A FIELD GUIDE TO CROSS-CULTURAL RESEARCH ON CHILDHOOD LEARNING

Theoretical, Methodological, Practical, and Ethical Considerations for an Interdisciplinary Field

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Cover image: Children playing in front of their home in Kafr Elsheikh, Egypt (2016). Photo by Mona Abo-Abda, https://commons.wikimedia.org/wiki/File:ART_and_KIDS.jpg. Cover design: Jeevanjot Kaur Nagpal

3. Charting a middle course: Theory and methods in the practice of cross-cultural research

Coordinated by Ivan Kroupin, Felix Riede, April Nowell, and Chantal Medaets

Recent years have seen a resurgence in work arguing for the importance of cross-cultural research. Yet, there are few guides and worked examples of how theory in cognitive science and anthropology can actually be instantiated in a productive research program. This chapter collects contributions on this topic, with several background essays on the practice of cross-cultural research and six concrete examples of research programs. Across these contributions, the recurring theme is balancing the need for generating generalizable science with attention to local cultural contexts. Instead of converging on a single solution, these contributions provide a lay of the land, demonstrating the various ways in which researchers have found a pragmatic balance between the universal and the specific in studying our cultural species.

3.1. Notes on a difficult terrain

Ivan Kroupin, Felix Riede, April Nowell, and Chantal Medaets

The challenge of this book in general, and this chapter in particular, is to outline a study of childhood learning across cultures. This work would, in some sense, be much easier if we were instead interested in studying only the universal features of the human mind, or only

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the patterns of thought and behavior of a specific group. Each of these charts a clear path in terms of the desired level of analysis (universal v. local) and methodological approach (standard experiments v. rich ethnography). However, neither can lead to general understanding of human learning. After all, universal patterns alone cannot be the whole science of human cognition in any meaningful sense, because we are inherently cultural beings (e.g., Geertz, 1973; Cole, 1996; Levinson, 2012; Kroupin et al., 2024). Moreover, even if we are interested only in universals, failing to account for culture means that we cannot identify when we may be using methods that do not measure what we intend them to (e.g.,Greenfield, 1997; Hruschka et al., 2018). Similarly, studying exclusively culturally specific phenomena means the scholarship we engage in, while certainly legitimate in and of itself, is no longer part of a generalizable science (D'Andrade, 2000; Bakhurst, 2009).

The study of learning across cultures, then, must chart a middle course. The present chapter provides perspectives from researchers working in this difficult terrain—a series of notes on the territory and sketches of existing routes. Nielsen details the importance and feasibility of cross-cultural work, debunking persistent myths that have prevented the field, and especially universally oriented researchers, from engaging with culture to a greater extent. Moving to concrete methodology, Medaets and Gomez provide an introduction to ethnography, a key tool to bring cultural detail into our research programs. Some of the earliest and most successful integrations of ethnography and experimental psychology, in turn, come from the first wave of cross-cultural research (e.g., Cole et al., 1971; Greenfield & Childs, 1977; Lancy, 1981), which relied on a theoretical framework developed by Vygotsky and his students (e.g.,Vygotsky, 1978; Luria, 1976) to organize their work (see Rogoff & Chavajay, 1995; Cole, 1996 for historical reviews of how this framework came to be adopted). Pamei introduces this framework and Greenfield places it in dialogue with the more universalist approach of Piaget, as well as her own broader theoretical framework. Taverna & Coppens raise a separate set of theoretical issues concerning the epistemologies from which western cognitive science is conducted. In addressing these limitations, they propose

a theoretical and methodological approach augmented with insights from the epistemology of the Wichi, a small-scale ethnolinguistic group residing in Argentina and Bolivia. Takada, Silan, Keller and Wiseman further outline their own paths in combining generalizable and culturally salient frameworks, highlighting a range of theoretical and methodological approaches. Finally, Ferreira provides an Indigenous perspective, highlighting the cultural specificity of our assumptions about 'childhood' and sources of knowledge which may not be immediately apparent to outside researchers.

As will become obvious throughout this chapter, there is currently no agreed-upon approach to theorizing or studying learning across cultures. Our goal is to highlight that this challenge is both worthwhile and tractable. The perspectives we offer here are aimed to give a sense of the range of approaches in this domain, any and all of which may serve as models for researchers developing their own cross-cultural program. With that in mind, we close this introduction by directly addressing readers coming from universalist and culturalist backgrounds. Given the typical difference between these camps, it may benefit those coming from each to focus on particular aspects of the perspectives below.

To those coming from a universalist perspective, the following pieces can help illustrate conceptual and methodological steps that can be taken to introduce a greater attention to culture within your research program. Nielsen is a perfect starting point, outlining both the motivation for and practical approach to cross-cultural work. After this, it is perhaps easier to begin by reading those perspectives that more explicitly discuss conventional experimental psychological methods in cultural context (Wiseman, Keller, Greenfield) and work your way towards more cultural approaches in order to understand the relevant methods (Medaets & Gomez, Takada, Silan), frameworks (Pamei, Taverna & Coppens) and perspectives (Ferreira).

Those coming from a culturalist perspective may benefit from focusing on the ways in which more standardized methods can be developed and implemented in conjunction with close attention to culture. Greenfield and Keller provide historically successful

integrations between ethnographic and experimental approaches, while Taverna & Coppens review a more recent set of efforts. Wiseman illustrates a contemporary program that has produced ethnographically informed generalizable measures. Pamei, Takada, and Silan likewise focus on the interface of experiment and cultural context in various ways, while Ferreira provides rich material for considering how generalizable methods may be integrated with local knowledge.

3.2. Debunking myths in cross-cultural developmental psychology

Mark Nielsen

Scrutiny persists over the legitimacy of psychology as a science. Criticisms include a reliance on suspect statistical techniques, lack of experimental reproducibility, and failure to consider the potential historical situatedness of research endeavors (e.g., Bakker & Wicherts, 2011; Collaboration, 2015; Muthukrishna et al., 2021). Among these critiques are questions about the cultural specificity of data collection and findings that lack verifiable generalizability (Henrich et al., 2010). An analysis of prominent developmental journals noted that the vast majority of studies were undertaken with WEIRD (Western, Educated, Industrialized, Rich, and Democratic) populations (Nielsen et al., 2017). Despite this, and other attempts at drawing attention to the problem (Amir & McAuliffe, 2020; Draper et al., 2022), it appears little has changed. Taking the latest issue of one of the peak developmental psychology outlets as a guide, 12 of the 18 articles featured only WEIRD data and two articles included minority populations but placed the data in WEIRD contexts. Statements alluding to generalizability remain common (e.g., "This study demonstrates that children …") even though most data lacks appropriate foundations (Peters et al., 2022). This continued lack of priority afforded to the collection of heterogeneous data is indicative of a majority approach that devalues cross-cultural research and treats it as unnecessary or impractical. This approach rests on the perpetuation of a series of myths that warrant debunking.

Myth #1: Research is generalizable without heterogenous data

If research outcomes are being written as if they speak to general features of human cognition, universality cannot be assumed until evidence demonstrates so. Findings are specific to the population from which data is collected. This is not a necessary consideration if the topic is population-specific, but, if broad claims are to be made, data collection must be extended to contrasting populations. It should no longer be acceptable to make generalized statements about findings without the data to back them up.

Myth #2: Extending data to a different population requires theoretical foundations

For some, the correct approach is to develop theoretically motivated reasons for contrasting disparate populations. With *a priori* predictions, appropriate communities can be targeted and if differences are found there can be some certitude in attributing test outcomes to the variables of interest. However, where research enterprises bear on issues of universality, similar outcomes should arise regardless of where their hypotheses are tested, and differences may not be expected. Where generalizability is a stated aim, greater explanatory power comes from testing among most contrasting populations—but this might not always be feasible. In which case, extending to populations that differ on any dimension, however small, will be better than no comparison at all.

Myth #3: Limited access to different populations

Setting up test sites that represent polarities is not always straightforward—and can be highly resource-intensive. However, it might not be necessary to travel vast distances to novel places that demand considerable investment of time establishing appropriate relationships and understanding necessary local customs. Most populations will have sub-populations that identify in ways that sit outside the mainstream. And these can exist in places not far from well-tried data sources. Targeting such groups might not

permit broad generalizations to be drawn, but it is a step in the right direction.

Myth #4: Not having time to establish appropriate relationships

Extending data to make it more meaningful may require a lot of work. When entering other communities, you need to establish relationships and understand local procedures, to know how to ask for things and where to find them. Most importantly, you need to build trust, especially when children and families are involved. This all takes time, and most of us are not blessed with much to spare. Forming collaborative partnerships with those who have already laid the necessary groundwork becomes key. Approaching established field researchers or community liaison representatives may be all that is required. And don't give up—persist until you find that person who says 'yes'; you never know how fruitful it might be.

There remains a real and genuine need for psychology in general, and developmental psychology specifically, to meet head-on the numerous criticisms that have been leveled at it. Failure to do so risks our discipline being slowly treated as a dominion of limited relevance and profligate waste. It is time for change and time for excuses to stop.

3.3. The ethnographic study of learning in childhood

Chantal Medaets & Ana Maria R. Gomes

Originally developed in anthropology, ethnography aims to approach as closely as possible the logics, sensitivities, and ways of perceiving the world of specific groups. In ethnographic studies of learning during childhood, what is expected is a detailed description of interactions, in a natural setting, among children themselves and between children and adults, as well as with the objects, animals, plants, and other non-human entities of their environment, thereby revealing the intricate web of relationships

within which learning takes place. Beyond these immediately observable interactions, it is equally important in ethnography to consider the historical and social factors that influence them, such as the political context of the studied group and norms and laws related to childhood.

Some ethnographic studies of childhood place the primary focus on the interaction among children, examining children's peer cultures (Arleo & Delalande, 2010; Corsaro, 2003). Ethnographers in these cases may actively engage with children's groups as 'different adults' (Corsaro, 2003) or assume a more observational role (Arleo & Delalande, 2010). Others adopt a 'generational approach' (Pires & Ribeiro, 2015), investing similar time in observing and analyzing children's actions and the actions of the adults with whom they interact (Lignier, 2019; Medaets, 2016; Morelli, 2023; Sarcinelli, 2021, among others). Still other ethnographers compare learning processes within the community and in institutional settings, like schools (Heath, 1983; Gomes, 1998).

In any case, once the observation focus is determined, ethnography involves the researcher's immersion in the field as they follow interlocutors' movements. This clearly distinguishes ethnography from the dominant approach in childhood learning studies: experimental protocols. In experimental studies, researchers direct the situation, starting with predefined hypotheses and proposing activities (such as exercises or tests) consistent with their goals. In contrast, ethnographers let themselves be guided by their interlocutors, trying to align with their rhythms and grasp their concerns. They integrate into their interlocutors' network for an extended period and seek to describe it, along with detailing the interactions of these individuals with themselves, reflecting on the effects of their presence in the field.

This doesn't mean ethnographers enter the field without a research problem or guiding questions; instead, their questions should: (i) align with the general principle of embracing local practices and (ii) necessarily evolve through their interactions in the field. It also doesn't imply that ethnographers engage in entirely 'natural' situations, in contrast to a total 'artificiality' of experimental settings (Hammersley & Atkinson, 2007). Much has

been written about the non-neutrality of the researcher and, on the contrary, the analytical potential in considering the ethnographic encounter (Bensa, 1995). The crucial point is not the illusion of accessing an interference-free reality, but rather the direction and guidance of the activities.

This overall research stance does not prevent proposing certain activities to interlocutors. In ethnographic studies involving children, it is common to suggest activities such as drawing or writing short pieces (Mead, 1932; Toren, 2011; Cohn, 2017). However, as Toren emphasizes, in ethnography these activities must be subordinated to a broader research logic. This means that any device gains its full meaning when considered alongside what is learned from unguided, long-term coexistence that all ethnography involves.

And how long should this 'long duration' in the field be? For this frequently asked question, there is no predetermined answer. As Rockwell reminds us, it depends on the specific research conditions (such as bond intensity or data analysis progress, in dialogue with relevant literature). Sufficient time is needed to witness recurring situations, in order to "be able to anticipate, from what has already been experienced, what might happen" (Rockwell, 2009, p. 41).

Each methodological approach has strengths and limitations. Ethnography is particularly suitable for capturing the cultural specificities of knowledge production and circulation within a particular group. What kind of knowledge and which skills are considered important to be passed on to new generations? Who are the individuals recognized as bearers of this knowledge? Are there any restrictions or rules governing access to it? What are the learning modalities practiced (which may vary depending on different skills)? To what extent do these processes change over time, and what are the historical and social factors that influence them? Ethnographic research, endorsed in interdisciplinary projects since the 1970s (cf. LeVine, 2010), is a valuable way to address these points. It can also be used to address more general questions (e.g., "how do toddlers learn to take things," Lignier, 2019; "the implications of social change for cognitive development," Greenfield, 2004). But in such cases, insights are based on long-term

relations with a specific group; not only do researchers take these cultural specificities into account, as well as internal differences in the group, but they lean on them to arrive at more general conclusions.

To understand features of the mind that have been shaped by cultural contexts, or even to identify recurrent cross-contextual features, we cannot settle for superficial descriptions of such contexts. Situated and deeper descriptions are needed. Ethnography provides a crucial tool with which to fill the current gap in cognitive science and other disciplines when it comes to a rich understanding of cultural contexts and how these may shape (and be shaped by) human minds.

3.4. Vygotskian theory: Examining causal relations in learning across contexts

Gairan Pamei

Modern psychological research and the contemporary cognitive science of child development tends to overlook the influence of culture. Partially, this oversight could be attributed to the erroneous reading, interpretation and application of Piagetian scholarship (see Burman, 2020, 2022 for details) in the early history of the discipline. However, in recent years, the loud call to expand the scientific discourse with culture as an essential (e.g.,Henrich et al., 2010; Nielsen & Haun, 2016; D. Medin et al., 2017; Nielsen et al., 2017; Rad et al., 2018) has received more attention. As an overarching framework, the body of work by Lev Vygotsky can be an interdisciplinary inspiration.

The cultural-historical approach to psychological research proposed by Vygotsky (1998, 2012) is a compelling theoretical framework for culturally situated research on learning in childhood. Broadly, it is based on three principles: emphasis on the analysis of process, examining causal relations, and tracing the historical development of an attribute (Vygotsky, 1981). This framework is valuable in examining children's learning in spaces of formal education, as well as in the context of other institutions,

such as the family, where unorganized and unsupervised play is a common form of socialization. This is made possible by making explicit the relation and distinction between '*life*' and formal education (Esteban-Guitart, 2018) and acknowledging that both contribute to children's socialization and cognitive development in distinctive ways.

The developmental or genetic method of analysis by Vygotsky involves capturing the structure of the environment and how this environment becomes internalized by the learner. This approach can be used for a wide range of studies, from learning mathematical skills to memory and concept formation (see Vygotsky, 1998). Importantly, the term 'genetic' refers to both ontogenesis and the historical development of cultural contexts within which children learn (Doria & Simão, 2018). A concrete example of this cultural-historical dynamic is the study of word-meaning acquisition in children from northeast India, where most of them use neither their first nor their second language in the school curriculum. In this case, defining the learning environment requires integrating information regarding the political history of the modern Indian nation state, since this historical trajectory characterizes the distinctive socio-cultural and linguistic contexts of this frontier region (Jolad & Agarwal, 2021). Some approaches (e.g., constructivism; Kirschner et al., 2006) assert that if an enriched environment is provided, students inevitably and inadvertently learn the fundamental abstract concepts.

Given the complex patterns of interactions between the learner and various cultural factors (e.g., institutions, languages etc.), hypotheses within a Vygotskian framework can be effectively expressed in a causal inference model which maps multiple causal relationships (Deffner et al., 2022). Specifically, Directed Acyclic Graphs (DAGs) provide a useful formal tool for mapping out the learning context. The major merit of DAGs is that they are able to capture kinds of interactions and relationships without having to specify specific cultural institutions or practices (Rohrer, 2018) that may vary across sites of study. The goal is the transparent and explicit linkage of causal assumptions to subsequent data analysis.

The following is a hypothetical illustration of how the commonalities and specificities of learning can be examined to identify causal relations using DAGs (see also Section 4.3). For example, a study can be designed with (1) the theoretical estimand–reading comprehension variation, (2) a causal model of how the observed data is generated, (3) a generative model of how populations may differ in language backgrounds, educational experiences, and (4) the empirical estimand—an estimation strategy that tells us how to interpret data. In Figure 3.1, the causal assumptions denoted by the arrows are that formal schooling has a causal effect on L1 vocabulary which in turn affects L2 vocabulary. *U* is the unobserved factor that affects both formal schooling and L2 vocabulary.

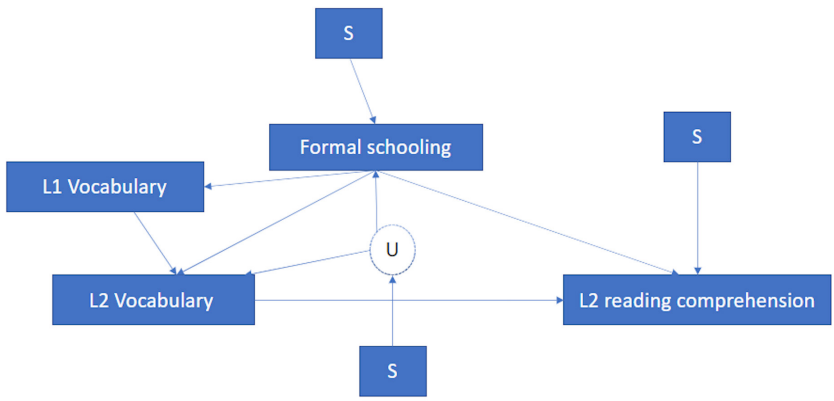


Fig. 3.1 A selection diagram where nodes S represent the assumption that locations differ in their effects on formal schooling and U on L2 reading comprehension.

For exploratory research, it is advisable to draw different DAGs for different field sites to check for hypotheses regarding different mechanisms. If two populations of English L2 students in India, say, from the states of New Delhi and Nagaland, differ in the unobserved cultural variable, *U*, which affects both formal schooling and L2 reading comprehension, then it can confound the effect. An identification strategy should list or simulate and model the covariation of similar unobserved confounds. Here, L1–L2 distance can be a suitable proxy to control. In this example, the L1

of both the groups are tonal, so fine-grained comparisons can be made.

To conclude, if we are interested in capturing learning in cultural contexts, a Vygotskian framework allows us to systematically capture both the historically located cultural environment and the environmentally located individual learner. The emphasis on causal interactions can be methodologically estimated with a graphical framework (e.g., DAGs) that allows formalization of different functions of the expected variations. A comparative approach can address the inevitability of variability and stability without compromising the eventual scientific goal of generalization.

3.5. Using Piagetian and Vygotskian theory in the study of children's learning across cultures

Patricia M. Greenfield

I went to Senegal in 1963, a graduate student with the explicit mission of testing Piaget's theory of cognitive development in a very different culture. The specific intention of my graduate mentor, Jerome Bruner, was that I would test Wolof children's development of conservation of quantity, the concept that a liquid quantity poured into a container of a different shape still was the same amount, i.e., conserved its quantity. Whereas Piaget and collaborators had concluded from their studies in Switzerland that this cognitive achievement was a matter of age, that is, chronological development, my discovery was that this cognitive milestone did not take place without the environmental influence of formal schooling. My initial conclusion was that this result invalidated Piaget's theory (Greenfield, 1966; Greenfield & Bruner, 1966). However, that conclusion was much too simplistic. I later found that Piagetian theory could be very useful in understanding how children learned central facets of their own culture—even though their culture was very different from Piaget's Switzerland. My two examples are weaving (see Section 2.9, and Maynard & Greenfield, 2003) and Tzotzil sibling terminology (Greenfield & Childs, 1977), to which I now turn.

My first realization of the usefulness of Piagetian theory for the cross-cultural study of children's learning occurred when I compared the ability of Piaget's (1928) theory to predict children's development of Tzotzil kinship terms in a Tzotzil-speaking Maya community in Chiapas, Mexico with theories from anthropology (Greenfield & Childs, 1977). The first theoretical idea from anthropology was that kinship terms for culturally important family relations would be learned before less culturally central terms. The second theoretical idea—componential analysis—came from anthropological linguistics and predicted that less relationally complex terms would be learned more quickly (e.g., 'brother' over 'second cousin' in English). However, neither cultural importance nor terminological complexity predicted the order in which Tzotzil sibling terms were learned. In sharp contrast, all predictions from Piagetian theory were confirmed. Here is the Piagetian developmental sequence that emerged:

Age 4–5: Egocentrism.
Can answer ego-centered questions
(e.g., "What is the name of your older sister?")

Age 8–10: Reciprocity
Can answer other-centered questions about sibling relations external to self, including reciprocal pairs
(e.g., The oldest sibling Petu is being questioned about a sibling relationship that does not include her: "As for your younger sister, Shunka, what is the name of her younger brother?" Answer: "Shun."
Reciprocal question: "As for your younger brother, Shun, what is the name of his older sister?" Answer: "Shunka."

Age 13–18: Reversibility
(e.g., The oldest sibling Petu is still being questioned: "As for your younger sister, Shunka, what is the name of her older brother?" Answer: "Petu."
This is called reversibility because it is necessary to see the relationship to self from another person's perspective.

This sequence involved exactly the same steps that Piaget (1928) had uncovered in Switzerland, asking similar questions about siblings in Swiss families. Hence, this study illustrates how Piagetian theory

can be useful to researchers studying the acquisition of specific cultural knowledge in settings that are very different from Piaget's Switzerland.

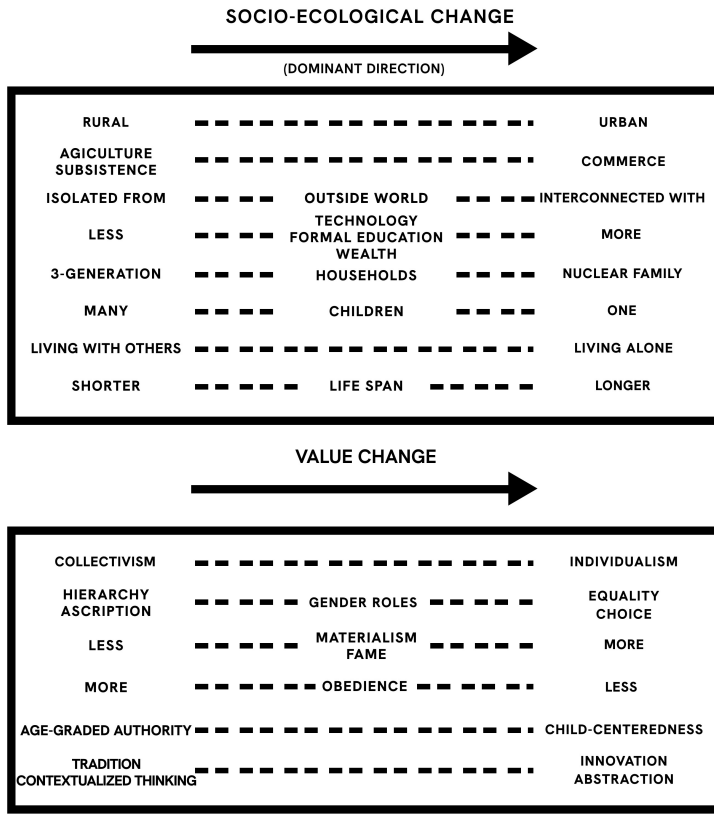
Whereas Piagetian theory could provide a framework for understanding the order in which Zinacantec children acquired knowledge of Tzotzil sibling terms, the theory had nothing to offer about how the learning took place. For the study of learning processes, I found Vygotskian theory (Vygotsky, 1998) useful, especially the Vygotsky-derived concept of scaffolding introduced by Wood, Bruner, & Ross (1976).

In the same Maya community, we applied Vygotskian theory to a different kind of learning study; a study of how Zinacantec girls learn how to weave on a backstrap loom. In contrast to the study of kinship terms, which focused on the learner's cognitive development, the emphasis here was on the process of social transmission. The central Vygotskian concept was the Zone of Proximal Development—the theoretical idea that the most useful teaching takes the learner just a small step beyond what they already know. Our video microanalysis of girls of various ages working at the backstrap loom showed this to be an accurate description of the way in which the Zinacantec weaving teacher—almost always a close relative—structures the process by which girls learn how to weave. Wood and Bruner's concept of scaffolding describes the help that teachers give to learners when the learner is not quite able to take the next learning step on their own. Help at such points indicates that the teacher is working in the learner's Zone of Proximal Development. According to Vygotskian theory, the learner is acquiring how-to knowledge with the teacher's help, so that, in the near future, the learner will be able to take that next learning step on their own, without help from the teacher.

Piagetian theory is useful to identify the developmental steps that children pass through with age in mastering a cognitive task, and Vygotskian theory is useful in identifying certain environmental conditions that facilitate this mastery—specifically, fruitful teaching techniques that are applicable both in school and out of school. So Piagetian theory focuses on the maturational variable—the child; and Vygotskian theory focuses on variables in

the microenvironment—the adult teacher. However, neither theory incorporates variables in the macroenvironment—the influence of socio-ecological change. This is the contribution of my theory of social change, cultural evolution (see also Section 2.7), and human development, to which I now turn (Greenfield, 2009, 2016, 2018).

Social and ecological change has accelerated globally. My interdisciplinary and multilevel theory provides a unified framework to explore the implications of these changes for cultural values, learning environment and/or socialization processes, and human development and/or human behavior (Greenfield, 2016). Figure 3.2 summarizes important socio-ecological changes and their implications for shifts in values, learning environments/socialization, and development/behavior.



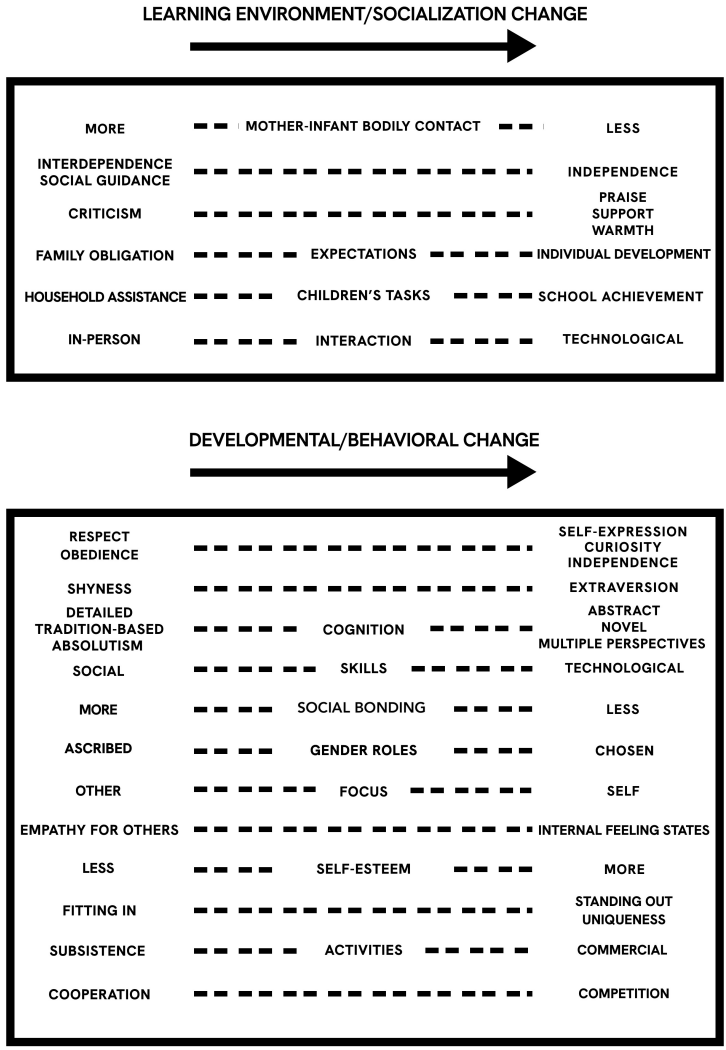


Fig. 3.2 Model of social change, cultural evolution, and human development. Relationships for which there is empirical evidence have been selected for inclusion. While the horizontal arrows represent the dominant direction of social change in the world, socio-ecological change can go in the opposite direction. In that case all the horizontal arrows would be reversed. Adapted from Greenfield (2016).

Note that although there is a dominant direction of socio-ecological change, change also happens in the other direction,

leading to opposite shifts on the lower levels (Evers et al., 2021, 2024; Greenfield et al., 2021; Park et al., 2014, 2017). To summarize evidence concerning the dominant direction of social change, socio-ecological shifts in that direction lead to both cultural losses (e.g., interdependence, collectivism, respect, tradition, contextualized thinking, subsistence skills) and cultural gains (e.g., independence, individualism, social equality, innovation, and abstraction). The citations in the next paragraph provide the references for this summary.

Methodologically, the relationships shown in the diagram have been documented through longitudinal study of a single community or country (Mexico: García et al., 2015, 2017, 2020; U.S. Maynard et al., 2015, 2023; China: Zeng & Greenfield, 2015) and by comparing multiple generations at a single point in time (China: Bian et al., 2022; Zhou et al., 2017; Mexico: Manago, 2014; Rotem et al., 2024; Israel: Abu Aleon et al., 2019; El-sana et al., 2023; Weinstock et al., 2015; Weinstock, 2015; Romania: Ionescu et al., 2023). All of this research has documented the effects of socio-ecological shifts that have occurred in place. However, other research has documented the effects of socio-ecological shifts that have occurred through international migration (Mexican immigrants in the US.: Greenfield & Quiroz, 2013; Raeff et al., 2000; Ethiopian immigrants in Israel: Rotem et al., 2024). The conclusion of my theory is that developmental trajectories and learning environments, such as those described by Piaget and Vygotsky, are not constant, but are affected by shifts in the macroenvironment.

3.6. A brief critique of 'factor epistemology' in cultural/cross-cultural research

Andrea Taverna & Andrew Coppens

It is challenging—logistically, ethically, and politically—to gather research samples with sufficient diversity to make generalizable claims about children's learning and development (Henrich et al., 2010; Nielsen et al., 2017). Yet, diverse sampling cannot fully address the challenges and promises of cultural research. Much of

what makes cultural research epistemologically challenging comes from the need to make comparisons across cultural boundaries. Conventionally, supporting claims about cultural group differences has relied on factor epistemology, which involves:

- Ontological assumptions that learning and development consist of separable processes and features that can be appropriately operationalized as factor- or variable-based measurements (cf. Rogoff, 2003).
- Analytic assumptions that understanding learning and development entails conceptually reconnecting these measurements via unidirectional causal relations, often in ways that attempt to isolate a narrow set of 'active ingredients' (cf. Taverna et al., 2022).

Factor epistemology has origins in European intellectual heritage—the Cartesian worldview (Lakatos, 1978) —that sharply separates 'internal-to-mind' processes from the 'external' world. A fundamental reason that factor epistemology creates problems for cultural research is that the meaning of objects of measurement or observation cannot be assumed to be consistent from one cultural group to another. Extensive critical discussions of this problem span decades, in cross-cultural cognitive psychology (Cole et al., 1978), language acquisition research (Avineri et al., 2015; Miller & Sperry, 2012), and attachment parenting (Keller & Bard, 2017). These critiques typically present an alternative epistemology of relationality (among many others, see: Cole, 1996; Di Paolo & De Jaegher, 2016; Overton, 2013a, 2013b; Overton & Lerner, 2012; Rogoff, 2003; Szokolszky & Read, 2018; Valsiner, 1998). This relational-ecological paradigm understands learning and development in terms of the organism-environment econiche, encouraging attention to system-level dynamics rather than focusing on components in isolation.

Insights via a relational epistemology from the Wichi

Taverna and colleagues' research, for example, has focused on an alternative scientific-relational epistemological orientation to

cross-cultural developmental research, drawn from ontologies common among the Wichi, an Indigenous community living in the Chaco Forest of Northern Argentina (Taverna et al., 2022).

Extending relational perspectives on conceptual development (Medin et al., 2013, 2015; Taverna & Waxman, 2020), this work focuses on how Wichi children and adults conceptualize and reason about *hunhat lheley* (Inhabitants of the Earth). All *hunhat lheley* are perceived by the Wichi in the frame of a relational epistemology that is organized around the notion of *husek* (goodwill) as an agent of vitality and socialization. For example, human beings, non-human animals and spirits, are considered inhabitants with social *husek* because they relate to the world with intentionality and pro-social behavior and are animate beings. They are also considered inhabitants with vital *husek* because they have vital properties, like blood, which are lacking in other entities (metal, stones, soil, etc.). Plants that do not have social *husek* are still considered to have vital *husek* due to their greenness (a sign of life). Thus, entities are understood in terms of the properties of how they relate to the world—either socially or vitally.

These two relational perspectives shape the Wichi's conceptual representations about living (*iloy*) and animate things, since only the inhabitants with social *husek* (animals, humans, spirits) are classified as living, while plants, which have vital *husek*, can die but are not alive. In addition, this relationality also shapes animal concepts, as the *tshotoy* (animals of the forest) are divided into pre-socially aggressive *tshotoy* (cats, snakes) and social and peaceful ones (rats, armadillos, etc., Baiocchi et al., 2019). Finally, relationality is also evident in the causes that the Wichi use to explain the behavior of ecosystem inhabitants, as the Wichi tend to attribute individual causes (e.g., mood) to world inhabitants with social *husek*, but causes related to the annual climate cycle (e.g., rain) to world inhabitants and entities without social *husek* (Fernández Ruiz & Taverna, 2023).

Similarly, children's acquisition of grammatical knowledge in the first language—Wichi *lhomtes*—occurs in the context of native cultural knowledge, values, socialization, and linguistic practices. As in other communities, Wichi language acquisition

shows qualitative changes in the child's language—from a pre-grammatical period toward first morphosyntactic combinations—and is also similar in certain aspects of the socialization process (e.g., maternal speech or 'motherese', Taverna & Waxman, 2020; Taverna, 2021). However, this linguistic transition takes place in a social environment that is distinct in important ways from the western environments typically studied in cognitive science. Specifically, in Wichi households, mothers and other caregivers coordinate child attention to create 'lateral joint attention' rather than engaging children solely in joint attention as is common in western populations. Moreover, they use non-verbal channels—gaze, posture, facial expression—to direct their own attention from a lateral (non-focal) position to a central point (the child and the object). They turn to their children with penetrating attention without explicitly intervening and, above all, without being addressed by the child (Taverna et al., 2024).

In the relational perspective considered here, these varying environments of cultural knowledge, values, socialization and linguistic practices are not seen as independent variables, but as stabilized 'cultural cues' that might work as 'cultural affordances' (Ramstead et al., 2016) and support different (linguistic or social) patterns of behavior. At the level of the language-learning system, it is the recursive interaction between the system in question, the learning mechanisms and the role of cultural affordances in any human econiche (practices, values, cultural knowledge, etc.) that synergistically drives changes to the representational resources within the learning system.

These findings leverage insights from relational epistemologies, specifically three organizing ideas: affordances, ecological niches, and representational emergence. Within the cognitive-ecological approach (Medin et al., 2015), it is believed that, like species in an ecosystem, certain ideas may grow better in certain ecologies. These relatively stabilized 'ideas-habitats' work as cultural affordances (Gibson, 1979), a fundamentally relational concept (Ramstead et al., 2016). The ecological niche is, then, a system of interrelated cultural affordances which synergistically drive changes to representational resources within the learning system.

Within the Wichi ecological niche, the *hunhat lheley*, *tshotoy*, spiritual inhabitants, and the Wichi itself coexist fully integrated with the Chaco Forest. It is precisely the Wichi cognitive, linguistic, and social competencies as stabilized relational patterns that contribute to building and sustaining the econiche.

An important caveat to this brief Wichi case illustration is that learning and development among the Wichi are not 'more relational' than for other cultural groups. Seeing the advantages of a relational epistemology, here in terms of its ability to make visible the explicitly socialized and culturally normative relational values and practices of the Wichi community, can be instructive as both an empirical and epistemological challenge to cultural perspectives (including research approaches) where factor epistemology is an unexamined common sense. This leads to a more general closing point: cultural and cross-cultural research is well positioned to engage in politically equitable inquiry with Indigenous communities, positioning their varied ways of life not only as sources of empirical insight but also as models of relational epistemological inquiry.

3.7. A language socialization approach for studying (social) learning in childhood

Akira Takada

One of the most important theoretical frameworks for analyzing and better understanding the acts of meaning (Bruner, 1990) that constitute and color our social reality is the language socialization approach, which has developed and gained attention in the intersecting fields of anthropology, sociology, linguistics, and psychology (e.g., Duranti et al., 2012; Takada, 2012). According to Ochs and Schieffelin (2012, p. 1), who have led the language socialization approach, "language socialization research examines how children and other cultural novices apprehend and enact the 'context of situation' in relation to the 'context of culture'." The author sympathizes with the language socialization approach and has also promoted it.

This perspective facilitates reconsideration of the concept of learning. I wish to consider individual and social learning separately and independently (Takada, 2016). Social learning is defined as learning that occurs in a social situation; namely, "an environment of mutual monitoring possibilities, anywhere within which an individual will find himself accessible to the naked senses of all others who are present, and similarly find them accessible to him" (Goffman, 1964, p. 135). In contrast, individual learning is defined as a learning process that occurs within each individual. Individual learning is supposed to be observable as changes in behavioral, cognitive, and neural structures. The language socialization approach mainly studies social learning. It analytically examines how cultural novices, including children, learn to behave appropriately in a particular 'context of situation' and 'context of culture'.

Methodologically, the language socialization approach emphasizes observation in natural settings and integrates ethnographic methods with studies of face-to-face interactions to link 'socialization to use language' with 'socialization through language use' (Duranti et al., 2012; Takada, 2019). This is also the case when focusing on social learning.

In ethnographic research, participant observation through fieldwork is the primary method. It requires the researcher to become familiar with the institutions, customs, languages, and practices of a particular group of people through long-term contact with them, and to communicate this familiarity to readers in the society to which the researcher originally belonged in terms they can understand. In order to observe the institutions, customs, languages, and practices of the people in the study area, the researcher must avoid distorting them as much as possible. However, in order to participate in people's lives, the researcher cannot be invisible or even claim to have acted like an invisible person. There is no doubt that it is a difficult task to achieve both participation and observation, and how to reconcile them will differ from researcher to researcher.

In order to analyze face-to-face interactions in detail, data (video and audio) of face-to-face interactions are first collected

using video cameras and other equipment. The obtained data are transcribed, and systematic and empirical analysis is conducted. In transcribing conversations, we first identify the speaker of every utterance that is heard by repeatedly viewing the video and audio, and then carefully transcribe the content in a manner that follows the conventions of previous research. In addition, non-verbal features such as eye gaze, gestures, and posture may be also transcribed.

It is theoretically important to point out that the language socialization approach does not presuppose human universals. Rather, it is a theoretical construct that can only be considered after the analysis of the properties of culture. The language socialization approach devotes its energies to showing how cultural practices, customs, and social institutions are integrally organized in concrete and everyday interactions. In most studies of culture, these have often been treated as if they were entities at different levels, categorized relatively from the 'micro' to the 'macro' realm. However, analysis of face-to-face interactions can reveal the function of the actors' agency that link them.

That is to say, in social situations, participants, who often have different stances toward taking part in the situation, engage in interaction for the purpose of mutual understanding. These actions are interrelated and constitute a characteristic sequence of actions. The accumulation of these actions results in the creation of a community that shares various patterns of semiotic resources that have become conventionalized and structured. In this respect, there is no community that does not change, and communities can be born anywhere. Children born into a community or novices to a community gradually become familiar with these patterns as they become involved in the interactions that are taking place there. Social learning occurs in the process. Moreover, all communities continue to be constituted, maintained, and transformed by such dynamics. Attempts to solve local interactional tasks may result in the reproduction or alteration of long-established cultural practices, customs, and social institutions.

3.8. The cross-indigenous approach to multi-site studies

Miguel Silan

The theoretical framework designated as the 'cross-indigenous approach' is a simultaneous multi-emic approach to studying psychological and social phenomena across cultures. While the standard cross-cultural enterprise is to "test the generality of existing [theories] by comparing the responses of different cultural groups on standardized measures of psychological processes" (Ellis & Stam, 2015, p. 298) the cross-indigenous enterprise is to converge (or fail to converge) on psychological universals through multiple independent explorations among source cultures (Silan, 2023). This framework aims to mitigate the vulnerabilities of cross-cultural approaches, such as the methodological artifacts from subjecting non-WEIRD populations to experiments with WEIRD assumptions (Baumard & Sperber, 2010; Feldman-Barrett, 2017) and the strong assumption of measurement equivalence in cross-cultural studies; both of which are difficult to detect in standard cross-cultural studies.

The methods of data collection imply (1) qualitative, ethnographic or mixed-methods data gathering simultaneously across multiple defined target populations, and/or (2) using culturally appropriate scales developed either collaboratively with community representatives to create culturally 'fair' materials ('weak assembly'; van de Vijver & Poortinga, 2016), or by creating separate, culturally-specific scales for each population that measure similar constructs or mechanisms ('strong assembly') (Silan, 2023; van de Vijver & Poortinga, 2016).

The data collection aims to capture behaviors, thoughts, and emotions as they naturally occur in participants' daily lives, also taking into account their specific cultural contexts and social realities. Researchers aim to triangulate data collection, that is, to use multiple methods and data sources to see whether inferences converge or fail to converge (Thurmond, 2001). The establishment of rigorous exploration, description and validation per site is needed before comparability across cultures is warranted.

Here, culture is taken as a "heterogeneously distributed collective system of pragmatic knowledge" (Kronenfeld, 2017, p. 2). And so, we enquire into children's learning in context, taking into account the culture-bearers' social, cultural and ecological realities, which frame the empirical regularities observed in children's learning. While common cross-cultural approaches treat culture as an external variable that causes variability in behavior, when using the cross-indigenous approach, culture is treated as co-constitutive of the individual, or in some important manner 'within' an individual. The cross-indigenous approach is a multi-site approach that has no *a priori* expectation of comparability across sites and populations except in the broadest sense.

The cross-indigenous approach is a principled way of making comparisons across cultures, aiming to stake out what is unique, what is shared, and what is universal across populations, to explain psychological and social processes through culture-sensitive and naturalistic methods (Silan, 2023).

3.9. An ecocultural perspective on children's development and learning

Heidi Keller

Humans start learning at birth and even before, and continue learning throughout the entire lifespan. Learning is the major mechanism of information acquisition and processing, and thus the basis for behavioral and symbolic changes. Put simply, learning is the human way of adaptation. However, learning is not random. On the one hand, there are biological predispositions to acquire specific information at particular points of time during the lifespan (informed hypotheses, Keller, 2002); on the other hand, there are individual preferences that emerge over time and social and/or cultural biases that lead us to focus on specific information that is available from the environment. Cultural norms and values function like a lens through which the environment is perceived. There are universal tasks, ones which every individual in every cultural environment has to solve. Yet, these generally have no

fixed solutions. Rather, their solutions show contextual variations with respect to timing, interpatterning with other developmental domains, and phenotypic appearance.

Cultures can be described as contextual representations of norms, values, and behavioral conventions that have proven to be adaptive in particular environments. Nevertheless, culture is not a static term but a dynamic process. Although there is substantial variability in cultural orientations, two general emphases have been reliably differentiated (Keller & Kartner, 2013). One emphasis reflects the western urban middle-class lifestyle with nuclear families, few children in the household, rather late first-parent parenthood and high levels of formal education (WEIRD, Henrich et al., 2010). We have labeled this cultural orientation as psychological autonomy, expressing an individualistic worldview of self-contained mental agents. Of course, relatedness is also important to psychologically autonomous individuals, yet it is conceived of as a set of voluntarily negotiable social bonds between separate individuals. Prototypes of this model have been identified, yet also multiple variations.

The second emphasis characterizes the rural small-scale farmers' life in many sub-Saharan African, South-East Asian, and South American villages. Life is organized in multigenerational households with many children, earlier first parenthood, and lower degrees of formal education. The cultural model representing this lifestyle can be conceived of as hierarchical relatedness, denoting 'we-ness' or interrelatedness as default conception of the self. Typically, the relationships are organized hierarchically, mainly according to age and gender, associated with particular responsibilities for maintaining the social system.

However, autonomy is also needed to master life in these environments, especially in terms of actions, i.e., self-responsible (*eigenverantwortlich)* and independent mastery of behavioral tasks and challenges which are relevant and beneficial to the community more broadly. Hierarchical relatedness can also appear in multiple variations, as can the combinations between psychological autonomy and hierarchical relatedness. These cultural models are related to socialization goals, parenting strategies, and ultimately children's development.

In any context, children grow up in environments structured by cultural scripts; children learn to express these scripts in their behavior and mental representations. However, the available evidence is not evenly distributed across different cultures: there is plenty of research for some cultural environments, especially WEIRD families, but there is much more limited work on other cultural environments such as rural farmers in non-western contexts who live traditional lifestyles, or urban middle-class families in non-western contexts. Strikingly, learning and development in traditional contexts, as among foragers, pastoralists or fishing communities, has received relatively scant attention by cognitive researchers (Keller, 2007, 2022). What is urgently needed, then, is more research in and from different cultural communities.

Doing so requires a research strategy involving a multi-method design, based in preliminary ethnographic field research. This preliminary research must be exploratory, i.e., not guided by hypotheses, and qualitative in nature. Ethnographic work involves assessing practices through observational methods. Equally important is the assessment of local meaning systems in open interviews with multiple actors such as adult and child caregivers, and local cultural informants who are particularly knowledgeable in the requested content domains. Finally, focus groups are a different and complementary approach to assess meaning systems. These different datasets must be triangulated and checked by members of the particular cultural groups for their validity (as an example of this methodological approach, see Schmidt et al., 2021).

This kind of preliminary ethnographic work is key to successful cross-cultural research. After all, taking assessment tools that have been developed in one cultural community, mainly in WEIRD environments by WEIRD researchers with WEIRD participants, and applying them in other cultural communities poses scientific problems. Locally relevant meaning systems may be completely missed, and behavioral data may be misinterpreted. It also poses tremendous ethical challenges, since it may mean that local voices are ignored and superimposed by foreign meaning systems—systems that are often evaluative and judgmental in that the WEIRD pattern is defined as the universal standard (Scheidecker et al., 2023).

Overcoming biased research strategies is necessary to achieve a global understanding of children's learning and development, and it requires a change of perspective in our research. Since there is no universal theory of cognitive development to derive hypotheses, curiosity must be the starting point, especially when working across cultures. Ethnographic qualitative research methodology is crucial to formalize this curiosity, as is local knowledge which allows us to explore and acknowledge local practices and meaning systems. Supporting local researchers and fully integrating them into international research teams is a necessity within such work. As our global database of such curiosity and culture-driven work grows, this will in turn allow us to more confidently posit and test general principles of human development.

3.10. Deeply similar, deeply different: Collaborative and interdisciplinary studies of culture and cognition

Kara Weisman

I begin with two basic theoretical assumptions. First, I assume that, across cultural settings, human minds are similar in deep and important ways. There are many reasons for this: our shared evolutionary history; our shared physiology (brains, sense organs, the general size and shape of our bodies); our experiences of basic biological and psychological sensations, needs, and drives; our existence in this particular world with its laws and regularities.

My second assumption is that, across cultural settings, human minds differ in deep, important, and systematic ways. There may well be parts of human psychology and development that are encapsulated, completely cordoned off from social-cultural influences, but I use specific proposals about innateness as tools for theorizing and not as ground truths. Instead, I take seriously the possibility that cultural forces can shape phenomena as basic as sensory experiences (see, for example, Luhrmann, Weisman, et al., 2021), in addition to concepts as rich as those of emotion and mental life (Weisman et al., 2021).

In designing studies and in interpreting results, then, I seek to describe both what participants have in common and how they vary, and to characterize the nature of these similarities and differences. I rarely find myself describing similarities in the absence of differences, or differences in the absence of similarities; my 'prior,' so to speak, is that both similarities and differences will be present in a dataset.

In the case of children's learning, I take the primary task of the child to be learning how to fit into the places and communities they occupy—in other words, learning to think like, feel like, act like, and interact with the people around them. Following Piaget, I posit that biological forces shape but do not fully determine cognitive development, which proceeds via the child's active exploration in a particular social world. Following Vygotsky and subsequent developments in cultural psychology, I consider 'cognition' and 'culture' to be co-constructed, with children's learning providing critical insights into this ongoing social-cognitive process. Taken together, this means that we should sometimes expect to see that children in diverse cultural settings construct similar construals about the world (though perhaps for different reasons); in other cases, children will come to very different ways of being and understanding (though these ways of being might serve similar purposes).

This framework implies that theories of cognitive development must be rooted in careful comparisons across cultural settings. Large-scale, multi-site, collaborative research networks—like the Mind & Spirit Project (Luhrmann, Weisman, et al., 2021) and the Developing Belief Network (Richert et al., 2022; Weisman et al., in press)—are one critically important tool for producing these kinds of datasets. The best versions of this that I have witnessed so far all involve collaborators with diverse cultural expertise, diverse research skills, and diverse background assumptions coming from differences in their training, their theoretical orientations, and their lived experiences. The combination of cultural anthropologists and cognitive-developmental psychologists has been an especially fruitful one in my experience (see Weisman &

Luhrmann, 2020). The biggest take-away from this combination of theory and methodology is that we must disentangle observations of similarities vs. differences across cultures from conclusions about human universals vs. cultural specificity.

Observed similarities across cultural settings are often taken as evidence for human universals (and, by extension, as evidence for the influence of evolutionary forces, biological constraints, and so forth), especially when these similarities are quantified using experimental or otherwise quantitative, 'empirical' methods. But holding in mind the two theoretical assumptions I laid out above—that we are all deeply similar, while we are all deeply different—forces us to entertain alternative explanations. In some cases, similarities emerge due to similar needs and motivations, or similar constraints in the environment. In some cases, similarities might even emerge from very different pathways, driven by different needs and motivations. For example, people in one setting might construct a category of EMOTION because expressing emotions is understood to be an important part of being one's true self, while people in another setting might construct a similar category of EMOTION because tracking others' emotions is critical for fitting into a more interdependent society (Weisman et al., 2021). Understanding the learning trajectories that converge in similar adult 'endpoints'—i.e., studying conceptual development across cultural settings—is one critical step forward to making meaning from cultural comparisons.

Likewise, cultural specificity need not imply 'culture' alone. When I observe differences across cultural settings, I strive to recognize the higher-order commonalities that might provide a common explanation for observed differences. Are people in two settings trying to solve the same problem? Are there certain clusters of cultural settings that converge on similar solutions, or certain dimensions of cultural variability that might provide some explanation of the observed differences? As I understand it, this is common wisdom in the history of cultural anthropology: the problems are universal, the solutions are variable, and yet there is also likely structure to the variability in solutions.

3.11. Methodological perspectives for the study of Indigenous children

Bruno Ferreira

An appropriate methodology for research with Indigenous children requires us to be open to learning. I write from my experience as a Kaingang Indigenous person and researcher in the field of education, but other research shows that much of what is valid for the Kaingang is also valid for other Indigenous peoples in Brazil (Bergamaschi, 2008; Cohn, 2000; Tassinari, 2007). Therefore, I argue that one of the main devices that must be adopted by researchers who want to understand how Indigenous children learn is to live with them, listen to them, and seek to understand their experience. Most Indigenous peoples regard children as beings who are entitled to autonomy and freedom. We consider that they can learn if they want to, but will not be forced to do so. It is uncommon to see Indigenous parents shouting at or being violent to a child, for if the child is not willing to carry out an activity, she or he is not forced to do so (on the absence of physical punishment among Indigenous peoples in Brazil, see Tassinari, 2007).

From this understanding, it becomes important to resort to the practices of participant observation and the conversation circle. This last methodological tool leads participants to bring their experiences to the circle, allowing them to form reflective opinions and access deeper thoughts about themselves and others, in order to go beyond practical experiences and emotions and bring important details that are hidden or not necessarily conscious in daily life to the research. Both in the conversation circle and in observation and coexistence, the Indigenous mother tongue must be the vehicle of communication. Furthermore, the logic of oral traditions (as opposed to written, school-based ones) must be respected as a guide for reflections relevant to the work.

Living in the community helps the researcher to realize that Indigenous children live within the traditional educational processes of their people's families. They are present in most activities in their community: children are the ones who serve the

elders; they are the immediate helpers. They help with planting, producing handicrafts, and looking after other children. There are not many restrictions and separations and children follow most of the adults' activities. When participating in these activities, children also play and talk to each other and older people. In these moments they learn about practical functions within the people's tradition. This also shows that, among Indigenous peoples, the western differentiation between what a child is and what an adult is does not always make sense, or at least not in the same way. Among Indigenous people, there are many moments in which children participate in activities as much as adults; they are not segregated. It is important to remember that the idea of childhood is a western construction, not an Indigenous one.

Furthermore, the researcher's coexistence in the community allows her or him to experience other forms of learning, such as, in the case of the Kaingang people, singing, a way of transmitting the ancestral knowledge and emotional skills that requires the children's concentration. It is also important to mention that the telling of stories—myths—performed by the elderly is fundamental for children to learn their cultural practices rooted in ancestry. In mythical narratives, the present is explained by the action of past events, whose current effects have not been and will never be erased by time. This is demonstrated in the narratives of the Kaingang people, as they bring into their narrated words the relationships between humans, animals, and nature. These narratives are references and have a dimension that produces and guides everyday life, establishing points of reference connected to the past and the present.

References

Abu Aleon, T., Weinstock, M., Manago, A. M., & Greenfield, P. M. (2019). Social change and intergenerational value differences in a Bedouin community in Israel. *Journal of Cross-Cultural Psychology, 50*, 708–727. https://doi.org/10.1177/0022022119839148

Amir, D., & McAuliffe, K. (2020). Cross-cultural, developmental psychology: Integrating approaches and key insights. Evolution

and Human Behavior, 41(5), 430–444. https://doi.org/10.1016/j.evolhumbehav.2020.06.006

Arleo, A., & Delalande, J. (2010). *Cultures enfantines: Universalité et diversité*. Presses universitaires de Rennes. https://doi.org/10.4000/books.pur.10732

Avineri, N., Johnson, E., Brice-Heath, S., McCarty, T., Ochs, E., Kremer-Sadlik, T., Blum, S., Zentella, A. C., Rosa, J., Flores, N., Alim, H. S., & Paris, D. (2015). Invited forum: Bridging the "language gap". *Journal of Linguistic Anthropology, 25*(1). https://doi.org/10.1111/jola.12071

Baiocchi, M., Waxman, S., Pérez, E., Pérez, A., & Taverna, A. (2019). Social-ecological relations among animals serve as a conceptual framework among the Wichi. *Cognitive Development, 52*. https://doi.org/10.1016/j.cogdev.2019.100807.

Bakhurst, D. (2009). Reflections on activity theory. *Educational Review, 61*(2), 197–210. https://doi.org/10.1080/00131910902846916

Bakker, M., & Wicherts, J. M. (2011). The (mis)reporting of statistical results in psychology journals. *Behavior Research Methods, 43*(3), 666–678. https://doi.org/10.3758/s13428-011-0089-5

Baumard, N., & Sperber, D. (2010). Weird people, yes, but also weird experiments. *Behavioral and Brain Sciences, 33*(2–3). https://doi.org/10.1017/S0140525X10000038

Bensa, A. (1995). De la relation ethnographique. *Enquête, 1*, 131–140. https://doi.org/10.4000/enquete.268

Bergamaschi, M. A. (2008). *Povos Indígenas & Educação*. Mediação.

Bian, Q., Chen, Y., Greenfield, P. M., & Yuan, Q. (2022). Mothers' Experience of Social Change and Individualistic Parenting Goals Over Two Generations in Urban China. *Frontiers in Psychology, 12*. https://doi.org/10.3389/fpsyg.2021.487039

Bruner, J. (1990). Culture and Human Development: A New Look. *Human Development, 33*(6), 344–355. https://doi.org/10/fk2tqp

Burman, J. T. (2020). On Kuhn's case, and Piaget's: A critical two-sited hauntology (or, On impact without reference. *History of the Human Sciences, 33*(3–4), 129–159. https://doi.org/10.1177/0952695120911576

Burman, J. T. (2022). Meaning-change through the mistaken mirror: On the indeterminacy of "Wundt" and "Piaget (in Translation., Trans.). *Review of General Psychology, 26*(1), 22–48. https://doi.org/10.1177/10892680211017521

Cohn, C. (2000). *A criança indígena: A concepção Xikrin de infância e aprendizado*. University of São Paulo. https://doi.org/10.11606/D.8.2000.tde-15042024-142639

Cohn, C. (2017). Les dessins d'enfants et l'anthropologie: Une étude chez les Xicrin (Pará, Brésil. In A. Pierrot, I. M. Carvalho & C. Medaets (Eds). *Domination et apprentissage. Anthropologie des formes de la transmission culturelle*. Hermann. https://doi.org/10.4000/rfp.6745

Cole, M. (1996). Cultural psychology: A once and future discipline (pp. xvi, 400). Harvard University Press.

Cole, M., Gay, J., Glick, J., & Sharp, D. W. (1971). *The Cultural context of learning and thinking: An exploration in experimental anthropology.* Basic Books.

Cole, M., Hood, L., & McDermott, R. (1978). Ecological niche picking: Ecological invalidity as an axiom of experimental cognitive psychology. LCHC and ICHD, Rockefeller University. https://doi.org/10.13140/2.1.4727.1204

Collaboration, O. S. (2015). Estimating the reproducibility of psychological science. *Science (New York, N.Y.), 349*(6251), 4716. https://doi.org/10.1126/science.aac4716

Corsaro, W. A. (2003). *We're friends, right?: Inside kids' culture*. Joseph Henry Press.

D'Andrade, R. (2000). The Sad Story of Anthropology 1950-1999. *Cross-Cultural Research, 34*(3), 219–232. https://doi.org/10.1177/106939710003400301

Deffner, D., Rohrer, J. M., & McElreath, R. (2022). A Causal Framework for Cross-Cultural Generalizability. *Advances in Methods and Practices in Psychological Science, 5*(3), 25152459221106366. https://doi.org/10.1177/25152459221106366

Di Paolo, E., & De Jaegher, H. (2016). Neither individualistic, nor interactionist. In C. Durt, T. Fuchs, C. Tewes, & enaction (Eds). *Embodiment, enaction, and culture: Investigating the constitution of the shared world* (pp. 87–105). MIT Press.

Doria, N. G., & Simão, L. M. (2018). Differing times and differing measures: Dimensions of historical time in Vygotsky's work. *Theory & Psychology, 28*(6), 757–779. https://doi.org/10.1177/0959354318787345

Draper, C. E., Barnett, L. M., Cook, C. J., Cuartas, J. A., Howard, S. J., McCoy, D. C., & Yousafzai, A. K. (2022). Publishing child development research from around the world: An unfair playing field resulting in most of the world's child population under-represented in research. *Infant and Child Development*, e2375. https://doi.org/10.1002/icd.2375

Duranti, A., Ochs, E., & Schieffelin, B. B. (2012). *The handbook of language socialization*. Wiley-Blackwell. https://doi.org/10.1002/9781444342901

Ellis, B. D., & Stam, H. J. (2015). Crisis? What crisis? Cross-cultural psychology's appropriation of cultural psychology. *Culture & Psychology, 21*(3), 293–317. https://doi.org/10.1177/1354067X15601198

El-sana, S., Greenfield, P., & Weinstock, M. (2023). Ecological change, psychological mindedness, and attitudes toward school psychology: A three-generation study of Bedouin women in Israel. *Applied Developmental Science*, 1–17. https://doi.org/10.1080/10888691.2023.2192498

Esteban-Guitart, M. (2018). The biosocial foundation of the early Vygotsky: Educational psychology before the zone of proximal development. *History of Psychology, 21*(4), 384–401. https://doi.org/10.1037/hop0000092

Evers, N. F. G., Evers, G. W., Greenfield, P. M., Yuan, Q., Gutierrez, F., Halim, G., & Du, H. (2024). COVID-19 increased mortality salience, collectivism, and subsistence activities. *Journal of Cross-Cultural Psychology, 55*(3), 239-259. https://doi.org/10.1177/00220221231226310

Evers, N. F. G., Greenfield, P. M., & Evers, G. W. (2021). COVID-19 shifts mortality salience, activities, and values in the United States: Big data analysis of online adaptation. *Human Behavior and Emerging Technologies*. https://doi.org/10.1002/hbe2.251

Feldman-Barrett, L. (2017). *How emotions are made: The secret life of the brain*. Pan Macmillan.

Fernández Ruiz, M., & Taverna, A. (2023). Native ontological framework guides causal reasoning: Evidence from Wichi people. *Journal of Cognition and Culture, 23*(3–4), 397–419. https://doi.org/10.1163/15685373-12340169

García, C., Greenfield, P., Montiel-Acevedo, D., Vidaña-Rivera, T., & Colorado, J. (2017). Implications of 43 Years of Sociodemographic Change in Mexico for the Socialization of Achievement Behavior: Two Quasi-Experiments. *Journal of Cross-Cultural Psychology, 48*, 002202211769857. https://doi.org/10.1177/0022022117698573

García, C., Greenfield, P., Navarro, A., Colorado-García, J., & Vidaña-Rivera, T. (2020). Cooperative Play and Globalized Social Change: Mexican Children are Less Cooperative in 2017 than in 1967. *Current Research in Ecological and Social Psychology, 2*, 100003. https://doi.org/10.1016/j.cresp.2020.100003

García, C., Rivera, N., & Greenfield, P. M. (2015). The decline of cooperation, the rise of competition: Developmental effects of long-term social change in Mexico. *International Journal of Psychology, 50*(1), 6–11. https://doi.org/10.1002/ijop.12120

Geertz, C. (1973). *The Interpretation of Cultures*. Basic Books.

Gibson, J. J. (1979). *The ecological approach to visual perception*. Houghton Mifflin.

Goffman, E. (1964). The neglected situation. *American Anthropologist, 66*(6), 133–136. https://doi.org/10.1525/aa.1964.66.suppl_3.02a00090

Gomes, A. M. R. (1998). *Vegna che ta fago scriver. Etnografia della scolarizzazione in una comunità di sinti*. CISU.

Greenfield, P. M. (1966). On culture and conservation. In J. S. Bruner, R. R. Olver, & P. M. Greenfield (Eds). *Studies in cognitive growth* (pp. 225–256). Wiley.

Greenfield, P. M. (1997). You can't take it with you: Why ability assessments don't cross cultures. *American Psychologist, 52*(10), 1115–1124. https://doi.org/10.1037/0003-066X.52.10.1115

Greenfield, P. M. (2004). *Weaving generations together: Evolving creativity in the maya of chiapas.* School of American Research Press.

Greenfield, P. M. (2009). Linking social change and developmental change: Shifting pathways of human development. *Developmental Psychology, 45*(2), 401–418. https://doi.org/10.1037/a0014726

Greenfield, P. M. (2016). Social change, cultural evolution, and human development. *Current Opinion in Psychology, 8*, 84–92. https://doi.org/10.1016/j.copsyc.2015.10.012

Greenfield, P. M. (2018). Studying social change, culture, and human development: A theoretical framework and methodological guidelines. *Developmental Review, 50*, 16–30. https://doi.org/10.1016/j.dr.2018.05.003

Greenfield, P. M., Brown, G., & Du, H. (2021). Shifts in ecology, values, behavior, and relationships during the coronavirus pandemic: Survival threat, subsistence activities, conservation of resources, and interdependent families. *Current Research in Ecological Psychology, 2*. https://doi.org/10.1016/j.cresp.2021.100017

Greenfield, P. M., & Bruner, J. S. (1966). Culture and Cognitive Growth. *International Journal of Psychology, 1*(2), 89–107. https://doi.org/10.1080/00207596608247117

Greenfield, P. M., & Childs, C. P. (1977). Weaving, color terms, and pattern representation: Cultural influences and cognitive development among the Zinacantecos of Southern Mexico. *Inter-American Journal of Psychology, 11*, 23–48.

Greenfield, P. M., & Quiroz, B. (2013). Context and culture in the socialization and development of personal achievement values: Comparing Latino immigrant families, European American families, and elementary school teachers. *Journal of Applied*

Developmental Psychology, 34(2), 108–118. https://doi.org/10.1016/j.appdev.2012.11.002

Hammersley, M., & Atkinson, P. (2007). *Ethnography: Principles in practice.* Routledge

Heath, S. B. (1983). *Ways with words: Language, life, and work in communities and classrooms.* Cambridge University Press.

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences, 33*(2–3), 61–83. https://doi.org/10.1017/S0140525X0999152X

Hruschka, D. J., Munira, S., Jesmin, K., Hackman, J., & Tiokhin, L. (2018). Learning from failures of protocol in cross-cultural research. *Proceedings of the National Academy of Sciences, 11*5(45), 11428–11434. https://doi.org/10.1073/pnas.1721166115

Ionescu, A., Furdui, R., Gavreliuc, A., Greenfield, P. M., & Weinstock, M. (2023). The effects of sociocultural changes on epistemic thinking across three generations in Romania. *PLOS ONE, 18*(3), e0281785. https://doi.org/10.1371/journal.pone.0281785

Jolad, S., & Agarwal, A. (2021). Mapping india's language and mother tongue diversity and its exclusion in the indian census. https://doi.org/10.31235/osf.io/sjxc6

Keller, H. (2002). Development as the interface between biology and culture: A conceptualization of early ontogenetic experiences. In *Between culture and biology: Perspectives on ontogenetic development* (pp. 215–240). Cambridge University Press. https://doi.org/10.1017/CBO9780511489853.011

Keller, H. (2007). *Cultures of Infancy*. Erlbaum.

Keller, H. (2022). *Cultures of infancy*. Routledge classis series. Routledge.

Keller, H., & Bard, K. A. (Eds). (2017). *The cultural nature of attachment: Contextualizing relationships and development.* MIT Press. https://doi.org/10.7551/mitpress/9780262036900.001.0001

Keller, H., & Kärtner, J. (2013). Development The Cultural Solution of Universal Developmental Tasks. In M. J. Gelfand, C. Chiu, & Y. Hong (Eds.), Advances in Culture and Psychology (Volume 3. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199930449.001.0001

Kirschner, P. A., Sweller, J., & Clark, R. E. (2006). Why minimal guidance during instruction does not work: An analysis of the failure of constructivist, discovery, problem-based, experiential, and inquiry-based teaching. *Educational Psychologist, 41*(2), 75-86,. https://doi.org/10.1207/s15326985ep4102_1

Kronenfeld, D. B. (2017). *Culture as a system: How we know the meaning and significance of what we do and say.* Routledge. https://doi.org/10.4324/9781315267326

Kroupin, I., Davis, H. E., & Henrich, J. (2024). Beyond Newton: Why Assumptions of Universality are Critical to Cognitive Science, and How to Finally Move Past Them. *Psychological Review.* https://doi.org/10.1037/rev0000480

Lakatos, I. (1978). *The methodology of scientific research programmes.* Cambridge University Press. https://doi.org/10.1017/CBO9780511621123

Lancy, D. F. (1981). The Indigenous Mathematics Project: An Overview. *Educational Studies in Mathematics, 12*(4), 445–453. https://doi.org/10.1007/BF00308142

LeVine, R. (2010). The six cultures study: Prologue to a history of a landmark project. *Journal of Cross-Cultural Psychology, 41*(4), 513–521. https://doi.org/10.1177/0022022110362567

Levinson, S. C. (2012). The Original Sin of Cognitive Science. *Topics in Cognitive Science, 4*(3), 396–403. https://doi.org/10.1111/j.1756-8765.2012.01195.x

Lignier, W. (2019). The discovery of symbolic violence: How toddlers learn to prevail with words. *Ethnography, 22*(2), 246–266. https://doi.org/10.1177/1466138119872522

Luhrmann, T. M., Weisman, K., Aulino, F., Brahinsky, J. D., Dulin, J. C., Dzokoto, V. A., Legare, C. H., Lifshitz, M., Ng., E., Ross-Zehnder, N., & Smith, R. E. (2021). Sensing the presence of gods and spirits across cultures and faiths. *Proceedings of the National Academy of Sciences, 118*(5), 2016649118. https://doi.org/10.1073/pnas.2016649118

Luria, A. R. (1976). *Cognitive development: Its cultural and social foundations.* Harvard University Press.

Manago, A. M. (2014). Connecting societal change to value differences across generations: Adolescents, mothers, and grandmothers in a Maya community in Southern Mexico. *Journal of Cross-Cultural Psychology, 45*(6), 868–887. https://doi.org/10.1177/0022022114527346

Maynard, A. E., & Greenfield, P. M. (2003). Implicit cognitive development in cultural tools and children. *Cognitive Development, 18*, 489–510. https://doi.org/10.1016/j.cogdev.2003.09.005

Maynard, A. E., Greenfield, P. M., & Childs, C. P. (2015). Developmental effects of economic and educational change: Cognitive representation across 43 years in a Maya community. *International Journal of Psychology, 50*, 12–19. https://doi.org/10.1002/ijop.12129

Maynard, A. E., Greenfield, P. M., Childs, C. P., & Weinstock, M. (2023). Social change, cultural evolution, weaving apprenticeship, and development: Informal education across three generations and 42 years in a Maya community. *Applied Developmental Science*. https://doi.org/10.1080/10888691.2022.2151445

Mead, M. (1932). An investigation of the thought of primitive children, with special reference to animism. *The Journal of the Royal Anthropological Institute of Great Britain and Ireland, 62,* 173–190. https://doi.org/10.2307/2843884

Medaets, C. (2016). Despite adults: Learning experiences on the tapajós river banks. *Ethos (Berkeley, Calif.), 44*(3), 248–268. https://doi.org/10.1111/etho.12134

Medin, D. L., Ojalehto, B., Marin, A., & Bang, M. (2013). Culture and epistemologies: Putting culture back into the ecosystem. In Y. Hong, M. J. Gelfand, & C. Chiu (Eds.), *Advances in culture and psychology* (vol. 4, pp. 177–217). Oxford University Press.

Medin, D. L., Ojalehto, B., Waxman, S. R., & Bang, M. (2015). Relations: Language, epistemologies, categories, and concepts. In E. Margolis & S. Laurence (Eds). *The conceptual mind: New directions in the study of concepts* (pp. 349–378). MIT Press. https://doi.org/10.7551/mitpress/9383.001.0001

Medin, D., Ojalehto, B., Marin, A., & Bang, M. (2017). Systems of (non-) diversity. *Nature Human Behaviour, 1*(5), 1–5. https://doi.org/10.1038/s41562-017-0088

Miller, P. J., & Sperry, D. E. (2012). Déjà Vu: The continuing misrecognition of low-income children's verbal abilities. In S. T. Fiske & H. R. Markus (Eds). *Facing social class How societal rank influences interaction* (1–6, pp. 109–130). Russell Sage Foundation.

Morelli, C. (2023). *Children of the rainforest: Shaping the future in amazonia.* Rutgers University Press.

Muthukrishna, M., Henrich, J., & Slingerland, E. (2021). Psychology as a Historical Science. *Annual Review of Psychology, 72*(1), 717–749. https://doi.org/10.1146/annurev-psych-082820-111436

Nielsen, M., & Haun, D. (2016). Why developmental psychology is incomplete without comparative and cross-cultural perspectives. *Philosophical Transactions of the Royal Society B: Biological Sciences, 371*(1686), 20150071. https://doi.org/10.1098/rstb.2015.0071

Nielsen, M., Haun, D., Kärtner, J., & Legare, C. H. (2017). The persistent sampling bias in developmental psychology: A call to action. J*ournal of Experimental Child Psychology, 162*, 31–38. https://doi.org/10.1016/j.jecp.2017.04.017

Ochs, E., & Schieffelin, B. B. (2012). The theory of language socialization. In A. Duranti, E. Ochs, & B. B. Schieffelin (Eds). *The handbook of language socialization* (p. 21). Wiley-Blackwell. https://doi.org/10.1002/9781444342901

Overton, W. F. (2013a). A new paradigm for developmental science: Relationism and relational-developmental-systems. *Applied Developmental Science, 17*(2), 94–107. https://doi.org/10.1080/10888691.2013.778717

Overton, W. F. (2013b). Relationism and relational-developmental systems: A paradigm for developmental science in the post-Cartesian era. *Advances in Child Development and Behavior, 44*, 21–64. https://doi.org/10.1016/b978-0-12-397947-6.00002-7

Overton, W. F., & Lerner, R. M. (2012). Relational developmental systems: A paradigm for developmental science in the postgenomic era. *Behavioral and Brain Sciences, 35*(5), 375–376. https://doi.org/10.1017/S0140525X12001082

Park, H., Twenge, J., & Greenfield, P. M. (2017). American undergraduate students' value development during the Great Recession. *International Journal of Psychology, 52*, 28–39. https://doi.org/10.1002/ijop.12410

Park, H., Twenge, J. M., & Greenfield, P. M. (2014). The Great Recession: Implications for Adolescent Values and Behavior. *Social Psychological and Personality Science, 5*(3), 310–318. https://doi.org/10.1177/1948550613495419

Peters, U., Krauss, A., & Braganza, O. (2022). Generalization Bias in Science. *Cognitive Science, 46*(9), e13188. https://doi.org/10.1111/cogs.13188

Piaget, J. (1928). *Judgment and reasoning in the child.* Harcourt Brace.

Pires, F., & Ribeiro, F. B. (2015). Crianças: Um enfoque geracional. *Política & Trabalho, 43*, 13–17.

Rad, M. S., Martingano, A. J., & Ginges, J. (2018). Toward a psychology of Homo sapiens: Making psychological science more representative of the human population. *Proceedings of the National Academy of Sciences, 115*(45), 11401–11405. https://doi.org/10.1073/pnas.1721165115

Raeff, C., Greenfield, P. M., & Quiroz, B. (2000). Conceptualizing interpersonal relationships in the cultural contexts of individualism and collectivism. *New Directions for Child and Adolescent Development, 2000*(87), 59–74. https://doi.org/10.1002/cd.23220008706

Ramstead, M. J. D., Veissiere, S. P. L., & Kirmayer, L. J. (2016). Cultural affordances: Scaffolding local worlds through shared intentionality

and regimes of attention. *Frontiers in Psychology, 7*. https://doi.org/10.3389/fpsyg.2016.01090

Richert, R. A., Weisman, K., Lesage, K. A., Ghossainy, M. E., Reyes-Jaquez, B., & Corriveau, K. H. (2022). Belief, culture, & development: Insights from studying the development of religious beliefs and behaviors. *Advances in Child Development and Behavior, 62*, 127–158. https://doi.org/10.1016/bs.acdb.2021.11.002

Rockwell, E. (2009). *La experiencia etnográfica: Historia y cultura en los procesos educativos.* Paidós.

Rogoff, B. (2003). *The cultural nature of human development.* Oxford University Press.

Rogoff, B., & Chavajay, P. (1995). What's Become of Research on the Cultural Basis of Cognitive Development? *American Psychologist, 19*. https://doi.org/10/ckxthb

Rohrer, J. (2018). Thinking clearly about correlations and causation: Graphical causal models for observational research. *Advances in Methods and Practices in Psychological Science, 1*, 27–42. https://doi.org/10.1177/25152459177456

Rotem, O. S., Weinstock, M., & Greenfield, P. M. (2024). Changes in values and ways of knowing among three generations of Israeli women of Ethiopian origin. *Current Research in Ecological Psychology*. https://doi.org/10.1016/j.cresp.2024.100186

Sarcinelli, A. S. (2021). Des gamins roms hors-de-l'enfance. Entre protection et exclusion. Éd. des Archives contemporaines. https://doi.org/10.17184/eac.9782813003881

Scheidecker, G., Chaudhary, N., Keller, H., Mezzenzana, F., & Lancy, D. (2023). "Poor brain development" in the global South? Challenging the science of early childhood interventions. *Ethos*, 1–24. https://doi.org/10.1111/etho.12379

Schmidt, W. J., Keller, H., & Rosabal-Coto, M. (2021). Development in context: What we need to know to assess children's attachment relationships. *Developmental Psychology, 57*(12), 2206–2219. https://doi.org/10.1037/dev0001262

Silan, M. (2023). Rethinking multi-site studies: Can the cross-indigenous approach mitigate common cross-cultural vulnerabilities? In In press social and personality psychology compass. https://doi.org/10.31234/osf.io/jsyca

Szokolszky, A., & Read, C. (2018). Developmental ecological psychology and a coalition of ecological–relational developmental approaches. *Ecological Psychology, 30*(1), 6–38. https://doi.org/10.1080/10407413.2018.1410409

Takada, A. (2012). Pre-verbal infant-caregiver interaction. In A. Duranti, E. Ochs, & B. B. Schieffelin (Eds). *The handbook of language socialization* (pp. 56–80). Wiley-Blackwell. https://doi.org/10.1002/9781444342901

Takada, A. (2016). Education and learning during social situations among the Central Kalahari San. In H. Terashima & B. S. Hewlett (Eds). *Social learning and innovation in contemporary hunter-gatherers: Evolutionary and ethnographic perspectives* (pp. 97–111). Springer. https://doi.org/10.1007/978-4-431-55997-9_1

Takada, A. (2019). *Anthropology of interaction: Places where "mind" meets "culture."* Shinyosha.

Tassinari, A. I. (2007). Concepções indígenas de infância no Brasil. *Tellus, 7*(13), 11–25.

Taverna, A. (2021). Motherese in the Wichi Language (El maternés en la lengua wichí. *Journal for the Study of Education and Development, 44*(2), 303–335. https://doi.org/10.1080/02103702.2021.1889290

Taverna, A., Padilla, M., Fernandez Ruiz, M., & Baiocchi, M. C. (2022). Concepts, language, and early socialization in the indigenous wichi perspective: Toward a relational–ecological paradigm. In M. V. Alves, R. Ekuni, M. J. Hermida, & J. Valle-Lisboa (Eds). *Cognitive science and education in non-weird populations: A latin american perspective* (pp. 74–97). Springer. https://doi.org/10.1007/978-3-031-06908-6

Taverna, A., Padilla, M., & Waxman, S. (2024). How pervasive is joint attention? Mother-child dyads from a Wichi community reveal a different form of "togetherness." *Developmental Science.* https://doi.org/10.1111/desc.13471

Taverna, A., & Waxman, S. (2020). Early lexical acquisition in the Wichi language. *Journal of Child Language, 47*(5), 1052–1072. https://doi.org/10.1017/S0305000919000898

Thurmond, V. A. (2001). The point of triangulation. *Journal of Nursing Scholarship, 33*(3), 253–258. https://doi.org/10.1111/j.1547-5069.2001.00253.x

Toren, C. (2011). The stuff of imagination: What we can learn from Fijian children's ideas about their lives as adults. *Social Analysis, 1*, 23. https://doi.org/10.3167/sa.2011.550102

Valsiner, J. (1998). *The guided mind: A sociogenetic approach to personality.* Harvard University Press.

van de Vijver, F. J. R., & Poortinga, Y. H. (2016). On item pools, swimming pools, birds with webbed feet, and the professionalization of multilingual assessment. In *Educational measurement: From foundations to future* (pp. 273–290). The Guilford Press.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds). Harvard University Press.

Vygotsky, L. S. (1981). The genesis of higher mental functions. In J. V. Wertsch (Ed.). *The concept of activity in soviet psychology.* M. F. Sharpe Inc Publisher.

Vygotsky, L. S. (1998). *The collected works of L.S. Vygotsky* (vol. 5, R. W. Rieber Ed.). Springer.

Vygotsky, L. S. (2012). *Thought and Language.* MIT Press.

Weinstock, M. (2015). Changing epistemologies under conditions of social change in two Arab communities in Israel. *International Journal of Psychology, 50*(1), 29–36. https://doi.org/10.1002/ijop.12130

Weinstock, M., Ganayiem, M., Igbaryia, R., Manago, A. M., & Greenfield, P. M. (2015). Societal Change and Values in Arab Communities in Israel: Intergenerational and Rural–Urban Comparisons. *Journal of Cross-Cultural Psychology, 4*6(1), 19–38. https://doi.org/10.1177/0022022114551792

Weisman, K., et al. (2024). The development and diversity of religious cognition and behavior: Protocol for Wave 1 data collection with children and parents by the Developing Belief Network. *Plos one, 19*(3), e0292755. https://doi.org/10.1371/journal.pone.0292755

Weisman, K., Legare, C. H., Smith, R. E., Dzokoto, V. A., Aulino, F., Ng, E., Dulin, J. D., Ross-Zehnder, N., Brahinsky, J. D., & Luhrmann, T. M. (2021). Similarities and differences in concepts of mental life among adults and children in five cultures. *Nature Human Behaviour, 5*, 1358–1368. https://doi.org/10.1038/s41562-021-01184-8

Weisman, K., & Luhrmann, T. M. (2020). What anthropologists can learn from psychologists, and the other way around. *Journal of the Royal Anthropological Institute, 26*(S1), 131–147. https://doi.org/10.1111/1467-9655.13245

Wood, D. J., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychiatry and Psychology, 17*, 89–100. https://doi.org/10.1111/j.1469-7610.1976.tb00381.x

Zeng, R., & Greenfield, P. M. (2015). Cultural evolution over the last 40 years in China: Using the Google Ngram Viewer to study implications of social and political change for cultural values. I*nternational Journal of Psychology, 50*(1), 47–55. https://doi.org/10.1002/ijop.12125

Zhou, C., Yiu, W. Y. V., Wu, M. S., & Greenfield, P. M. (2017). Perception of cross-generational differences in child behavior and parent socialization: A mixed-method interview study with grandmothers in China. *Journal of Cross-Cultural Psychology, 49*, 62–81. https://doi.org/10.1177/0022022117736029