to be that OC teachers focus on organizing an open-ended but guided discussion with the children, whereas I, as a traditional teacher, could only communicate either with one student at a time or with a whole class, treating it as one individual. In addition, I tried to control fully the interaction; any student’s contribution that was not sanctioned a priori by me was considered an interruption. In contrast, in the OC, children freely contribute to the discussion (see Brooks and Brooks 1993).

The difference in teaching between traditional and OC teachers seems to be more than just “pedagogical technology.” I, as a traditional teacher, had a bag full of pedagogical tricks. But the problem was that I was never really interested in what the students said because, for me, **they said** something that I considered either “correct” (something I had already known) or “incorrect,” which was nonsense for me, an obstacle to my further instruction of the class. However, OC teaching in a whole

group shows a teacher’s genuine interest in what the children are talking about (Paley 1986).

Once, I asked an OC teacher with two years of experience in the OC what he found interesting in children’s talk. He thought for a while and said that he was always puzzled by how what a child just said relates to what somebody else had said before the child. The teacher pointed out that it is very rare for children to interrupt the teacher or a classmate. However, often their contribution is not well articulated. It appeared that this OC teacher saw that it was his role to help the children to articulate their thinking (which involves being coherent, logical, and factual) and to provide useful links in the classroom dialogue rather than to impose the “correct” views on the children, as traditional teachers often do (for more discussion, see also Brooks and Brooks 1993; Meek 1991; Tharp and Gallimore 1988).

Learning is embedded in collaboration and collaboration is embedded in learning in the OC. In order to manage a group of children in the classroom, the OC teachers and parent volunteers often try to integrate children’s contributions by either providing bridges between the contributions or asking the children to do that themselves. This integration provides opportunities for the children to share their experiences with the classroom participants as well as to relate the experiences of other children and adults in the classroom to their own experiences. Through this process, participants share their inquiries and establish supportive relationships. Thus, for an OC teacher, unlike for a traditional teacher, building the classroom community and learning the curriculum are the same thing: members of the classroom learn through building a community and at the same time build a community through their learning (for more discussion on instructional conversations, see Saunders et al. 1992; Tharp and Gallimore 1988).

All educational philosophies provide opportunities for students’ learning. However, what the students learn in classrooms differs. The content of students’ learning is defined by the nature of their participation in institutional practices (Lave and Wenger 1991; Rogoff 1990; Wertsch 1991):

In a community of learners, students appear to learn how to coordinate with, support, and lead others, to become responsible and organized in their management of their own learning, and to be able to build on their inherent interests to learn in new areas and to sustain motivation to learn. In adult-run models, students learn how to manage individual performance that is often measured against the performance of others, to carry out tasks that are not of personal interest and may not make sense to them, to demonstrate their skills in the format of basal test answers and test questions, and to figure out the criteria by which adults will judge their performance to be better than that of others. [Rogoff et al. 1996:410]

In one of our studies of the OC school, we analyzed videotaped data (and surveys of the teachers and parents) of 45 parent volunteers working

in small groups with children on the inventions and inventors theme. We focused on the educational philosophies that the parents demonstrated in the ways they organized their activities (for more information on the study, see Matusov and Rogoff 1997). We found two major educational philosophies that we called "one-sided" and "collaborative." The one-sided philosophy is represented by the adult-run and children-run approaches (and their mixture), and the collaborative philosophy is represented by a community of learners approach. In the adult-run approach, children's learning is presumed to occur based on the teacher's provision of information and emphasizes reproduction of the adult culture. This adult-run model of schooling has been compared to an assembly factory or banking because children are seen as receivers of a body of knowledge but not as active participants in learning (Callahan 1962; Rogoff 1994b; Rogoff et al. 1996). In the children-run model, the children are seen as constructors of knowledge on an individual basis and adults are viewed as potential hindrances to learning that limit children's creativity and exploration (see Firestone 1977; Graubard 1972; Holt 1967; Neill 1960; Rogoff et al. 1996).

The community of learners approach is a third model. It lies outside of the traditional adult-run or children-run one-sided continuum. In a community of learners, both the children and teachers (as well as parents when they are involved in the classroom instruction) are active in structuring the inquiry. All participants are considered to be learners. Children and adults collaborate in learning endeavors of shared interest, with adults assuming responsibility for guiding the process and children learning to participate in the management of their own learning (Brooks and Brooks 1993; Calkins 1986; Dewey 1916; Matusov and Rogoff 1997; Newman et al. 1989; Rogoff 1994b; Rogoff et al. 1996; Tharp and Gallimore 1988; Wells et al. 1990).

Based on a coding system we devised to examine patterns in the activities organized by the parents, my colleagues and I found that 76 percent of the parent volunteers with less than two years of experience in the OC (called "newcomers" in the study) demonstrated the one-sided approaches to teaching, whereas the percentage significantly dropped to 34 percent in old-time **co-ops** who were in the innovative school program longer than two years (called "oldtimers" in the study). The number of parents demonstrating the collaborative approach significantly rose from 10 percent in the newcomers to 46 percent in the oldtimers. The results of the study support the idea that new parents have a background in the one-sided educational philosophy, perhaps stemming from parents' participation in traditional U.S. adult-run schooling. Also, the results suggest that many (but not all) parent volunteers in the innovative school are involved in the process of learning the collaborative philosophy (Matusov and Rogoff 1997). The study indicates that the OC school is a community with a distinct philosophy of **practice or a shared way** in which community members define their

practice in beliefs, perception, and actions. **Also, as will be described below**, the study directly supports the linear model of community maintenance in which newcomers learn oldtimers' philosophy of practice.

How Does an Innovative Educational Community Maintain Itself?

Focusing on the learning of new parent volunteers in a school with a collaborative philosophy allows us to examine developmental changes that are involved in the process of becoming an adult member of the innovative educational institution as well as to address the question of how the innovative institution maintains itself in and through inclusion of new members with often different educational backgrounds. Recently, it has been argued that ontogenetic cultural development should be viewed as the process of becoming a member of a community of practice (Heath 1989; Lave and Wenger 1991; Rogoff 1994b). In this process, individuals entering a new **sociocultural** setting (e.g., cultural community) need to learn new practices, relationships, values, tools, and systems of belief. However, the process of becoming a member of a new culture sometimes requires changing one's worldviews and shifting paradigms (Rogoff 1994b).

Sociocultural and developmental approaches in psychology and anthropological education direct attention to the importance of how families—both children and their parents—join a new culture and to the importance of the processes of development in classrooms (Erickson and Mohatt 1982; McDermott 1977; Rogoff 1990). Vinovskis (1988) **argues** that families' life developments are shaped by their interactions with cultural institutions such as churches, schools, and workplaces (see also Hareven 1982; Wapner and Craig-Bray 1992). According to Lave and Wenger's concept of legitimate peripheral participation (1991) and Rogoff's concept of guided participation (1990), the process of learning involves participation in so-called cultural practices with gradual or rapid transfer of responsibility for activities from community oldtimers to newcomers (see the section on how newcomers join a community below). New members establish a dynamic mutual understanding with experienced members of a community to manage their relations and their immediate cognitive tasks (Rogoff 1990; Wertsch 1984).

People are not born with one or another philosophy of teaching and learning. They learn educational philosophies many ways, including their participation in educational and noneducational institutions such as schools, families, workplaces, churches, clubs, and so on. One such case of learning happens when people join an innovative educational institution in which they need to learn new, unfamiliar sociocultural practices based on an unfamiliar educational philosophy. The process of learning how to participate in a community of learners is not easy for people who come from a one-sided philosophy of learning, and it often takes time for many of them to learn and accept a new collaborative school philosophy. In my study with Rogoff (1997), it appeared that

many of the new parent volunteers joining the innovative school could be characterized by high exposure of traditional schooling in their past and commitment to innovative education in their present. In this situation, the newcomers had a choice of either learning new practices, changing the institution, or leaving it.

The constraints on the learning processes of new members depend on the ways by which the community maintains itself. From an analysis of literature and observations in the OC, I have extracted four possible processes and four different, corresponding abstract models of how an educational community might maintain itself. Community maintenance can undergo a "selective process," that is, a negotiation between the community and a prospective member which defines whether the community fits *the prospective* member and whether that member fits the community. This process defines who joins and who does **not join** the community. There can be a "fitness process"—a negotiation that is similar to the selective one but is ongoing between the community and a *permanent* member. This negotiation defines who stays in the community and who "discordantly" leaves the **community**.³ There can be a "homogenizing (linear) process," in which all members learn the community way of doing things. This process constitutes a distinct practice and specific features of the community. Finally, there can be an "ecological process" in which members of the community develop different but compatible ways of doing things. The compatibility is based on an ecological synergy of the diversity, mutual tolerance and adjustment, and open-endedness of development of the ways of doing things. As the studies and observations of the OC show, all four processes are present. Below, each process is considered separately as an abstract model of community maintenance, defining what kind of learning it constitutes for the community newcomers.

A Filter Model of Community Maintenance

According to the filter model of community maintenance, based on a selective process, the community attracts those prospective members who fit its philosophy of practice and repels those who do **not**.⁴ The negotiation between prospective members and the community might involve different forms such as communicating with prospective members via advertisement in print; personal interviews by appointment; informal, "open-door" events demonstrating classroom practices; tests of prospective members; and so on. For example, at a meeting with prospective OC parents, most elements of negotiation were present—spelling out the benefits to and responsibilities of prospective members as well as addressing some of their worries:

[The OC] presents not only the district curriculum, but also curriculum developed by children and parents, in a child-centered, hands-on, manipulative, experiential learning experience. Children are supported in making choices,

planning their time, learning to make **good** decisions, and taking responsibility for their learning. Since parents participate on a weekly basis, the **adult-child** ratio is low. Each classroom has an accredited teacher and several co-oping parents at any one time. Parents are viewed as team teachers and help provide curriculum and enrichment **for** the children. . . .

For some parents considering the program, the idea of co-oping can be intimidating. My favorite response to that discomfort comes from Carolyn Turkakis, our sixth grade teacher. "You are your child's first teacher from the minute that child is born until the kid is five years old and ready for kindergarten. You could make a list of thousands of things you've already taught your child." [OC slide presentation for prospective parents, spring 1994]

The selective process is mutual, though usually not symmetrical. It involves the parents considering not to enroll their children in a traditional neighborhood school and the innovative school seeking enough enrollment to maintain itself and secure funds from the school district. The mutuality of the negotiation depends on the state of the "offers and demands": if there are more people who want to join the innovative school than places are available (as it was temporarily eight years ago in the OC), then the leverage of negotiation shifts to the community that sets the terms of the enrollment. The school might establish waiting lists or even organize tests **for** defining suitability of the prospective members to the communal philosophy and practices. Here, prospective members are expected to adjust more to the community than the community is expected to adjust to them. However, if there are more places available in the innovative school than the prospective members, or if the community tries to encourage a specific or diverse population for enrollment (ethnic or socioeconomic diversity or single-parent families), the negotiations shift to more community adjustments to these members (as it was temporarily in 1992 in the OC).⁵ Requirements for enrollment become more flexible, and the community seeks ways to adjust its expectations for newcomers who might not be exactly the people it is looking for (e.g., offering alternative **co-oping** for new parents outside the classroom, like helping with field trips, preparing instructional materials, etc.).

If a community maintains itself strictly **through** a selective process, diversity and learning of the communal philosophy are neither needed nor expected (see Figure 1). Indeed, the selective **filter** that the community establishes admits in only those candidates who fit the communal philosophy. Learning the communal approach is not involved in **the** filter model. Only some minor adjustment of the newcomers to the community may take place, and this does not involve a deep transformation of new members' philosophies of practice.

Philosophical diversity is left outside the community "membrane." Alien approaches are not welcomed. The presence of a diversity in **teaching** approaches indicates poor quality of the selective process, which, in turn, has to be tuned up. The agreement of all the members on set community norms and philosophy and a high level of teaching skills in the participants are required. Thus, in the filter model, a community

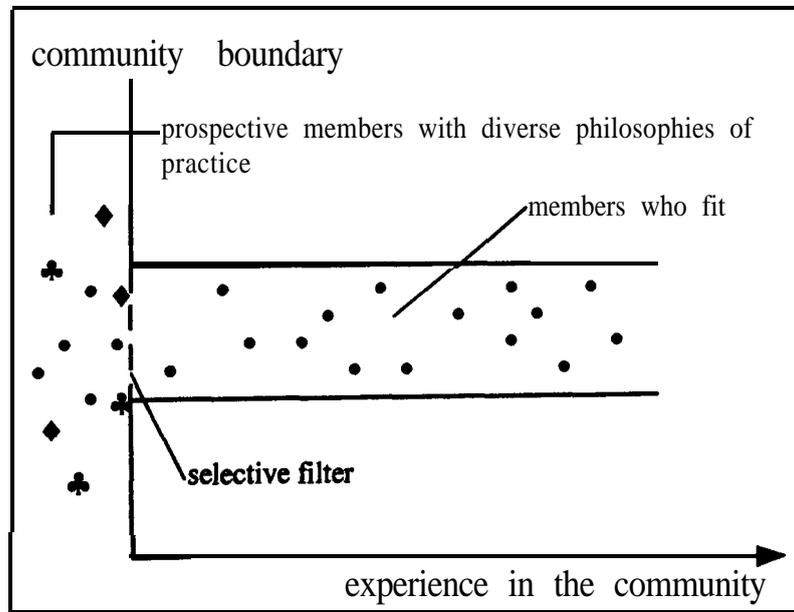


Figure 1.
Community maintenance through a "selective filter."

that maintains itself through a selective process values agreement and homogeneity and devalues disagreement, diversity, and development.

A Funnel Model of Community Maintenance

Unlike the filter model, the funnel model, based on a fitness process, involves an initial diversity of community members in regard to their philosophies of practice. According to the funnel model of community maintenance, members of the community who do not fit the communal philosophy leave or are expelled from the program as they experience an increasing mismatch between personal and communal philosophies. The increasing mismatch between an individual member and the community is a centrifugal process—it moves the mismatched member to the periphery of the community first and then, finally, takes her or him completely out of the community (see Figure 2). This process of leaving is also mutual to a certain degree: the community expels (or silences) the member and the member chooses to leave (or to be silent).

As in the filter model, learning is not expected in the funnel model because unfit members will leave the community one way or another. However, unlike in the filter model, diversity is assumed and initially tolerated. This community diversity has a developmental character but without learning being involved—it decreases with members' experience in the community as the centrifugal mismatch process gradually expels

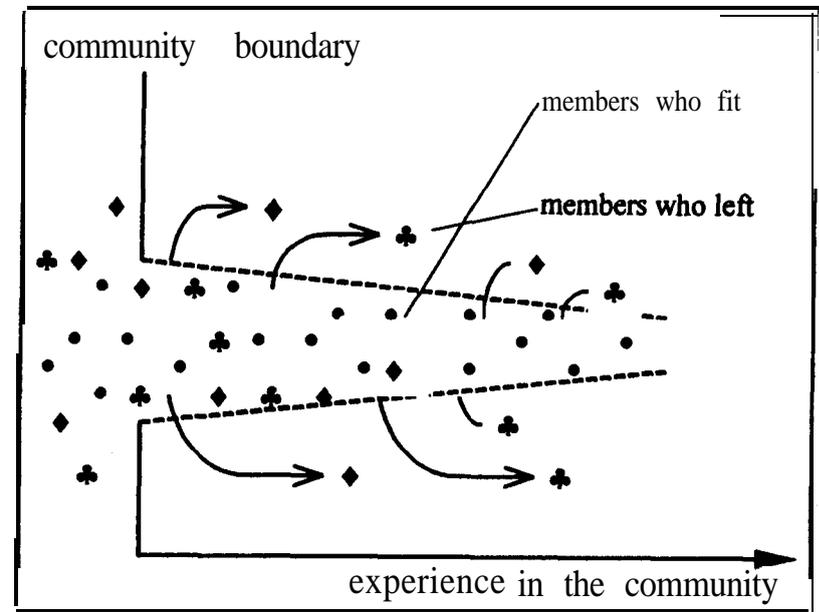


Figure 2.
Community maintenance through a "funnel" fitness process.

(voluntarily or not) all unfit members out of the community. Homogeneity is the final goal rather than the initial point of the community.

The funnel model of community maintenance has been successfully applied to study the phenomenon of underachievement among non-white, working-class, and poor students in traditional U.S. schools. It is an unfortunate phenomenon that some minorities (e.g., African Americans, Native Americans, Mexican Americans, working classes, poor people, and so on) are overrepresented in the school failure group—they are more likely to show low scores in school achievement tests, and they have low grades and high dropout rates. Philips (1983) and Erickson and Mohatt (1982) explain this phenomenon by pointing out the incompatibility between the patterns of discourse that minority children experience in their ethnic community and in school. Thus school learning events are limited or do not even happen because of interactional discord between minority students and teachers coming from mainstream culture. Many ethnographic studies (Philips 1983; Vogt et al. 1987) demonstrate that schools expect children to come to school already knowing how to participate in school events, such as teacher-student interaction through a whole class, teacher control of interaction while talking with students, and specific types of teacher-class interactions that might not be present in the ethnic culture to which minority students belong. Philips (1983) argues that cultural models of discourse account for children's

and teachers' participation in classroom events-how teachers talk to children, how children listen as the teacher talks, how teachers and students get a turn to speak or allocate turns at speaking to others, how they ask questions and provide answers in the appropriate way and at the right time. A mismatch between a teacher's cultural model and a cultural model of minority students leads to moving minority students to the periphery of classroom participation. The specific problem of this funnel model is that the underachieving minority children often do not have the possibility to leave the school, yet they have been moved outside of the legitimate learning process in the classroom (Lave and Wenger 1991).

In the OC, the funnel processes also take place in regard to parent volunteers but, of course, not in such an extreme degree as described above. In the previously mentioned study of parent volunteers (Matusov and Rogoff 1997), we sent an open-ended questionnaire to 50 parents one year after the collection of video data.⁶ By doing this follow-up, we incidentally got information on which of the target parents left the program and why. Three out of the 50 parents left the program after a year. Two of them moved out of the state. Only one parent of 50 quit the OC program in accord with the funnel model, because of her strong disagreement with the school philosophy. She stated that she liked the OC philosophy, but, according to this parent volunteer, the philosophy "does not work" for her child. In her explanation, she referred to the excessive child-run practices and a lack of structure in the two classrooms in which she co-oped. This parent volunteer was a newcomer with less than three years of OC experience. Ironically, according to our study, she strongly demonstrated the children-run approach in the videotaped observation. This case clearly fits the funnel model of community maintenance because the children-run educational philosophy does not seem to be "the OC way" of teaching and learning-the parent left the school because of the discrepancy between her own views and her perception of the community's views on teaching and learning. However, if one assumes that our observational "slice" of the study (Matusov and Rogoff 1997) fairly represented the processes of changes in distribution of the collaborative co-ops over their years in the OC, the self-selective processes seem not to be solely responsible for the increasing percentage of the collaborative coopers. Only one of 50 left the program for such a reason.

A Linear Model of Community Maintenance

In contrast to the filter and funnel models, the linear model based on a homogenizing process involves newcomers learning the community way of doing things (see Figure 3).⁸ This learning process is guided by two principles: efficiency (or a desired outcome of the activity) and convention (or a community consensus on how community activities must be done). The principle of efficiency is usually considered to be more dominant than the principle of convention, which is reserved for cases

when there are several equally efficient directions from the community point of view. The principle of efficiency facilitates building a community consensus by attracting the members' attention to so-called objective properties of activity processes rather than personal values and preferences (e.g., all second graders have to memorize the multiplication table by the end of the year). Community newcomers learn from their own involvement in the activity and from the experienced and seasoned members who facilitate newcomers' recognition of the "right" way of doing things.

In the linear model of community maintenance, the community consists of members with different levels of mastery and understanding of the community way of doing things. The diversity in a community that maintains itself through a homogenizing process of learning has a two-fold nature. One type of diversity is purely "developmental"-it reflects learning in progress. This type of diversity might even be welcomed, especially among new members of the community who are considered to be at the initial point of learning, which may be far from the community way of doing things. The other type of diversity is "residual"-it reflects a deviation of experienced members from the "right" communal way of doing things. This type of diversity is considered to be undesirable and even dangerous for both the deviant member and the community. The member who deviates may act in a way that could injure him- or herself or the community because of its inefficiency and unconventionality (Lagache 1995). For example, according to Lagache's (1995) ethnography of a scuba diving school in California, students who are constantly "stressed ,

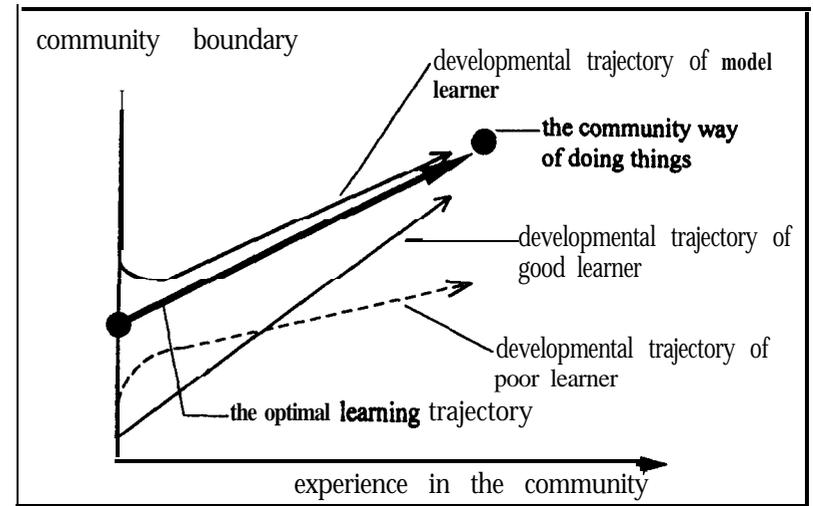


Figure 3. Community maintenance through a linear homogenizing process.

out" by a mask flooded with water jeopardize their lives while diving because they might panic and waste time by clearing their **mask** of water and thus, as a consequence, lose air or even drown. They also indirectly jeopardize the school (i.e., its reputation and the instructor's license) that gave them a scuba diving certificate.

Matusov and Rogoff's (1997) study indicates that learning is an ongoing process in the OC. About half of new parent volunteers after two years or so in the program became "collaborative" co-operators. The percentage of "one-sided" co-operators dropped from 76 percent to 34 percent. A survey that we sent to OC parents one year before the videotaped observations came back full of parents' descriptions of how they had learned in the OC to co-oper (completed by 79 percent of all the co-operators in the school [Rogoff et al. 1996]). To the question "Did you feel like you didn't know what you were doing at first?" 77 parents (or 83 percent) responded yes and 16 parents (17 percent) responded no. When asked, "What aspects of co-opping were the most puzzling or difficult for you at first (or still)?" the parents often seemed to directly or indirectly refer to their difficulties in understanding the OC philosophy of teaching. Their lack of understanding of the OC philosophy was evident in their apparent frustration about **not** knowing teaching techniques. For example, they commented on "how to blend learning and fun," "getting down to their [the children's] level," the OC as "unstructured and unfocused," "what was expected of me, how to make lessons, how much to expect from children," "kids telling me they didn't **have** to do an activity-YIKES!'," "how to handle small groups."

The analysis of the videotapes as well as the parents' reports suggests philosophical changes in the co-operators. For example, we (Matusov and Rogoff 1997) had one opportunity to observe a very new co-operator on three occasions during his first month in the OC. In our first observation, the teacher asked the co-operator to facilitate an **ongoing** children's activity of inventing **new** board games. The co-operator spent **most** of the time observing the children and helping them when asked for help. He kept himself physically and mentally at the periphery of the children's activity. He occasionally tried to initiate conversation with the children in a very shy manner, but almost all his attempts failed. After a few weeks, in our second and third observations, this parent again was asked by the teacher to help the children, in this case to disassemble old equipment so the children could use the parts for their inventions. It was evident that the mechanical work of disassembling was more comfortable for the parent than inventing board games. By the end of the third observation, the **co-operator** easily elaborated questions that children asked him and initiated his own topics of discussion. Getting to know the children and familiarity with classroom activity appeared to **have** contributed to the co-operator's apparent change from the children-run to the collaborative approach.

The analysis of the videotaped observations shows that parent volunteers who, by the coders' judgment, predominately demonstrated the collaborative approach provided a higher degree of supportive interpersonal relations with the children and higher developmental suitability of activities for the children than the "one-sided" co-operators (Matusov and Rogoff 1997). The supportive interpersonal relations were defined in the study as the co-operator being sensitive to children's needs; open to negotiation and compromise; providing rationale for her or his demands; and being friendly, smiling, nurturing, and secure. High developmental activity was defined as challenging activity that was problematic and approachable for the children (it could be achieved by the co-operator's guidance, child/children self-guidance, and guidance through the material). The association of the collaborative approach with both supportiveness of interpersonal relations and high developmental suitability indicates that the collaborative approach is "the OC way" of doing things (as defined by the OC philosophy statement).

In accord with the linear model, it was found in the study that the OC has **not** only "developmental" but also "residual" diversity of educational philosophy. About one-third of the oldtimers who had co-opered in the OC for more than two years still comprised "one-sided" co-operators (Matusov and Rogoff 1997). Statistical comparison of "collaborative" and "one-sided" **groups** of parents shows that the "one-sided" co-operators were less supportive and provided activities with lower developmental suitability of the activity for the children than the "collaborative" **co-operators**, as the linear model suggests (see the trajectory of "poor learners" in Figure 3). However, on a case-by-case basis, **some** "one-sided" co-operators were very supportive and provided high developmental suitability of activities for the children. This phenomenon does not fit the linear model of community maintenance, which assumes that any "residual" diversity in philosophy of practice is dysfunctional.

An Ecological Model of Community Maintenance

According to the ecological model of community maintenance, community ecology is constituted by a multifaceted relationship of mutual support among the members of the community. New members join the community by learning how to participate in such a relationship-how to achieve a comfort zone in the community practice by providing comfort to other members. In an ecological model developed primarily from interviews with OC teachers, 1994-96, and the 1992 parent survey (Rogoff et al. 1996), the personal comfort of one member promotes comfort in other members. As Bartlett, Goodman Turkkanis, and Rogoff state, in the OC "children's learning includes learning to lead others (including adults) in school activities, and to build on their own interests at the same time as contributing to the learning and comfort of others in the classroom" (in **press:1**).

The Ecological Zone of Community Comfort

Seasoned OC teachers deliberately worked on providing an “ecological zone of community comfort” for all the parents in their classrooms. A seasoned teacher, Carolyn Goodman Turkanis told me in a July 1994 interview that, at the beginning of every school year she interviewed each parent volunteer about her or his area of **co-oping** and the number of children he or she felt comfortable working with. The teacher saw that her role in helping the parents was to “immediately connect them to something they enjoy doing.” Goodman Turkanis asserted that “if you go past the co-oper’s comfort level, you change their **mindset** and their attitude,” and this can affect their feelings about teaching. But what is even more important, as she pointed out, going beyond the co-oper’s comfort level can create a high level of anxiety, which in turn lessens the opportunities that the co-oper will have to notice her or his “teaching” and “learning” moments and build on her or his own strengths.

New parent volunteers are also concerned about and actively seek their own niche of comfort in working with children as a means of their own development as co-ops. I will give just two examples of their development through expanding the ecological zone of community comfort. One parent volunteer, while reflecting on what helped her or his transition in understanding the OC program, listed the following helpful changes in her or his approach: “switching to areas [of co-oping] I’m more comfortable in. A willingness to let the teacher deal with kids who don’t cooperate/are disruptive, rather than expending my energy on them.”

Another parent volunteer described her attempts to find a zone of comfort in her first year of co-oping by considering limiting her group to only “cooperative” children:

My immediate issue was that co-oping itself was so frustrating. At first I felt uncomfortable trying to make other people’s children do things, and had to force myself to try to direct them. But then it seemed like I spent most of my time trying to capture wayward children who didn’t want to do the activity that I had brought in, and force them to learn my lesson. If I managed to get them to the table where I had set up my activity, I still had to spend most of my time trying to get them to co-operate, and meanwhile the 3 or 4 other children sitting cooperatively trying to do my activity gradually fell apart as I did. . . .

With my level of frustration being so high, I realized I needed to change something about my attitude, at least. I started by deciding (huffily) that those uncooperative kids weren’t worth my time, and that if they didn’t want to come to my activity, fine. I’d focus on the cooperative kids, and just let the teacher know that so-and-so hadn’t made it to my group. (That, it turns out, is what I was supposed to have been doing anyway, not trying to solve all the problems myself.) I’d think of participation in my group as a privilege, not an obligation. And the privilege would be earned by cooperation. [Rogoff in press:5]

This experience almost immediately changed her attitude and understanding of the OC philosophy and helped the co-oper develop better skills of cooperative teaching (and **learning**) that allowed her to learn how to work with the whole classroom. Notice that after the transformation of the co-oper’s attitude, the children’s comfort became the basis of the co-oper’s own comfort.

Learning as Expanding the Zone of Comfort

In the ecological model, learning takes place via an expansion of a newcomer’s ecological zone of community comfort. In its own turn, the newcomer’s growing ecological zone of community comfort constitutes a diverse ecology of **mutually supported** approaches to the community practice and to the developmental diversity of “root pathways” involving newcomers’ initially diverse philosophies of practice and ways of learning the community philosophy (see Figure 4).

The ecological zone of community comfort is a “zone of learning” that is similar to what Vygotsky (1978) defined as the zone of proximal development. In these zones, people cross boundaries of their skills and participation in the activity by means of the help that participants provide to **each** other. Parents’ level of comfort translates into children’s level of comfort. As former OC kindergarten teacher Pam Bradshaw reported in

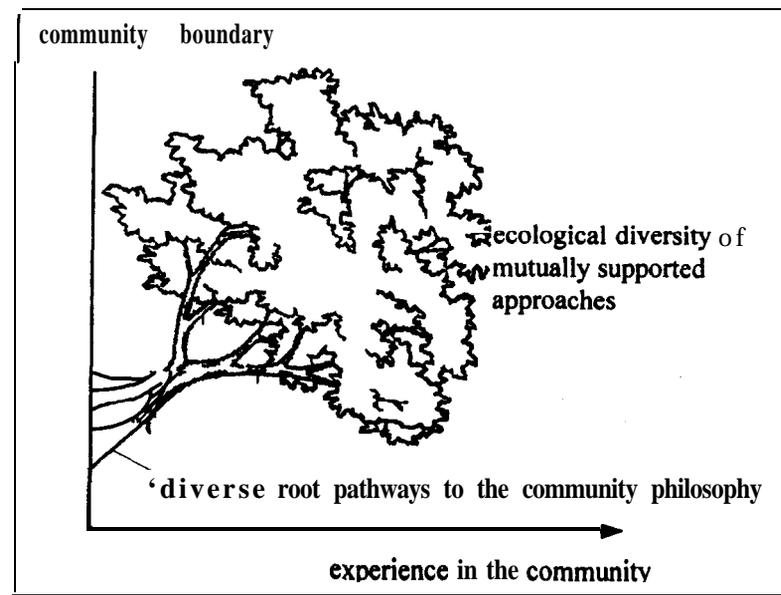


Figure 4.
Community maintenance through an ecological diversity process.

a January 1996 interview, the kindergarten classroom "seems to really 'warm up' in February." She also noticed that the fifth- and sixth-grade blend classroom ran more smoothly than the kindergarten classroom because the upper-grade classroom was a combination of the seasoned teacher (Carolyn Goodman Turkanis) and mainly seasoned parent volunteers and seasoned children.

This channel of mutual comfort creates an opportunity for sharing interests and inquiries in the activity between the co-oper and the children, which, in turn, nurtures parents' teaching skills. As Goodman Turkanis (interview, July 1994) reported, many of the parents "grow" as co-ops in their ecological zone of community comfort. For example, later in the school year, some parents asked the teacher to increase the size of their groups or to begin to incorporate the children with whom they were not able to work before. The teacher kept open the discussion about personal level of comfort with her co-ops during the school year. This helped the parents feel comfortable experimenting with their own teaching and expanding the boundaries of their comfort in the classroom.

Multifaceted Character of the Ecological Model

As many seasoned members of the innovative school described in the survey, learning the OC practices was "relaxing" as they achieved "personal enjoyment" in teaching the children by focusing on emerging "learning and teaching moments" (Rogoff et al. 1996). These "islands" of personal enjoyment have multifaceted characters (e.g., in teaching, in managing groups, in learning, in interpersonal relations) and often involve several participants at once. Unlike *personal* zones of comfort, ecological zones of comfort involve many community members at once. The islands of personal enjoyment might emerge for parents while working with some children, teachers, members of the school administration, their own families, and so on. They might happen in "out-curricular" spheres-like developing intimate friendships with some children (Goodman Turkanis, interview, July 1994). In these zones of participation, participants' efforts meet communal support. Expanding and bridging these islands of personal comfort zones defines the processes of personal and communal development.

Let me illustrate the multifaceted character of the ecological model with the following example. The two seasoned OC teachers, Carolyn Goodman Turkanis and Leslee Bartlett (interviews, July 1994), discussed a discrepancy among the three co-oping approaches (i.e., **adult-run**, **children-run**, and **collaborative**) and how well the co-ops fit the OC as expressed by the teachers and parents in the questionnaire (Matusov and Rogoff 1997). The results were puzzling because, although all OC teachers and almost all parents reported that they thought that the collaborative approach actually characterized the OC philosophy, on the case-by-case basis there was no direct correspondence between approaches that a parent/teacher claimed and the degree to which the

parent fit the program in their judgments. By knowing an approach, it was impossible to predict with certainty whether a given parent was judged as a model OC **co-oper** or not. Goodman Turkanis and Bartlett suggested that this discrepancy might reflect multiple practices and multiple values that constitute the OC environment.

First, they pointed out, doing well in the OC involves more than working well in small groups with the children. It involves a very broad list of coopers responsibilities, including their attendance of parent meetings, support of and cooperation with the teachers, progress over time in learning OC philosophy, willingness to contribute in the classroom and school, involvement in their own child's education, help in keeping the program on the right track, ability to balance between family and school demands, suggesting ideas to the teacher about curriculum and classroom organizations, and so on. The collaborative approach to co-oping (in the coders' judgments of co-ops' videotaped activity) was included in this list as only one of many important contributing items of a "model" or "good" co-oper in the teachers' global judgments of the co-ops' participation in the OC throughout the year. That might be why the relation between the co-oper's type and the co-oper's approach appeared only in the statistical analysis of groups rather than in **case-by-case** comparisons.

Second, the "model" co-oper in a community of learners might reflect the process of becoming rather than being an ideal member of the community. In other words, the "model" and "good" co-oper might be considered an open-minded **co-oper** who takes risks by experimenting and trying new approaches and new directions. In this case, it is not only fitness to the OC philosophy that makes a co-oper a "model" or "good" type but also the willingness to take risks when addressing the problems. The collaborative approach, more than the others, involves a need for flexibility, adjustment, and experimentation; this might provide another reason for the apparent "discrepancy" between a parent's co-oping approach and her or his fitness to the ecology.

Third, besides academic learning, there are other values with which the OC community is concerned. One such value is providing friendship and a nurturing relationship with the children. Goodman Turkanis (interview, July 1994) stated,

Although I value interactive learning and collaborative learning, it's the most important in my classroom, sometimes I just enjoy a co-oper who loves children and can sit, and dialogue, and laugh, and visit, and have a really good time, and then bring children back to the learning task by saying, "Come on you guys, let's do it a little more"-whatever it is. It's interesting to watch children flock to personalities.

Not only "internal" but also "external" multiplicity of practices and values shape a community of practice. Nicolopoulou and Cole (1993) describe their project of establishing after-school computer activities for

children in two sites: a community library and a boys' and girls' club. The global purpose of the project was to build a few sustainable communities around after-school computer activities in these (and other) sites so that, after a few years of university support, the project could be continued there. Another goal was to involve the children in productive thinking about educational software. The findings of the study show that productive thinking was more strongly promoted in the library ecological setting, with its stress on commitment, seriousness, learning, respect of the business of other people, quietness, and freedom of choice. However, as to the establishment of a sustainable community and practice, it was the boys' and girls' club and not the library that offered its base and resources for the continuation of the after-school computer activities.

The paradox in this case is that the library ecologically fit the project, but the project did not ecologically fit the library. The computer activities were too noisy and annoying for the library, and their educational value was not high enough to elicit the necessary financial support in the recession era of severe budget cuts for California public libraries. The boys' and girls' club, with its focus on entertainment, freedom of choice, noise, options, and essential noncommitment and fun, did not offer an ecology that fit very well with a university project that required commitment, concentration, and prolonged social interaction and relations with peers and adults. However, as another entertainment option, the project ecologically fit the club. Thus, the university project could reach mutuality with neither the library nor the boys' and girls' club at the time of the report. The lack of supportive mutuality closed the ecological zone of community comfort for the communities and, thus, arrested their development.

Ecology as Mutually Supported Diversity of Community Practice

The diverse root pathways lead to understanding of the community of practice as a cohesive unity (represented by the tree stem on Figure 4). They also lead to a *compatible* philosophical diversity of ecological, mutually supported approaches ("niches") in community practices (represented by tree branches with leaves on Figure 4). This ecological diversity is based on members' diversity in personal history, interaction with other institutions that require compromises, and participation in other communities glued together by participants' mutual support (Fullan 1993; Rogoff et al. 1996).

In the OC, the ecological zone of community comfort involves not only the collaborative approach but also one-sided (adult-run and children-run) approaches. In a way, the "ecological zone of community comfort" by itself is almost approach and philosophy free. When I asked Leslee Bartlett, a seasoned OC teacher, what her main reason was for interfering in parent's co-oping and offering her help, she reported that it was dictated more by her feeling of an ecological discomfort in the cooper's

group, when the educational and personal well-being of the participants was in jeopardy or deteriorating, rather than by an apparent discrepancy in the co-oper's philosophy of teaching (interview, July 1994). Her main concern, as a teacher, was the opportunity for children to be involved in quality learning and to have a supportive, nurturing environment that did not stress them. She argued that "the ultimate [OC] goal is . . . that the kids [and parents] are learning the best way they can." This teacher's goal spells out both the diversity in developmental pathways (as a process) in all community members and the diversity in the directions of these pathways.

Paradoxically, this pluralism or even eclecticism of educational philosophy in the teacher's attitude translates strongly into the philosophy of mutuality. By helping with a co-oper's problems emerging in her or his group activity, the seasoned OC teacher opened a channel of collaboration and learning. She discussed with the co-oper how the co-oper perceived the problem, why problems happen, how to solve them, and how the teacher or somebody else might help? The teacher involved the co-oper in the collaboration on thinking why, for example, there was "a disciplinary problem" in the activity or why the children refused to work with the co-oper, and through this collaboration with the teacher, the co-oper learned how to collaborate with the children.

Co-ops' development in the OC seems to be based on collaboration on shared problems (i.e., being engaged in the same problems) with other members of the community even when those collaborators do not have a shared or common philosophy of teaching and learning.¹⁰ For example, when I interviewed the former OC principal Carol Lubomudrov (in July 1994) at the time of her transition from the OC to a new school (as a part of principal rotation), I asked her how she was going to approach new faculty in a new school, many of whom might be rather traditional teachers. She responded that she would approach the faculty by addressing their problems and initiate a philosophical dialogue out of those problems. She said,

When you come across articles you're reading and you know, "Oh, that is something this person might need to know about." . . . push them in their interests is what I'd like [to do.] And so if I have somebody that I know is really interested in math or doing a unit on insects, then, you know, your lenses are always out there or. . . yeah, like workshops that are available. . . . And it rephrases that dialogue. You know, we've been talking about dialogue-see, then I can share my philosophy through their interests. But I **don't know how** else I would ever go into a school. I mean, that's just how I believe.

This approach to engaging people with diverse philosophies of practice echoes recent academic discussions. Following Beer, Eisenstat, and Spector (1990), Fullan argues that school reform should start with targeting small, isolated, and often peripheral elements of a community's practice that are perceived by the people and the whole community as

problematic rather than launching big restructuring and philosophical debates, which "puts the cart before the horse" (1993:67). "As heretical as it sounds," says Fullan, "reliance on visions and strong shared cultures contains severe limitations for learning from non-linear change" (1993:67).

Similarly, when Rogoff (1994a) was asked how she would initiate change in a traditional school, she responded that she would ask the people in the school how she could help them with their problems. Through participation in working on peripheral, nonthreatening elements of community practice, participants develop common "borders" of engagement, common interests, common objects of activity (Engestrom and Engestrom 1990), and, thus, open channels for collaboration. In this ecological model, the diversity of philosophical approaches is not only "developmental" but also "residual." The communal relations are based not on the homogenization of participants' philosophy of practice but on their mutual support. Being similar or different is not an issue in the ecological model." The issue is becoming mutual and supportive in members' and the community's development.

The OC community and its philosophy of learning and teaching are not static but undergo a developmental process of change. There are "external" and "internal" causes for change in the community that are intertwined together. For example, changes in the U.S. economy increasingly require work (either part time or full time) for both parents. This change produces pressure on the OC community to reevaluate its policy about parent co-oping in the classroom for three hours per child per week, especially for parents with many children or for single parents. For example, one of many possible program adjustments the OC community is currently considering is co-oping outside the classroom (i.e., preparing learning materials, organizing field trips). However, some community members are concerned that excessive outside-classroom co-oping might jeopardize the OC philosophy as a community of learners which has the classroom as the smallest "cell" of that community, incorporating children, parents, and teacher. The problems that the innovative educational community faces are not temporary. In fact, a community of learners anticipates constantly dealing with and learning from emerging problems as its way of life (Fullan 1993).

The process of growing mutuality inside and outside a community of practice promotes community maintenance, philosophy, diversity, and development. It is simultaneously a reproductive and productive process because it promotes the common thread and impetus for change in the community. It defines community patterns, community processes, and community relationships (both inside the community and between communities).

Summary: Diversity and Development

The relationship among the concepts of community, diversity, and development deserves scrutiny. Traditionally, diversity has been considered *between the communities*, whereas development has been considered within the community. In this article, I tried to make a point that both diversity and development can be and should be considered within the community.¹² The community develops its diversity and diversifies its development. Diversity in the community reflects its ecology rather than just a fluke or the play of capricious chances of participants' backgrounds, personalities, dynamics, relationships, links with other communities, and so on around "the mean" of the community "standard." Ecological diversity is not constituted by structural or functional differences between individuals (or practices) but by the principal openness and "incompleteness" of individuals (and practices) and their mutual support of each other. Similarly, ecological development is not change toward perfection, however it is defined, but, rather, the transformation of a whole person (and her or his participation in a community practice) directed toward a higher degree of mutuality and openness (i.e., "incompleteness")¹³ in terms of the integration of the community practice with other aspects of the participants' lives as well as with other practices and institutions where the community is situated. I define community ecology here as being in the world (i.e., acting holistically) and providing supportive mutuality within and outside the community. In this concept of community ecology, diversity and development meet each other.

The complex relationship between these global educational philosophies inside an innovative school constitutes the maintenance and development of this educational community. On the basis of the literature and from observations of the OC, four complementary models of community maintenance were considered. As the study of the OC (Matusov and Rogoff 1997) suggests, many new adult members of the innovative school seem to have traditional educational philosophies of teaching and learning. The OC school tries to attract those parents (and teachers) who are willing to become involved in their children's education and experiment with their own guidance and children's learning (the "filter" model of community maintenance). Coming to an educational environment that, in general, does not support traditional one-sided approaches to teaching and learning, the new parents have the option either to leave the program (the "funnel" model), to learn the new educational philosophy (the "linear" model), or to find an ecological niche where they can be supported and be supportive to the community while practicing one-sided approaches (the "ecological" model). Each of the models provides different but complementary descriptions of the diversity of parents' teaching approaches in the OC.

Unlike the other models that consider diversity as only a developmental and, thus, "temporary" phenomenon, the "ecological" model of community

maintenance puts its stress on "residual" or ecological diversity whereby different approaches mutually support each other. This ecological diversity is based on mutual respect, sharing problems in the community, and the multiplicity of community practices and values.

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Notes

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1. The acronym has lost its meaning with the history of the school. Initially, it meant "Open Classroom." I have heard that some OC children phonetically re-defined the label "OC" to mean that the school was "Authentically Collaborative."

2. See the account of my own learning of the OC philosophy of teaching in Matusov in press.

3. "Accordant" leave from an educational community involves families moving out of town, a child's graduation, and so on. It does not involve a philosophy conflict between a leaving member and the community.

4. Here I want to broaden the notion of "philosophy of teaching and learning" in a community to the notion of "philosophy of practice" to promote a broader discussion that extends schooling practices. Philosophy of practice is a coherent and dynamic unity that guides a person's participation in a **sociocultural** practice. This unity involves a person's beliefs, skills, goals, attitudes, and so on.

5. The changes in OC enrollment heavily depend on OC politics. A while ago the OC community wanted to make a case to the school district that the program needed one more classroom. To show potential enrollment the OC tried to attract too many new members. However, later the OC community realized that the district would not give an additional classroom because of lack of space in school buildings; besides there were too many children and parents in the classrooms. The OC changed its enrollment strategy, which led, in one year, to a lack of enrollment in 1992.

6. Fifty parent volunteers were videotaped. However, only 45 of them were analyzed because of some technical problems (e.g., absence of sound, a parent was out of the camera frame most of the time). Fifty parents constituted about 30 percent of the total OC "parent population." The number of parent volunteers involved in the study was limited by those parents who had chosen to participate in the inventions and inventors (K-6) all-program theme. The theme had been designed and developed by the teachers, parents, and children as a traditional OC activity without the participation of the researchers (see Matusov and Rogoff 1997).

7. It is unclear whether this parent volunteer "tired" of her own children-run approach, which she attributed to the whole OC community, or was involved in

pendulum swings between the adult- and children-run one-sided philosophies, or was experiencing some other conflict between the OC and her family philosophies of teaching and learning.

8. The picture in Figure 3 is based on a modification of Lagache's (1995) model of learning.

9. See Tharp and Gallimore 1988 for a similar but more detailed description of how a seasoned educator collaborated with a new teacher to improve her teaching.

10. See Matusov 1996 for a discussion of the notion of intersubjectivity that is based on the coordination of individuals' contributions to the activity rather than on overlapping individual understandings.

11. Think of another ecology—the ecology of a forest. What makes a forest an ecology is not similarities or differences between species, for example, wolves and hares, but mutual dependence between them: hares provide food for wolves while wolves provide disease control and genetic selection for hares. Wolves and hares mutually regulate each other. However, there is a limit in using the biological notion of ecology because it involves "circular" mutuality (of a forest) that is different from the "supportive" mutuality of the communities I consider here. The main difference is that, in the OC, individuals (e.g., teachers, parents, children, school administrators) are united with common problems of learning and teaching whereas individual animals in a forest do not have common problems. Their problems are not only different but incomprehensible for each other. It is interesting that one of the methods of therapy of a so-called alcoholic family whereby members of the family benefit in some deep way from being coercive and being coerced ("circular" mutuality) is to "reframe" their individual perspectives to make visual common problems for all family members (Catherall 1988; Morris et al. 1988; Steinglass 1985). United by problems, the family ecology switches from "circular" to "supportive" mutuality.

12. Consideration of diversity and development *between* communities of practice has to be undertaken in the future to complement this analysis.

13. In a way, ecological development is a movement away from the individual perfection of self-reliance and independence. Biology demonstrates the same principle—the more complex the organism, the more it requires from its environment for its well-being, and, thus, the better it incorporates into the environment (not in terms of efficiency but in terms of using more resources and having more opportunities and individual flexibility).

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