Noticing Learners' Strengths Through Cultural Research

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Abstract

Cultural research can help to identify strengths of cultural communities that are often viewed through a deficit model. Strengths-based approaches open researchers, practitioners, and the public to seeing the logic and value of cultural practices that vary from mainstream approaches. Strengths-based approaches include and extend beyond concerns for social equity: They are necessary for scientific characterization of human cognitive and social processes as well as for effective educational and societal practices. An example of a cultural strength is the sophisticated collaboration shown by many Indigenous-heritage children from North and Central America, which contrasts with the common practice in middle-class communities of dividing up activities into separate roles. These distinct approaches to working together fit with broader cultural paradigms that offer insights into human development as well as inspiration for alternative approaches. As an anonymous reviewer noted, the strengths of each group can be leveraged to mesh with the strengths of others.

Keywords

This article examines cultural differences in child development and child-rearing practices, with a focus on cultural strengths of groups who are often judged using a deficit model (e.g., African American, Latino/a, Native American, Pacific Islander). A strengths-based approach is essential for scientific understanding of human learning and development. Focusing on strengths will also provide paths for better assisting underserved populations in settings that are usually organized based on middle-class practices, like schools, parenting classes, and family interventions. Furthermore, their strengths can serve as models for others. To illustrate one such strength, we describe the sophisticated collaboration and initiative that is documented among Indigenous-heritage people of the Americas, and how sophisticated collaboration and initiative may arise within children's families and communities. We argue that these strengths develop in the context of a distinct, coherent paradigm of socialization practices and community values.

Success for children and families involves skill in *navigating across settings* organized according to distinct goals and cultural practices of a variety of dominant and nondominant communities (Gutiérrez, 2008; C. D. Lee, personal communication, 2008). People in different communities can learn from each other's strengths to expand their own ways of doing things as well as to better serve the learning and development of people from cultural backgrounds different than their own.

Cultural Research Opens Our Eyes

Cultural research is key to expanding understanding of human functioning beyond assumptions based on the cultural background of most researchers. Most researchers have lengthy experience in Western mass schooling, which enculturates even researchers who are not of European ancestry in the ways of learning and interacting of

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this institution. Mass Western schooling is a relatively recent European and U.S.-based institution and way of organizing children's learning. Classrooms are not culturally neutral; they promote culture-specific values and ideas from the dominant group (Deyhle & Margonis, 1995; Fryberg, Covarrubias, & Burack, in press; Lipka, 1998; Philips, 1983; Swisher, 1990). Western schooling is only one way of organizing learning; there are other sophisticated ways of organizing learning that are central to the ways of life of other communities as well as being under-recognized in communities where mass Western schooling is dominant (Rogoff, Callanan, Gutiérrez, & Erickson, 2016).

In many communities where extensive experience in Western-based schools has become common over several generations, school-like ways of learning and social interaction have become a dominant pattern in family and community life (Laosa, 1981; LeVine, LeVine, & Schnell, 2001; Rogoff, Alcalá, et al., 2014; Rogoff, Mistry, Göncü, & Mosier, 1993; Scribner & Cole, 1981). For example, Guatemalan Mayan mothers with extensive Western schooling are more likely to ask their toddlers questions to which the mothers already know the answer, like schoolteachers and unlike more traditional Mayan mothers whose questions genuinely seek information from the child (Rogoff, Mejía-Arauz, & Correa-Chávez, 2015). Likewise, a reliance on competition to motivate compliance and as a framework for assessment of learning is highly related to experience with Western schooling and conflicts with an emphasis on cooperation in many Indigenous communities (Graves & Graves, 1983; Madsen & Shapira, 1970; Philips, 1983).

If people only experience (or notice) the dominant cultural system, especially across multiple domains of their everyday life, then the same approaches to learning, collaboration, and social interaction seem to them to "work" everywhere. This makes it easy for people with extensive schooling experience to assume that their learning and social interaction practices are both normal and effective.

Limited experience and knowledge outside the dominant culture has led many well-meaning researchers, policy makers, and local and international government agents to assume that practices within their own highly schooled community define norms for all children's development, learning, and social interaction. This makes it easy to misinterpret the ways of people from many other backgrounds according to a deficit model— to assume that the others have something wrong with them.

For example, researchers can make serious mistakes in thinking that their procedures mean the same to others as among the usual participants, from highly schooled European American communities. But for research to have any validity, procedures need to be adjusted to the practices and meaning systems of the participants, and data need to be interpreted with cultural understanding. Although mainstream research has begun to include people from a variety of cultural backgrounds, it has seldom adjusted its procedures and interpretation of data to be appropriate to the cultural experience of the participants. Instead, data are often gathered and interpreted from the perspective of the cultural values and practices of the researchers. This is a serious problem—it undermines understanding and negates strengths of individuals and of cultural communities, by judging others' practices by the assumptions and value system of the dominant community.

As Wober (1969) put it, research has often asked "How well can they do our tricks?" In the next sections, we first consider negative consequences of the deficit model, and then examine alternatives offered by focusing on the strengths of nondominant communities.

Negative Consequences of the Deficit Model

Even with good intentions, people who are familiar only with dominant cultural ways commonly make the unfounded assumption that there is "One Best Way"— only one way that works. Alternative ways are assumed to be deficient and in need of fixing. This deficit approach treats cultural practices of nondominant communities as problems that account for the difficult life circumstances often faced by families from nondominant communities (e.g., poverty or difficulties in middle-class institutions such as schools).

Although many interventions based on a deficit model are well-meaning, it should be recognized that there is also a long history of U.S. and European efforts to subjugate colonized groups through schooling and missions, for the gain of the colonizers. From centuries ago into recent decades, U.S. government policies and school practices have attempted to eradicate the cultural practices of subjugated groups and substitute the dominant group's practices in a form that prepares them for positions of servitude or gives access to their resources to the dominant group (Bell, 2007; Menchaca, 1997; Rogoff, 2003).

When the assumption of One Best Way is institutionalized in research and policy, it leads to a subtractive model, asking children and families to abandon their familiar and often successful ways to adopt the dominant approach (Miller & Sperry, 2012; Valenzuela, 1999). To understand and support human development, it is essential to examine people's ways of life without assuming that the practices of highly schooled people are the norm, avoiding a subtractive, deficit model

(Cabrera & The SRCD Ethnic and Racial Issues Committee, 2013; Cole & Bruner, 1971; Deyhle & Swisher, 1997; García-Coll et al., 1996; Gutiérrez & Rogoff, 2003; Howard & Scott, 1981; McLoyd, 2013; McLoyd & Randolph, 1985; Nasir & Hand, 2006; Valencia, 1997; Yosso, 2005; Zirkel & Johnson, 2016).

A deficit model is not simply the idea that somebody still has something to learn—it assumes that they should already have learned it and that remediation is needed to fix this. Sometimes the deficit is blamed on a group's genes or brains and sometimes on their family background or "cultural deprivation" (Dinishak, 2016; Dudley-Marling, 2007; García-Coll et al., 1996; Miller & Sperry, 2012; Valencia & Black, 2002). Any of these ways are problematic.

Examples abound. Many well-meaning individuals with limited cultural perspective have attempted to teach people from less- or nonschooled backgrounds some of the practices of schooling and of highly schooled communities in the attempt to help students perform like their middle-class peers and to try to increase their success in mainstream worlds (Fernald & Weisleder, 2015). However, the interventions often take the view that the people's existing practices are faulty and need remediation (or even that they are the cause of poverty). For example, interventions for executive function often overlook (and may undermine) the sophisticated initiative and self-regulation that are common in some supposedly deprived populations (Cabrera & The SRCD Ethnic and Racial Issues Committee, 2013).

The deficit model also appears in the current concern about the "30-million word gap," based on correlations between social class and some measures of vocabulary (measured in questionable ways, including ruling out multiparty communication that is common in many communities; e.g., Johnson, 2015; Sperry, Miller, & Sperry, 2015). There is little recognition of the fact that the correlations are also associated with many aspects of middle-class status and extensive schooling (including freedom from the conditions of poverty) that relate to performance on tests and in school (Heath, 2015). Interventions to "fix" the so-called word gap ask parents to talk more to their children, with the assumption that getting parents to speak more words to young children will result in superior language development in general and success in school (Hindman, Wasik, & Snell, 2016; Miller & Sperry, 2012).

This attempt at a quick "fix" ignores the long history of structural differences across communities. As Oscar Barbarin has pointed out,

Interest in the word gap speaks to a widespread interest in miracle solutions. "If the problem facing low-income children of color is simply a question

of parents saying more words and longer words, it would be much easier to fix than poverty and access to education for adults," he said. "It'd be much easier to fix than the sense of alienation that poor and ethnic minority groups feel from mainstream society." (Rothschild, 2016)

In addition, the deficit approach focusing on vocabulary overlooks highly developed language skills—such as narrative fluency, oratory virtuosity, language dueling versatility, and sophisticated use of metaphor—in some populations that are regarded as having language deficits based on vocabulary tests (see the recent forum in the *Journal of Linguistic Anthropology,* Averini & Johnson, 2015; Heath, 1983; Miller, Cho, & Bracey, 2005; Miller & Sperry, 2012; Solís & Callanan, 2016). Mainstream researchers and practitioners have paid little attention to the research showing sophisticated language skills among children from nondominant populations (Cabrera & The SRCD Ethnic and Racial Issues Committee, 2013; Miller & Sperry, 2012).

Interventions based on a deficit model also undermine aspects of parent-child relations that are important for children's development and family functioning (Dudley-Marling & Lucas, 2009; González, Moll, & Amanti, 2005). For example, last year an intervention by the Initial Education Program in Mexico made Indigenous Mexican mothers doubt their child-rearing practices and values, by insisting that children must achieve autonomy by doing chores mostly by themselves, based on Western ideology valuing individual solitary achievement. In contrast, autonomy in the participants' Indigenous ideology is a progressive capacity to collaborate, to assume social responsibilities, and to be involved in family and community activities (Bertely-Busquets, 2016). The autonomy that is involved in collaborative initiative is an important skill, one to build on and even model from, not one to be replaced by the Western version. (We expand on this later.)

Although schooling and associated skills have great importance in middle-class communities, school success is not the apex of successful childhood in many other communities. In many communities, intelligence and competence are defined as taking initiative in responsible, collaborative use of knowledge and skills for the good of the group, which includes learning or developing new approaches to contribute to family and community wellbeing (Lutz & LeVine, 1982; Oyserman, Coon, & Kemmelmeier, 2002; Rosado-May, Urrieta, Dayton, & Rogoff, in press; Serpell, 1993).

At the same time, schooling has become an economic and political imperative for families and communities since the implementation of mass schooling over the past century (LeVine et al., 2001). Success in

school—and its related certifications—is a bottleneck in access to social and economic resources. Not knowing how to do well in school is thus consequential for marginalized populations, and deficit views contribute to maintenance of societal inequities.

We do not contest the idea that people in many cases should learn school-related skills, such as reading, writing, arithmetic. They may also need to learn specialized ways of communication and language that are important for success in school and on tests, such as how to respond to known-answer questions and veiled directives, raise a hand to bid for a turn to speak, exhibit vocabulary, make eye contact when being scolded, and explain ideas explicitly even if the ideas are already obvious to the listener (Basso, 1984; Delpit, 1988; Martini & Mistry, 1993; Rogoff, 2003; Scollon & Scollon, 1981; Tharp & Gallimore, 1988). A strengths-based approach is not a romantic view that glosses over skills and knowledge that have yet to be learned.

In today's world, it is often an advantage to know the skills necessary for school. But it is not a deficit to not know how to do so *yet*. By analogy, many readers of this article do not know how to speak a Mayan language. Do they have a Mayan language deficit? No, they simply have not learned Mayan yet. If they need to use it for some reason, then yes, they should learn it. But their learning is better supported if it is not treated as a deficit, a shortcoming that they or their parents or their community are blamed for. Indeed, their learning of a Mayan language is better supported by building on their strengths in another language or in language learning generally.

Building on Strengths

A strengths-based, *additive* approach fits with a central precept in learning theory, and almost a century of research, that indicates that people learn better when their prior knowledge can serve as the basis for their learning (Committee on Developments in the Science of Learning, 1999). Thus learning new cultural practices and information needs to build on people's cultural practices in an additive, not subtractive, way (Moll, Amanti, Neff, & Gonzalez, 1992; Valenzuela, 1999). An additive or strengths-based model emphasizes learning new skills and information without undermining or trying to eliminate skills and information that are present in populations that have yet to learn the ways of schooling. Everybody is able to and benefits from learning to do things more than one way, expanding their repertoires of practice (Gutiérrez & Rogoff, 2003).

Research has identified sophisticated skills that are resources for learning among populations that are often misunderstood within a deficit model. Their strengths can also serve as models for other groups to expand their own repertoires of practice.

Strengths in attentiveness to surrounding events

Research with children from Guatemalan Mayan and Indigenous-heritage U.S. Mexican backgrounds has revealed that they often attended so skillfully to surrounding events that they stayed on top of several events simultaneously, without either focus of attention interrupting the other. They did so substantially more often than children from highly schooled Guatemalan Mayan, U.S. Mexican, and European American backgrounds, who more often appeared oblivious to surrounding events in which they would otherwise have been interested, or quickly alternated their attention between competing events with brief interruptions (view video at http://stemforall2016.videohall.com/presentations/693; Chavajay & Rogoff, 2002; Correa-Chávez & Rogoff, 2009; Correa-Chávez, Rogoff, & Mejía-Arauz, 2005; López, Correa-Chávez, Rogoff, & Gutiérrez, 2010; Rogoff et al., 1993; Silva, Correa-Chávez, & Rogoff, 2010; Silva, Shimpi, & Rogoff, 2015).

Broad attention to surrounding events is valuable for learning from important activities that are not explicitly designed for the viewer's learning (Rogoff, Correa-Chávez, & Silva, 2015). Attentiveness to what is going on is also valuable for being able to successfully collaborate with other people, with consideration of others' activities and with skilled coordination (López, Najafi, Rogoff, & Mejía-Arauz, 2012). Children in a number of Indigenous-heritage communities of the Americas often collaborate in sophisticated ways that are rarely seen among children from highly schooled communities. In the next two sections, we discuss two forms of sophisticated collaboration observed in middle childhood (from about age 6 to 10 years):

- Working together in particularly fluid, skilled coordination; thinking together.
- Pitching in with initiative to ongoing family and community endeavors; in particular, collaborating in household work without being asked.

Then we discuss how these sophisticated forms of collaboration are situated in socialization practices in the family and cultural value systems.

Strengths in children coordinating ideas—thinking together

Cultural differences in children's ways of working together have long been noted (Graves & Graves, 1983).

For example, rural Mexican children were more likely to cooperate in a game than were urban children in the United States, who competed with each other even at the expense of any of them winning (Madsen & Shapira, 1970; see also Correa-Chávez, Mangione, & Mejía-Arauz, 2016).

As U.S. schools expanded the use of cooperative learning, they have found that many children have difficulty coordinating ideas and actions with others (Sharan & Sharan, 1992). This appears to be the case especially for middle-class European American children. Philips (1983) observed that in small group work, Anglo elementary school students in Oregon spent a great deal of their time disputing who would control the task, and thus had difficulty completing the task. However, students from the Warm Springs Reservation shared roles to smoothly collaborate and complete the tasks. Philips argued that the Indian children had learned how to engage in collaborative relations well before starting school, from their community's collaborative forms of interactive engagement favoring harmonious group dynamics.

Systematic cultural comparisons have revealed that children from Indigenous-heritage backgrounds of the Americas often employ an especially sophisticated form of collaboration, in which children think together, fluidly blending agendas and ideas with others (see https://www.youtube.com/watch?v=judFMZsaJaA for a video example; López et al., 2012; Mejía-Arauz, Rogoff, Dexter, & Najafi, 2007). They are attentive to each other's efforts, flexibly adjust their own actions to align with the direction of the group, and take initiative when they see what needs to be done and support others in doing the same.

In contrast, children from highly schooled (middle-class) backgrounds often divide up a task in ways that do not allow thinking together. For example, triads of European American middle-class siblings exploring museum exhibits often relied on turn-taking to divide access to the materials; Mexican immigrant sibling triads seldom divided access into turns—they more commonly collaborated together (López et al., 2012). In folding origami figures, triads of peers from families with extensive schooling (whether European American or Mexican heritage) tended to work solo or at most in dyads, leaving one child out, unlike the fluid and inclusive collaboration among triads from Indigenous-heritage Mexican backgrounds (Mejía-Arauz et al., 2007; see also Correa-Chávez, 2016).

When sibling pairs in California were asked to work together to solve a planning problem, Mexican-heritage pairs showed sophisticated blending of their agendas. They collaborated fluidly, sharing leadership and smoothly exchanging roles, and anticipated each other's

actions, to accomplish the task (Alcalá & Rogoff, 2017). In contrast, sibling pairs from highly schooled European American families collaborated half as much; they often divided the task, not sharing ideas but instead taking turns, excluding their sibling, or one child simply bossing the other.

The shared thinking among Indigenous-heritage children often involves flexibility in who leads at any particular moment. For example, Mazahua (Indigenous Mexican) children and adults worked together on fixing the windows of their school, with individuals taking the lead when they saw what to do, and comfortably shifting when someone else had an idea. The participants moved easily, fluidly, between leading and supporting roles (Paradise & de Haan, 2009).

Similarly, in a study of pairs of 9-year-old children instructing a younger child in how to play a game, Navajo pairs collaborated closely (Ellis & Gauvain, 1992). When one member of the pair was leading the instruction, the partner was attentive, and when the other child took the lead, he or she built on the earlier information provided by his or her partner. In contrast, Anglo pairs tended not to pay attention when they did not have the lead, and their contributions to the instruction often were disconnected, not building on the partner's prior information.

An especially nuanced and sophisticated form of fluid collaboration was revealed in a study of pairs of children programming a computer game together (Ruvalcaba & Rogoff, 2016). Pairs from Indigenous-heritage U.S. Mexican backgrounds collaborated twice as much as did pairs from highly schooled European American backgrounds. Although both backgrounds collaborated by making and ratifying proposals as to how to proceed, the Mexican-heritage pairs also engaged in very sophisticated shared thinking that proceeded without the need to explicitly propose a course of action. In this approach, the children "read" each other's ideas without needing to stop for proposals. It was as if they acted as one organism with four arms (to use Andrew Dayton's metaphor). They seemed to engage with a unified intention (to use Luisa Magarian's phrasing).

The European American pairs seldom employed this very smooth form of fluid collaboration. Rather, they often divided the project, with only one child engaged in programming at a time, not thinking together. Furthermore, their interactions often involved conflict over whose idea would prevail or who could control the keyboard or mouse. (Higher levels of conflict among children from highly schooled European American backgrounds have also been found in a number of other studies [e.g., Kagan, 1984; Rogoff et al., 1993].)

The fluid collaboration of many Indigenous-heritage children of the Americas and the division of labor

employed by many children from highly schooled families also show up in the ways that children engage collaboratively—or not—in work at home.

Strengths in children pitching in with initiative to family endeavors

In many Indigenous-heritage communities of Latin America, ethnographers have noted impressive collaboration of young children in work at home. By at least age 6 or 7, children contribute under their own initiative to some aspects of food preparation, keeping the household orderly, and economic activities such as weaving, agriculture, and tending a shop (see TEDx talk at http://www.facebook.com/barbararogoffpubli cations/videos/1116724285019770; Correa-Chávez, Mejía-Arauz, & Rogoff, 2015; Gaskins, 2000; Rogoff, 2003, 2011).

When Maya children from the Yucatán Peninsula were asked why they helped, they seemed surprised by the question; the answer seemed obvious to them. One child responded, "I help because I live there," and another mentioned, "Helping is everybody's responsibility." When asked if they knew other children who did not help at home, most of them said that they do not know any other child who does not help; a few mentioned, with a tone of outrage, that they know a child who does not help. These Maya children generally view work as something they are proud to do; they like to contribute to their family and community, even when it involves arduous work like carrying firewood (Alcalá & Cervera, 2017).

The cultural contrast with highly schooled middle-class communities is stark. It raises important questions about parenting and child development assumptions of the child development literature, which focuses on how middle-class, highly schooled parents get their children to do "their chores" through nagging, negotiations, struggles, and contractual arrangements such as contingent allowances or removal of privileges depending on the children's compliance. For example, middle-class children in Los Angeles contributed minimally and reluctantly to household work and did so mostly to earn privileges or avoid losing them; the children needed constant supervision and monitoring. This often evolved into struggles and negotiation between parents and children, and refusals by children to help (Klein & Goodwin, 2013; Ochs & Kremer-Sadlik, 2013). In child development literatures, middle-class children's reluctance to help in middle childhood is viewed as normal. Most child development researchers know little about the voluntary helpfulness of children in Indigenous American communities during middle childhood.

Recent cultural research has taken a strengths-based approach to directly compare cultural differences in children's collaborative initiative in helping at home. Mothers and their 6- to 10-year-old children in Indigenous-heritage communities in Mexico and from Mexican immigrant communities in California have reported that children engage voluntarily in a wide variety of skilled family and community work. They pitch in without being asked to help (Alcalá & Rogoff, 2017; Alcalá, Rogoff, Mejía-Arauz, Coppens, & Dexter, 2014; Coppens, Alcalá, Mejía-Arauz, & Rogoff, 2014; Coppens, Alcalá, Rogoff, & Mejía-Arauz, 2016; López & Rogoff, 2016; Mejía-Arauz, Keyser-Ohrt, & Correa-Chávez, 2013).

Both mothers and children emphasized the importance of collaboration and initiative (Coppens et al., 2014; Coppens et al., 2016). Many Indigenous-heritage mothers indicated that it is important for mothers not to try to control children's engagement in family work, that "it needs to be born from their heart." The children themselves said that of course they help, and they want to help, because they are part of the family and everyone pitches in (Coppens et al., 2014).

In contrast, highly schooled mothers from Guadalajara and Central California (whether of European or Mexican backgrounds) told a different story. Their children seldom helped voluntarily; mothers reported frequent struggles and heavy adult management, even for children to do self-care chores such as cleaning up their own messes or clearing their own plate or doing small assigned chores such as taking out the garbage. The middle-class children seldom contributed to household work that benefits the family as a whole, such as cleaning up the house or organizing a meal. Their contributions were generally limited to "their chores" and were usually only done by assignment, with heavy-handed adult control (Alcalá et al., 2014; Coppens et al., 2014).

In sum, children from Indigenous-heritage Mexican backgrounds show impressive initiative and collaboration in pitching in at home. Their collaborative attitudes and skills are sophisticated—and surprising from the perspective of middle-class communities. The cultural differences in readiness to collaborate are situated in distinct paradigms of cultural practices and values of children's families and communities (Rogoff, 2016).

Children's Collaborative Strengths Are Supported by Family Practices and Cultural Values

The strikingly distinct cultural approaches of sophisticated fluid collaboration and pitching in with initiative, on the one hand, and division of roles, on the other, are associated with related child-rearing practices and

cultural values. The patterns are multifaceted and seem to cohere as distinct paradigms (Coppens et al., 2016; Rogoff, 2016). Different approaches to working together are encouraged in distinct paradigms—one in which children engage broadly in family and community endeavors, with initiative, and one in which children's lives are generally separated from adults. (Please note that these contrasting paradigms do not map onto the common oversimplification that attributes either individualism or collectivism to the world's nations. In particular, autonomy is an important feature of collaborative initiative, and the two paradigms that we discuss are two of potentially a number of distinct child-rearing approaches [see Rogoff, 2003].)

Sophisticated collaboration and taking initiative to help appear to be part of a paradigm known as *Learning by Observing and Pitching In* to family and community endeavors (LOPI; formerly referred to as Intent Community Participation; Paradise & Rogoff, 2009; Rogoff, 2014, 2016; Rogoff, Alcalá, et al., 2014). In this paradigm children are widely included as valued contributors to family and community efforts, such as helping with household work and community events, alongside everyone else. They are treated in a collaborative manner at the level of community organization as well as in immediate social interaction, taking part and contributing with initiative alongside other people. The goals for child development prioritize becoming increasingly knowledgeable and skilled collaborators for the common good, through inclusion as observers and contributors in the wide range of activities of their families and communities. The extensive participation of children in almost every aspect of family and community life occurs within a complex social organization where children and adults collaborate, working toward shared goals (Alcalá & Cervera, 2017; Morelli, Rogoff, & Angelillo, 2003; Rogoff, Najafi, & Mejía-Arauz, 2014).

A contrasting paradigm segregates children from the activities of the broader community (Rogoff, 2014). Instead they are often relegated to specialized caregiving situations or learning settings like Western schools, which are generally organized by adults in situations outside of actual productive use of the information and skills. In this paradigm, children are not contributors; their activities are controlled by adults who attempt to motivate children's compliance using rewards or threats. Adults' and children's roles are separated, and adults assign divided roles to children. The goals for child development focus on children receiving information and becoming skilled in specific steps of activities, in preparation for certification to be able to contribute when they become adults.

We argue that being collaboratively included as valued contributors in their families' and communities'

endeavors encourages many Indigenous-heritage children of the Americas to use initiative and to fluidly coordinate with others. Indeed, Mayan mothers have offered this as their theory of how their young children learn to collaborate with others (Marta Navichoc Cotuc, personal communication, fall 1986). We speculate that many children from highly schooled communities are, in turn, encouraged to divide their activities from those of others by such everyday practices as enforcement of turn-taking that divides access to resources or by being excluded from being present or participating in many activities in which adults engage.

Family practices supporting children's collaboration or division of labor

Socialization practices at home are related to children's sophisticated collaboration or division of labor. In middle childhood, U.S. Mexican- and European-heritage children who showed collaborative initiative in household work with their families were also more likely to collaborate with another child in a planning task or with an adult in a science instruction activity. Children who engaged in household work only under adult control were more likely to divide their efforts with a peer by taking a boss-and-underling role in a joint planning task (Alcalá & Rogoff, 2017; López & Rogoff, 2016).

Inclusion or exclusion of children at young ages may be especially formative for children's approaches to working together by fluid collaboration or dividing tasks. In Indigenous communities of the Americas, it is common for very young children to help with what those around them are doing. For example, among Mayan families in the Yucatan Peninsula, even toddlers help with simple household work, such as picking up trash or feeding the chickens. Their contributions are not required or expected; parents acknowledge that these children are too young to provide much actual help. However, children's autonomy is respected and they are allowed to help (Alcalá & Cervera, 2017; Cervera & Méndez, 2006; see also Mosier & Rogoff, 2003).

This inclusiveness and respect for even toddlers' efforts to contribute is key to the child-rearing practices reported by Mexican-heritage mothers in California (Coppens & Rogoff, 2017). These mothers reported that when their 3-year-old children attempt to help, mothers value their contributions and include them collaboratively in the shared work. They also reported that an essential aspect of supporting their children's development is to include them and value their efforts. The young children's contributions, however partial, are appreciated like the contributions of their elders, and their growing maturity is quietly recognized.

In contrast, highly schooled European American mothers in California often reported that they tried to do their work around home when their 3-year-olds were napping, to avoid children's attempts to help. Mothers reported that they also attempted to deflect the children's efforts by suggesting that they go play or by giving them mock work that did not actually contribute to the effort at hand but which kept the children busy. In addition, they generally did not speak of the children's attempts as helping, but as play (Coppens & Rogoff, 2017), although researchers regard toddlers as motivated to help (e.g., Warneken, Chen, & Tomasello, 2006).

The division of labor in small groups from highly schooled communities appears often to be prompted by the highly schooled adults, who often take more of a controlling role than adults from traditional Indigenous American backgrounds. In Guatemalan Mayan family groups who were asked to construct a puzzle together, mothers with 12 years or more of schooling (and with many associated middle-class practices) often managed the group of 3 children by telling them what to do and dividing them into different parts of the task. In contrast, in Mayan families in which mothers followed many traditional Mayan practices (and had limited experience in Western schooling), the mothers and children more often worked together as a whole team of four. They coordinated fluidly, sharing ideas and assisting with actions. The children in these families more often made suggestions, providing leadership, than the children in the Mayan families with mothers who had extensive experience in Western schooling (Chavajay & Rogoff, 2002).

Similar contrasts were found when the Mayan families engaged in a problem-solving discussion: The more traditional Mayan families took part more evenly and flexibly in discussing how to solve the problem, whereas the highly schooled Mayan mothers often took control and called on the children to speak in turn. The highly schooled mothers often took a role that was directive and separate from the children's roles, dividing the children's roles from each other (Chavajay, 2006).

Likewise, highly schooled European American mothers often divided access to resources using a turn-taking model when a toddler and 3- to 5-year-old sibling were interested in the same novel objects (Mosier & Rogoff, 2003). To attempt to resolve conflicts, these families used turn-taking rules or other rules for dividing access (such as determining that the object goes to the one who had the object first or the one who has not had it for a while). These rules appear to be cultural tools for managing conflicts by dividing resources, a practice often called "sharing" but which does not involve shared thinking. Instead of partners heading for goals together, the emphasis is on individual rights and ideas.

In contrast, 3- to 5-year-old Mayan children in the same situation often found ways to share thinking as well as access to the objects with their younger sibling. They skillfully blended agendas in ways that involved thinking and acting in concert—offering to help the 1-year-old operate an object or inventing ways that they and the toddler could play together with the objects (Mosier & Rogoff, 2003).

The pattern of very fluid collaboration in families from Indigenous backgrounds of the Americas can even be seen at a scale of fractions of seconds (Dayton, Aceves-Azuara, & Rogoff, 2017; view video at http://stemforall2017.videohall.com/presentations/1034). Using microanalysis with 200-ms segments during 10-s stretches of interaction, Dayton et al. found that Guatemalan Mayan mothers with little experience in Western schooling and their two young children coordinated, all three together, moving in concert with each other as a fluid ensemble in most of the micro-interaction segments. In contrast, highly schooled European American family groups spent few of their micro-interaction segments collaborating as a group. Instead, they often split the group into two people coordinating and the third person left out, proceeded with none of the three family members engaging together, or resisted each other's efforts or engaged roughly as they negotiated micro (or not so micro) conflict.

The support within family life for children learning to collaborate and take initiative fits with community values and practices of collaboration. Thus, support for children learning collaboration and initiative occur from micro to macro organization, in a sort of fractal relationship (Dayton & Rogoff, 2016).

Community values and practices supporting collaboration

The emphasis on collaboration and initiative in Indigenous-heritage American families fit with community values and the organization of communities themselves (Corona, 2011; Flores, Urrieta, Chamoux, Lorente Fernández, & López, 2015; Paradise & de Haan, 2009; Pelletier, 1970). For example, many Mexican communities emphasize the importance of being *acomedida/o*, which has no direct English equivalent; it generally translates to being alert to help without being asked, aligning with the direction of the group (López et al., 2012).

Another example is the Cherokee Nation's summary of Cherokee Community Values, which conveys the priority of collaboration in single Cherokee words or concise phrases. Central among these priorities is

"*gadugi*, People coming together as one and working to help one another." Related priorities include "*ditsal-igohi itsehesdi*, Live united, work as a team with one another" and "*nani'v yvwi detsatloyasdisgesdi*, Include everyone, all human kind; however many" (Cherokee Nation Community & Cultural Outreach, based on Benny Smith, 2009, via Ryan B. Mackey, n.d.).

The collaborativeness of Native American communities in the United States has been seen as a "problem" for the U.S. government, in the efforts to take over Indians' lands: "There is no selfishness, which is the bottom of civilization" (Senator Dawes in 1883, quoted in Spring, 1996, p. 179). The U.S. government and colonists tried to instill competition to accumulate property: In an 1888 congressional report, the commissioner of Indian affairs was reported to believe "that the Indian student should be taught the 'exalting egotism of American civilization,' so that he will say 'I' instead of 'We,' and 'This is mine' instead of 'This is ours'" (Adams, 1996, p. 35).

Cultural Communities Should Learn From Each Other's Strengths

Schools, workplaces, political institutions, and many communities value collaboration and urge using more collaborative ways to work with others to solve complex issues (Kuhn, 2015). Although the organization of schooling still often prioritizes separating individuals, such as by treating collaboration as cheating and emphasizing control of children's interactions by teachers, some schools have successfully broken out of this mold (e.g., Rogoff, Goodman Turkanis, & Bartlett, 2001).

Nationally, the importance of collaboration is recognized as a 21st-century skill, especially given the importance of teamwork in today's economy and in harmonious family life. The child-rearing practices of Indigenous-heritage communities of the Americas provide valuable insights into processes of collaboration and their development, which can help the world to address important social and technical challenges such as climate change, hunger, and energy supplies.

We advocate a mutual process of learning, building on the skills and resources of distinct cultural traditions. The skills of nondominant communities (such as sophisticated collaboration in many Indigenous communities of the Americas) can be used as a foundation for helping children of nondominant communities to learn new skills that are important in the dominant society, in a strengths-based approach. Although a strengths-based approach is still rare in many school systems, numerous sources are available to provide guidance in implementing a strengths-based approach for children of nondominant communities.

Research also needs to use a strengths-based approach to document the assets that a variety of nondominant groups have to offer. In this chapter, we have focused on strengths of Indigenous-heritage communities of the Americas and of families that have emigrated from such communities (such as many Mexican and Central American families that now live in urban centers in their own nation or in the United States). We do not assume that other groups with nondominant histories necessarily share the same strengths; the strengths of each group need empirical examination. It is important to recognize, too, that as people with Indigenous American heritage have increasing experience in the practices and institutions of middle-class cultural life (like schooling), some of the more traditional Indigenous American practices are attenuated or lost, while others are sustained (Chavajay & Rogoff, 2002; Correa-Chávez & Rogoff, 2009; García, Rivera, & Greenfield, 2015; Mejía-Arauz et al., 2007; Rogoff, 2011; Rogoff, Najafi, et al., 2014).

The strengths of children from nondominant backgrounds and the strengths of their families and communities—such as sophisticated collaboration—can also help expand the repertoires of skills of children from dominant, highly schooled communities. We are not arguing that children, families, or communities with extensive Western schooling (and associated middle-class practices) have a deficit in collaborative skills. Instead, we suggest simply that many of them have had limited opportunities to learn how to work together collaboratively. Cultural research provides models and suggestions for how to support them in learning these valued skills, such as by including them in valued productive activities and encouraging and supporting their collaboration—recognizing the strengths of the children from highly schooled family backgrounds—even at early phases of collaborative expertise.

Learning how to adapt to distinct circumstances is obviously crucial for children from immigrant and nondominant cultural backgrounds; they are required to function across cultural contexts on a daily basis. For example, children may be expected to avert their eyes while interacting with respect with adults at home, while they may be expected to look adults in the eye while interacting with respect with adults at school (Chisholm, 1996; Hale-Benson, 1986). At school, respectful silence of Native American children may be misunderstood to be disinterest or resistance (Plank, 1994).

However, the importance of adaptability to distinct cultural values and practices applies to children from all backgrounds. This includes children from the dominant community whose facility in navigating across different cultural settings is increasingly important for their own success (Bourke, 2010).

Cultural research can make us aware of community and institutional practices that we otherwise overlook. If we look for strengths (and avoid deficit models), we will gain opportunities to understand the range of human potential and gain ways to help people learn sophisticated skills that may not yet be part of their repertoire of practices. A challenge for future research is looking for strengths in all populations and designing learning situations and assessments in ways that build on and build toward the strengths of all.

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