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

4. Research methods: A collage

Coordinated by Elena Miu

This chapter provides a non-comprehensive overview of the research methods used in cross-cultural studies of children. We present a collage of case studies and methods summaries that outline common practices and explore their theoretical, ethical, and practical implications. We first propose guidelines for dealing with issues of theoretical validity by showcasing the benefits of multi-methods perspectives for knowledge triangulation and introducing a design strategy for causal analysis. We cover practical organizational concerns pertinent to large cross-cultural studies. We then touch on ethical concerns and cover the value of long-term cumulative study, revisiting old work from a non-western-centric perspective, intersubjectivity and positionality, and include methods for sustainable and principled anthropology. Finally, we zoom in on methodological approaches used in cross-cultural work on children, summarizing the benefits and limitations of ethno-archaeological approaches, cross-cultural experiments, conversational analysis approaches, and standardized longitudinal assessments.

4.1. Introduction

Elena Miu

This chapter is structured as a collage of case studies and methods summaries, providing an overview of common practices, guidelines, suggestions, and issues pertinent to cross-cultural studies involving children. First, we outline good practices to ensure a successful, valid, and comprehensive study. Kline writes

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a beautiful demonstration of the investigative power of qualitative and quantitative methods combined, drawing upon her own work on teaching in Fiji. Pretelli lays out a state-of-the-art quantitative workflow for causal inference, complete with causal diagrams, Bayesian statistics, and simulated data. Rawlings reflects on the lessons learned from coordinating a multi-site cross-cultural project, providing a much-needed practical perspective. We then engage with complex and often sensitive aspects of ethnography, providing examples of how to make the most of a study in ethical and appropriate ways. Liebal provides an overview of ways to conduct ethnography at a distance, necessary in a post-pandemic society. Lancy illustrates the benefits of using archival data and casting a wide, curious net. Xu's study is a vivid example of the necessity of revisiting older work, particularly with a non-western perspective. Park shows how a culturally sensitive study and researcher are exactly what is needed when working with vulnerable populations. Finally, we zoom in on specific methodological approaches in more detail. Milks and Riede bring an archaeological perspective to the question of children learning, considering what we can and, importantly, cannot learn about the past. Stengelin examines experimentation in the field and discusses the nuances of what it means for an experiment to be cross-cultural. Takada discusses how conversational analysis can be applied cross-culturally to understand child socialization. Kärtner illustrates how longitudinal standardized assessments can shed light on causal questions regarding mother-infant interaction and socialization.

4.2. Mixed methods in the study of informal teaching in Yasawa, Fiji

Michelle Kline

Often in both anthropological and psychological studies that draw cross-cultural comparisons, a high value is placed on the replication of identical methods across field sites (see Apicella et al., 2020), with the expectation that replicating the same methods means

researchers are asking the same questions. Kline et al. (2018) argue that this equivalency assumption is false when comparing across broadly different cultural contexts. Among other problems, issues of language translation, the lack of one-to-one matches among concepts cross-culturally, the mapping of behavioral measures onto existing cultural systems and norms, or general discomfort with experimental/interview methods among participating groups may mean that the results do not mean what the field researcher believes them to mean. In addition, a one-size-fits-all method used cross-culturally may miss out on locally interesting variations.

Beyond questions of the validity of one-size-fits-all methods, a broader concern is that each chosen method necessarily—and by design—constrains the specific conclusions that can be drawn. This is both a strength and a weakness of experimental methods. Broad comparative studies with copy/paste methods across sites are unlikely to uncover novel cross-cultural variation, and are best suited to test specific hypotheses about cross-cultural variation in known variables. However, these methods are often undertaken without any qualitative or observational study to lay the groundwork, with the result that the interesting cultural variation that does exist goes undocumented by researchers, despite being important in the daily lives of participants. We argue that this is not the ideal approach to finding out about how humans live in the world, and even more so it is unlikely to accurately assess the cross-cultural variation in human behavior and human development. Rather, research requires a more varied mix of observational and qualitative methods, suited to a broader set of questions (Broesch et al., 2020). For these reasons, it is useful, if also more labor-intensive, to combine qualitative and quantitative research to study the same phenomenon at the same field site, in a comprehensive mixed-methods approach.

This has been undertaken, for example, in the study of teaching and learning in villages in Yasawa Island, Fiji. In this case study we take each method in turn, beginning with qualitative data collection and analysis, then mixed methods, then quantitative data collection and analysis. The research questions in this case boil down to: who teaches what to whom, when, and how/with what form(s) of teaching?

Qualitative ethnographic methods

Qualitative ethnographic methods can range from reading the existing ethnographic literature of a region, to conducting qualitative ethnographic observations and recording field notes, informal conversations, or qualitative interviews with participants. In the case of Yasawa Island, Fiji, Kline combined existing ethnographic literature with months of on-site field observations and field notes (unpublished) as background to the design of more quantitative methods. This also included photographs and video recordings with consent from parents and assent from children (see Broesch et al., 2020). For researchers in more qualitative fields, such as cultural anthropology, qualitative ethnography and thick description could form the basis of the work. This level of data collection and analysis can provide an in-depth description of participants' lives, contexts, and experiences. In the present case study, these mainly form the basis for qualitative 'field site' descriptions (such as Kline, 2016), for images and descriptive examples in presentations and/or published papers (as in Kline, 2015), and for in-depth background information in order to design feasible quantitative methods that will formally measure types and variations of teaching observed in the Yasawa Islands, Fiji. These qualitative observations and ethnographic literature yielded a general impression that teaching was important and frequent, though less marked than in western formal education, and that teaching happened within the context of everyday activities, not as separate 'lessons' with formal evaluations. These insights are key to understand the variety of results of more structured, quantitative studies of teaching at the same site.

Qualitative interview data, quantitative analysis

Kline et al. (2013) provide a more targeted study of learning and teaching at the same sites in the Yasawa Islands. Using interview data that included open-ended questions with qualitative responses, Kline et al. used quantitative coding of these answers to test hypotheses about who learns from whom, about what, and at what ages. With respect to teaching, participant responses reflect

societal norms among adults about teaching: the importance of 'teaching' varied by the domain of learning (e.g., boating, weaving, and other practical concerns), but was lowest when participants were asked about learning in general. When asked if parents must teach their children anything, nearly all participants (42 of 44) highlighted customs or 'ways of the land'—in other words, proper behavior. This and a qualitative review of the uncoded verbal responses reveals that participants treated 'teaching' as shorthand for making someone learn, and not necessarily as a fine-grained behavior such as tutoring, instructing, and so on. Teaching was also most commonly associated with learning from parents, as opposed to other relatives or non-relatives. In combination with the qualitative field data, the results of these interviews help to distinguish the researcher's treatment of 'teaching' as behavior that supports another's learning, versus a responsibility or duty of a parent to ensure that their children have properly learned how to behave in a general sense. Notably, there is some overlap – but these definitions are not the same, and the methods for studying each version of 'teaching' will necessarily differ.

Qualitative observational data, quantitative analysis

Kline et al. (2016) use structured qualitative observations of daily activities, collected between 2003 and 2011, to assess the general frequency of 'teaching' where teaching is defined as a stand-alone or abstract instruction that constitutes its own activity. Through this 'time allocation' method, researchers used a randomized schedule of participants and dates/times, plus instantaneous sampling—recording of who was present and what activities they were doing only at the point they first identified the focal participant—to gain a holistic picture of life in Yasawan villages. Under this method, 'teaching' would include things like: helping a child with homework, instructing a man as to the best way to cultivate yams, demonstrating a new style of weaving to a woman, or formal school sessions. The latter was excluded from analyses since the focus was informal teaching in day-to-day life. This method also excludes subtle forms of observable behavior, such

as pointing, telling, showing, correcting, or other behaviors that support another's learning while embedded in another activity. The results of this method show that teaching, when defined as a stand-alone activity, is rare in these villages (only 14 out of 565 observations included teaching). The activities that were labelled as teaching were mostly village or church meetings in which information was being shared with an audience (n=7). Notably, this method and definition of teaching (as an activity) mean that it is rarely observed, in contrast to more frequent qualitative observations of subtle teaching (as a behavior), and the importance of teaching according to Yasawan adults (as a social duty to shape children).

Quantitative ethnographic methods

Finally, as a follow-up to the qualitative and quantitative research above, Kline et al. (2016) used a fine-grained ethogram, or structured list of behaviors, to make quantitative observations of subtle teaching embedded in daily life. In contrast to instantaneous sampling, here teaching is defined as a list of behaviors (the ethogram) which support learning in others rather than as an activity in itself, and the observations were limited to focal individuals six years of age and younger, plus whomever they interacted with during observation sessions. Observations were continuous for fixed time periods, in order to capture these subtle behaviors. This method builds on the earlier qualitative field observations suggesting that teaching behaviors are woven into other daily activities, and the interviews suggesting that parents and grandparents are the most likely to teach (at least for children). In contrast to the time allocation results, this method and definition of teaching show that teaching (as a behavior) is relatively frequent, with teaching present in 484 out of 721 five-minute blocks of observation time (about 67% of observations). It is worth noting that this is a much more heavily constrained and structured method than the qualitative, open-ended field observations or notes. In the case of field notes, interpretation was made and meaning inferred by the researcher in the course of their

observations. In the present TEACH (2016) method, interpretation was reserved for after the quantitative analysis of research results and statistically tested patterns.

Conclusion

At first glance, the results of the combination of methods seems a mess: qualitative ethnographic observations provide in-depth examples of teaching in situ but the ethnographic record suggests it is rare; interviews indicate teaching is important but perhaps confined to a few domains and is primarily undertaken by parents or grandparents; time allocation observations indicate teaching is almost never the predominant activity; ethogram-based observations suggest teaching is prevalent (67% of observations) even for very young children (six and under). However, when the interpretation is made with methods and definitions in mind, a more cohesive, holistic picture of what teaching looks like in Yasawan villages is possible:

- Teaching as a stand-alone activity is rare and tends to happen primarily in formal settings, such as village or church meetings, or during formal schooling. In informal settings, teaching does not happen as a stand-alone activity, but is woven in with other daily activities.
- This subtle teaching takes place in the form of behaviors that support learning. For example, demonstration (pointing, slowing down, narrating, and showing while undertaking a task with novices observing) or the providing of abstract information that a novice cannot easily acquire themselves (e.g., what different animals eat or where they sleep, kinship labels, or rules of proper conduct). However, the most frequent form of subtle teaching behavior (for children younger than six years old) is providing additional feedback as to the danger, safety, or desirability of their behaviors.
- From the perspective of Yasawan adults, it is an important social responsibility for parents and elders to

> have influence by teaching values and proper conduct to children in the village; there are dire consequences if parents fail to teach children how to be proper community members.

Using just one of the above methods would not have yielded such a detailed picture of teaching, nor situated it in cultural context. It is only through the triangulation of methods that such a set of conclusions is possible.

4.3. A framework for quantitative causal analysis

Ilaria Pretelli

Quantitative approaches are often presented in opposition to qualitative ones, but this dichotomy is often forced: as we have seen in the previous section, quantitative analyses require a strong qualitative foundation and 'pragmatic researchers' combining both methodologies have higher potential to address problems in the social sciences (Onwuegbuzie and Leech, 2005). Nonetheless, quantitative work is characterized by certain goals, approaches, and methods, which we review below, with a focus on causal inference.

Quantitative studies are often guided by the objective to identify and test a causal mechanism, provide tools for predictions and/or offer generalizable explanations by looking for consensus, or trends, in data that are usually manipulated as numbers (Yilmaz, 2013). They stem from hypotheses attached to theories and test them in the real world using a variety of methods and approaches. Here we briefly summarize some important concepts for quantitative analysis, with an emphasis on causality and problem-specific methods for statistical analysis.

Causal inference

A search for causality underlies most quantitative research, even when hidden behind the old mantra of 'correlation does not mean

causation' (a warning for researchers that finding an association between two variables does not necessarily imply the causal connection envisioned). In fact, causal analysis is its own field of research and has developed a range of tools, both mathematical and statistical, to identify causation in real world systems (Pearl, 2000). Causal analysis should be included as a first step in the design and considered thoroughly during the development of any quantitative study. In experimental research, causation is usually addressed by randomization: if two samples are randomized to be identical at the start except for the treatment assigned, any difference in the outcome should be attributed only to the effect of the treatment (see the section on causal inference in Chapter 9). However, the situation becomes structurally much more complex in observational studies, and complex experimental set-ups can also encounter serious issues with causal inference. Hence, methods such as causal diagrams—intuitively simple graphs that display causal connections, such as DAGs (Directed Acyclic Graphs)—are a powerful tool that allow researchers to (i) clearly lay out the assumptions and goals of the study and (ii) define identification strategies, i.e., help decide which predictors to include in a statistical model depending on the causal query objective of the study (Pearl, 1995; see also Section 3.4). Contrary to verbal models, i.e., the often imprecise long-form explanations that justify research development and analytical choices, causal diagrams require the researcher to list all of the elements relevant for a certain analysis and to describe their expectations for what causes what. Figure 4.1 shows a DAG describing the factors influencing the development of ecological knowledge in Pemba, Zanzibar (Pretelli et al, 2022)—here we assume that knowledge varies with age, which stands for a proxy of various unmeasured time-varying factors. Moreover, we expect ecological knowledge to differ by sex, not because of innate differences, but rather because of gendered participation in activities and access to schooling. The DAG allows us to schematically represent these assumptions, and guides the analysis (see the supplementary information in Pretelli et al., 2022 for extensive description of the approach).

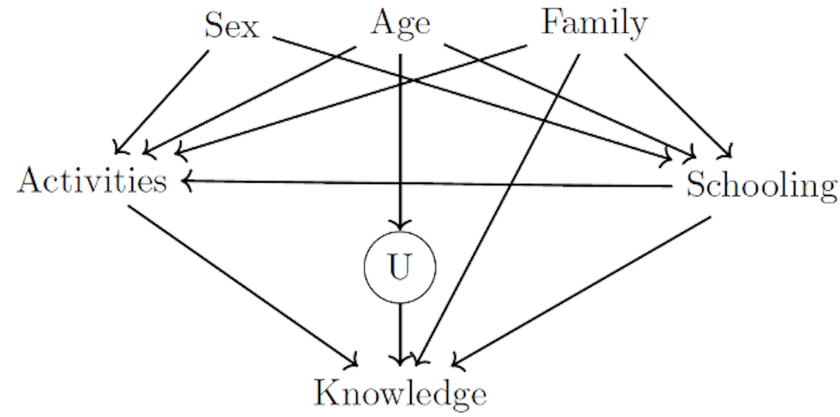

Fig. 4.1 DAG describing the factors influencing the development of ecological knowledge in a part-time foraging population in Pemba, Zanzibar. Originally appears in Pretelli et al. (2022). CC BY-NC-SA.

When used appropriately, the causal diagram should reflect previous knowledge on the subject, draw from theory, and clearly connect hypotheses to the estimand (i.e., the quantity to be estimated as a result of the statistical analysis) to address the issue at hand (Deffner et al., 2022). Moreover, mathematical tools applied to causal diagrams can help define which sets of controls should be included in order to obtain a causal estimate. The common approach in the behavioral sciences of including as many predictors as possible in an analysis does not often achieve its role of inferring not only causality, but any relation at all, because the causal connections between the variables included can either obscure or magnify the relationships. A well-known case is Simpson's paradox: a phenomenon where it is possible to identify a statistical trend when the data is grouped (or when certain controls are included in the analysis), but the trend disappears or reverses when the groups are combined (or if the controls are excluded; see a review of cases in psychology in Kievit et al., 2013). An accessible introduction to the concepts of causal inference can be found in Pearl (2018), and a hands-on approach to causal inference in the behavioral science is illustrated in Chapter 5 of McElreath's *Statistical Rethinking* (2018).

Thinking generatively: Simulations and models

Once the causal structure of the system is laid out, a researcher must choose a statistical approach to address the estimand (the parameter (s) to estimate that will be used to draw our conclusion, see above). A common approach in the behavioral sciences is to choose a statistical model out of several that are commonly used, often named after some statistician (e.g., Pearson, Cox) – this choice is usually driven by the characteristics of the data. This approach disregards the process that generated the data, but rather forces the problem into a mold by applying a statistical tool that implies a certain generative process and a series of assumptions to a set of data that were not necessarily generated by that process or conform to these assumptions. This might lead to erroneous or misleading results. An alternative to this approach is to think generatively: start from defining the process that generates the data, and then reconstruct problem-specific statistical models that can target specific inferences from the model. Statistical models should make minimum assumptions about the data and process, for example considering how a predictor can influence the results as it approaches zero, or if the effect should increase linearly as the predictor increases, rather than tapering off at large values. This approach is within reach of researchers nowadays, thanks to the development of computational and statistical tools that allow reasonably skilled researchers to specify their own statistical models in programming languages such as R or Stan, which use Bayesian inference and allow for very flexible, sophisticated model building (R Core Team, 2023; Stan Development Team, 2021). Bayesian inference offers advantages such as better treatment of small sample sizes, effective management of uncertainty, and easier interpretation of results in terms of predictions and counterfactuals.

Bayesian data analysis implies a workflow that includes (i) model choice and construction (including testing priors), (ii) fitting the model to data (i.e., estimation of the parameters), and (iii) evaluation of the model fit and interpretation of different kinds of results (Gelman et al., 2020). One important step, which can help enormously during the development of a Bayesian workflow, and

is incredibly useful for statistical analysis generally, is to produce and use simulated data. Artificial data can be produced through computational simulation according to the causal model proposed by the researcher, and it can then be used to test the statistical model. In particular, simulations allow us to (i) determine whether the statistical model used is able to offer information on the causal model we expect, as certain causal inferences are non-identifiable: multiple causal models can produce similar data and thus make it impossible to identify the generative process, and thus support or reject hypotheses, a phenomenon known as equifinality; (ii) estimate minimum sample sizes, or how much data would be necessary to produce reliable results, depending on effect size and variability in the data—the Bayesian version of a power analysis; (iii) understand the statistical model, evaluate its fit to real data and test the limitations of the model (Gelman et al., 2020).

Of course, at some point during this process, data have to be collected. Thinking with causal and generative models (i.e., simulations) is helpful to determine which kind of data are needed, what they mean and how they will be used in the analysis. Thus it is advisable to plan the analysis and produce a simulation before collecting the data. This can help anticipate issues that might arise later on when, for example, the researcher might realize they have not collected data for a fundamental control variable, or that the data recorded as continuous have no real continuous meaning and ethnographic background is needed to determine cut points.

Results and interpretation

Once the model is fit to the data, researchers must evaluate and interpret the results. Most commonly, researchers interpret and present resulting effect sizes, i.e., the value of a parameter as estimated in the model, and some measure of the confidence in the results, usually a *p*-value. Bayesian analysis does not rely on *p*-values, as these are a feature of frequentist statistics, but encourages researchers to carefully interpret the results of the models in terms of counterfactuals and predictions. The results of a Bayesian model based on a causal model can be used to calculate what would happen under certain conditions (i.e., counterfactuals)

and to predict outcomes for certain combinations of predictors. This moves away from interpreting results for specific predictors in isolation, and towards interpreting the joint output of the model on the outcome scale. Part of the interpretation of Bayesian model results should include monitoring how the model updates its priors, i.e., whether the model has learned anything from the data, evaluating model fit to check if the sample space was appropriately explored. Detailed instructions on model construction and results recovery are presented in McElreath's *Statistical Rethinking* (2018).

4.4. Lessons from a large-scale cross-cultural project

Bruce Rawlings

Conducting research in multiple populations in a single project is very difficult. Arguably, particularly so when a project is centrally led (i.e., by a PI or group of researchers at one institution), rather than dispersed across a group of researchers or institutions. In these cases, every decision—concerning what data to collect, how much to modify established protocols, who to consult for feedback and when, recruiting research assistants and translators, how to recruit participants, run data collection, handle and organize data, and how to disseminate the work—ultimately fall upon one or a few people.

My postdoctoral research project aimed to examine cognitive and academic development in children in a large-scale cross-cultural project, in which we worked with children and adults in 12 countries. This was my first major incursion into cross-cultural research. I came into the position from a comparative psychology background, with little exposure to studying (human) samples outside of the UK and US. My role was to develop experimental protocols, train local research assistants, help oversee data collection and data quality control, analyze, and disseminate the data—working with international collaborators, my PI, and my other lab members throughout.

Across this project—through things that worked well and not so well—I learned a vast amount about both cross-cultural research and good research practices in general. Here, I reflect

on my experiences and present three key points I learned that I want to pass on to researchers engaging in cross-cultural research. These are not exhaustive and may seem obvious for those more experienced, but things I took away with me as someone new to the field. While I hope these reflections will be useful to those of all experience levels, they may be particularly useful for those who are new to cross-cultural research.

Design a thorough and careful workflow protocol

This is one of the most important things I learned. Our project manager was a strong advocate for clear and high-quality workflow protocols, and I cannot emphasize enough how valuable they are. Cross-cultural research provides unique workflow challenges, which may include some or all of the following: designing and refining protocols suitable for one or more populations; ethical approval administration (at central and local levels); training local research assistants; piloting; participant recruitment; collecting data; translations (including back-translations); video coding and/or audio transcribing; and data storage, handling, and processing. Each of these steps are complex, particularly when multiple samples are involved, and require careful tracking, individually and in unison. Research teams should devote time and energy to developing a system that documents, tracks, and explains these steps in detail, and the decisions made to reach them. This will minimize mistakes, ensure transparency, facilitate replication, and allow identification of any unintended biases that may manifest in our work (Burger et al., 2023). It also helps collaborators from different institutions and/or backgrounds, and those from the wider research community, to understand your project and the decision processes from its inception to completion.

What a workflow looks like depends on the nature of the research, but researchers should document all decisions, modifications, difficulties, and successes throughout their project, to allow the research community to understand and learn from them, to continue to improve our practices. Several authors have described their cross-cultural workflow steps in detail, providing

excellent points of departure (Hruska et al., 2018; Holding, 2018; Burger et al., 2023).

Engage with local researchers and stakeholders from the onset

Putting aside the growing (correct, in my opinion) acceptance that many western scientists have for a long time engaged in poor and inequitable research practices by using methods such as helicopter research, failure to engage with local researchers, community members, and other stakeholders from the project onset will almost always make the research quality poorer. I was trained in psychology and anthropology at exclusively western (UK and US) institutions, based on theories and methodology derived almost exclusively from western researchers, based on western samples. Let's say, for argument's sake, I wanted to study cognitive development in Kyoto, or Buenos Aires, or Marrakesh. I have no background or training in child development in these populations. If I were to design a study or experimental protocol, it would be (whether I was aware of it or not) driven by my own experiences, training, and knowledge, which may not be appropriate for these samples. This can generate a range of problems concerning task validity and how participants perceive protocols, which may impact participant performance and lead to erroneous conclusions. Scientists are increasingly calling for researchers (particularly western-based researchers) to work alongside experts in relevant local cultural contexts, to ensure that theoretical frameworks, protocols and materials are culturally informed and appropriate (Hruska et al., 2018; Broesch et al., 2020), and in my experience this is a crucial first step to make.

Factor in sufficient time for protocol and data translations and processing

Often the native language of the researchers conducting the work is different to that of the study population(s). Developing protocols and processing data (regardless of whether it is observational or experimental), including a (rigorous) translation process,

takes a lot of time and effort. There are multiple points at which high-quality translations are essential, including recruitment documents, consent or assent information, study protocols, debriefing information, any training information for research assistants, and of course the data itself. Back-translation means a document is translated into the target language and then re-translated into the source language by a translator who does not see the original. This provides an extra step to catch errors than is present in a single translation process. This can, though, be a time-consuming process, requiring diligent and skilled translators, with clear dialogue between them and the research group. If there are many (or complex) protocols, or data with lengthy transcripts requiring translation, months may be needed both before and after data collection. Translators can be expensive, particularly for rarer languages, and researchers often fail to factor in sufficient funds or time to account for this—meaning shortcuts inevitably are taken. To maximize the research quality, translations need skilled translators, careful consideration, and time.

Conclusion

There are multiple resources available (referenced throughout and including this book) to help researchers who are involved in cross-cultural research at any stage. Good research requires ensuring that projects are well-documented, locally informed, appropriate for the study sample(s), and that enough time is factored in.

4.5. Remote ethnographic methods

Katja Liebal

What are ethnographic methods?

Ethnographic methods are qualitative methods, widely used by anthropologists. In addition to participant observation, sometimes referred to as "method par excellence" in anthropology (Sousa, 2022, p. 7), ethnographic methods may include interviews, PhotoVoice,

drawings, and diaries (Sullivan et al., 2018), and rely on multiple practices, such as listening, recording, reading, and documenting (Ploder & Hamann, 2021). Conducting such ethnographic research is closely linked with "going to the field" and establishing relations with other people (Sousa, 2022, p. 3).

For ethnographic research with children, there has been a fundamental change from research on children to research with or for children, resulting in the adaptation of existing methods (e.g., questionnaires) and the development of new 'participatory' or multi-method approaches (Fargas-Malet et al., 2010). While earlier work focused on the detailed description of child development within one cultural context (e.g., Dennis, 1940; Leighton & Kluckhohn, 2013), later ethnographic work considered the quantification of observations (Barr et al., 1991) and multi-site comparisons (Amir & McAuliffe, 2020), including some of the few studies specifically dedicated to different learning strategies in childhood (Lancy et al., 2010).

What are distant methods?

Distant approaches in ethnographic research, also known as remote, digital, or virtual ethnography (Bengtsson, 2014), are not a recent development. What is new, however, is the increase in the use of distant methods in research with children, as a result of the COVID-19 pandemic and the corresponding restrictions on travelling and close social contact (Lupton, 2021; Watson & Lupton, 2022). Since the pandemic resulted in the closure of research labs, schools, and kindergartens, the usage of distant methods with children has not been limited to ethnographic and qualitative approaches, but also involves experimental methods (Tsuji et al., 2022). Most of such distant ethnographic studies with children have an educational focus, investigating the effects of online schooling during the COVID-19 pandemic (Aladsani et al., 2022; Ratih et al., 2021).

Distant ethnographic methods used with children include interviews, observations, surveys and drawings, which can be either conducted by the researchers themselves during the online

interaction with the child (in real time, but with the researcher and the child being in different locations), or asynchronously as the data are collected by the child and/or their family and then later transferred to the researcher (Watson & Lupton, 2022). For example, Sandberg and colleagues (2022) conducted online ethnographic fieldwork with very young Swedish children (up to three years old) and their families to study their engagement with digital media technologies in their homes. They conducted interviews, observations, and surveys online, while interacting with the children and their families (via Zoom). Sousa (2022) investigated children's representation of COVID-19 in Brazil. Unlike in Sandberg et al. (2022), data were collected offline and asynchronously, as children's parents acted as mediators and collected the data on their children, such as interviews, audio recordings, and drawings, based on the researcher's instructions. New developments, such as adapting the PhotoVoice method through digital diaries (Volpe, 2019), were specifically used in research with young people to take into account the significance of mobile communication in their everyday lives.

Other studies use a mixed-methods approach (Doyle et al., 2009) and combine qualitative ethnographic approaches with quantitative psychological methods. For example, a team of developmental psychologists, biologists, and anthropologists (Children & Nature project) used interviews, PhotoVoice, and drawings in addition to sorting tasks and other experiments to investigate the attitudes of children and adolescents towards other animals in 16 countries, across different socio-cultural contexts (Thajib et al., under review). Because researchers were not allowed to travel during the COVID-19 pandemic, they instead collaborated with members of a range of different communities. During several online meetings, interviews or experimental procedures were translated, and, if necessary, adapted to the corresponding socio-cultural context. Collaborators were then trained online in using these different methods, and, after a piloting phase, they then worked with the children and adolescents of their community to collect the data, always synchronously, but either during online or in-person meetings, depending on the COVID-19 regulations. Thus,

local collaborators either used the different methods remotely or during direct interactions with the participants (Thajib et al., under review).

What are the methodological and ethical challenges?

An important challenge is not being able to go into the field, which is considered an integral part of conducting ethnographic research and raises the question whether remote methods enable a relation between the researcher and the researched (Bengtsson, 2014; Sousa, 2022). For example, Sousa (2022, p. 5) concluded that "I produced my first ethnography without being there [...]. For the first time, participant observation was not my main guide, and I did not have a qualified informant." This is particularly the case for asynchronous modes of distant data collection: researchers need to rely on other mediators, e.g., parents or local collaborators, and only receive the data with some delay. Unlike in synchronous interviews, researchers cannot ask for clarification or check whether their interview partners understood their questions (Lupton, 2021). Synchronous online sessions, on the other hand, often come with the challenge of limiting interactions to a tiny screen and the handling of different types of equipment (tablet, mobile phone, laptop) and software (Sandberg et al., 2022).

Ethical issues related to using distant methods mostly concern the challenge of providing safe conditions for collecting, transferring, and storing data (Tsuji et al., 2022), and acknowledging that their use merges participants' homes and researchers' fields in a new way that did not previously exist (Konken & Howlett, 2023). Still, an important benefit overall of using remote methods—ethnographic as well as more quantitative—is that a greater number of often difficult-to-reach communities can be included, resulting in greater samples and increased diversity (Hall et al., 2021).

4.6. Discovery and the ethnographic record

David F. Lancy

The paper entitled 'The Weirdest People in the World?' (Henrich et al., 2010) was an urgent call to take psychology's core theoretical propositions overseas to test their viability outside WEIRD (Western, Educated, Industrialized, Rich, and Democratic) society. Researchers are being exhorted to determine whether a particular pattern of results would also be found in Indigenous communities. If not, any claim of universality would be withdrawn. But Global WEIRDing (Cooperrider 2019) is rapidly shrinking the pool of communities that can serve as unacculturated comparison sites (Kramer, 2021, p. 10; Berl and Hewlett, 2015, p. 3; Maynard et al., 2023). Alternate research strategies must be used to cope with this problem.

One alternative is to adopt a historical perspective and draw on fieldwork undertaken before modern schooling and WEIRD child-rearing practices became entrenched. My approach has been to review the ethnographic record to tease out emergent patterns in child development. Storing, organizing and retrieving ethnographic accounts has become so much faster and more convenient. Studying childhood through the lens of archived accounts is, in a word, cheap, relative to the cost of sending researchers to, say, the South Pacific for three months of fieldwork.

Ethnography has some unique virtues that make ethnographic 'data' particularly valuable. By gathering information as a participant observer, the ethnographer weaves together three strands of information. First, ethnographers describe what they are seeing, compiling an impressive observational log (complemented with photos and audio/video recordings) from which patterns can be detected. Second, by interviewing or engaging their informants in a discussion of what they've witnessed, they may gain an insider's or 'emic' perspective, which often makes intelligible the foreign or exotic practices one has documented. The results of focused investigation (e.g., testing, spot observations and the like) can thus be more readily interpreted. Third, ethnographers record their own or 'etic' perspective. I pay particular attention to the anthropologist's 'aha' moments, when they are surprised or shocked by something that violates their own assumptions about childhood (Lancy, 2016).

Taking an open-ended and inductive approach to archived data allows one to go beyond the evaluation of WEIRD theory into the realm of discovery. The inductive study of archival records constructed from hundreds of ethnographic studies spanning a century or more will be illustrated by a specific case study. In this case study I discovered patterns in child development that were at odds with prevailing ideas about human evolution. Human life history is unique in the great length of the juvenile or immature period. The extended period is attributed to the time required for youth to master the culture, particularly subsistence skills.

However, in my comprehensive surveys—focused on children's learning—of the ethnographic, historical and archaeological records (Lancy, 2008, 2015, 2022), I kept finding case after case of apparent 'precocity'. An increasing number of studies show that children become skilled well before they gain complete independence and the status of adults. The Birds' work on Mer Island in the Torres Straits is representative:

> Four-year-old children [...] have knowledge of appropriate reef prey, but [...] are also extremely slow and tire easily when the substrate is difficult to negotiate [...] The learning process involves little or no direct adult instruction [rather, by foraging] in groups with older children, observing intently their prey choice and processing strategies [...] *by age six, children have become fairly efficient foragers*. (D. W. Bird and R. B. Bird, 2000, p. 291, emphasis added).

> Children begin spearfishing with toddler-sized spears as soon as they begin walking [and those] that choose to invest in spearfishing practice *reach the same efficiency as the most practiced adult by ages ten–fourteen.* (R. B. Bird and D. W. Bird, 2000, p. 262, emphasis added).

The Birds conclude: "How much experience do Meriam children need before they become efficient reef foragers? Evidently very little" (D. W. Bird and R. B. Bird, 2000, p. 291). Similar findings of precocity and initiative have proliferated (Endicott and Endicott, 2008; Hill and Hurtado, 1996; Odden and Rochat, 2004; Table 7.7 in Lancy, 2022 lists 14 examples). Diaries and letters provide a parallel account from history. "Children, in fact [...] labored at a

wider variety of tasks than either mothers or fathers. They were [...] the most accomplished and versatile workers of the farming frontier" (West, 1992, p. 30). But the literature makes clear that children usually approach the learning and practice of subsistence skills in a casual and playful manner, which masks their real skill to the casual observer. Nevertheless, these reports cast considerable doubt on the need for a lengthened childhood to learn critical subsistence skills (Blurton-Jones and Marlowe, 2002, p. 199).

The model that best seems to explain this extended period of juvenility is referred to as 'embodied capital' (Bock, 2002). The long period of dependency on others and heightened risk of perishing before passing on one's genes is offset by a longer, healthier, and more fertile adulthood. There is also another aspect of precocity, which I have characterized as children serving as a 'reserve labor force' (Lancy, 2015).

The long, tedious hours spent reviewing archival material is sometimes rewarded by serendipity. Probing the precocity issue further, I found many descriptions of children—especially in historical accounts—throwing off the leisure and frivolity of youth to ratchet up their contributions to subsistence, usually in response to a crisis in the family or community. The arrival of a new baby, death or disability of an adult member (Crittenden et al., 2013), and seasonal demand for labor are among many reasons offered when children assume greater responsibility and more reliably and efficiently practice skills they had earlier mastered. A sample of illustrative cases can be found in Lancy (2022, pp. 290–293). Just recently, two more relevant reports dropped into my lap. At UCLA, a sample of 1137 California residents was surveyed around one month after the beginning of the COVID-19 stay-at-home orders (March 2020). In roughly two thirds of the sample, parents raised their expectations of children's help at home (He et al., 2022). A more dramatic case emerged from a remote area of Amazonia where a plane carrying an Indigenous Huitoto family crashed, killing the adults but leaving four siblings aged 13, nine, four, and 12 months to fend for themselves for five weeks before being rescued. They gathered edible foods, erected a shelter and competently tended

the baby, which came as no surprise to their village relatives when interviewed by incredulous reporters (Acosta, 2023).

Like the evidence for 'precocious' learning, the idea that children constitute a reserve corps of workers is not compatible with theory that a lengthy period of juvenility is essential for learning one's culture. However, both of these ideas are compatible with the embodied capital model of human juvenility (Kaplan and Bock, 2001).

In conclusion, I would urge scholars to undertake a broad review of the ethnographic record with as few prior assumptions as possible. The possibility of discovering aspects of child development unanticipated in WEIRD social science are excellent.

4.7. Intersubjectivity and meaning

Jing Xu

The intersubjective nature of social behavior and its implications for meaning interpretation is important in research with children, because children are superb learners and even very young children are developing complex social cognition. When we are studying children, children are also studying us. They try to make sense of their social contexts. They read social cues about the identity, status, and communicative intention of their social interaction partners. Yet these intersubjective and contextual dimensions are easily obscured in our analytical process—especially in studies using standardized methods—but ignoring them can lead to erroneous conclusions. Drawing from my mixed-methods research, I have been introducing such ethnographic reflections into child development research (Xu, 2019). The following study about children's narratives, understanding, and physical aggression in a rural Taiwanese community provides an apt example.

The materials of this study came from what I call the 'Wolf Archive,' a historically significant set of fieldnotes collected by the late anthropologist Arthur P. Wolf in a Hokkien-speaking village near Taipei (1958–1960) at the height of Taiwan's martial-law era. Intended to replicate the Six Cultures Study of Child Socialization

(CSC), a landmark project in the history of anthropology (LeVine, 2010), the Wolfs' project was the first field research of ethnic Han Chinese and Taiwanese children in the world. With the help of excellent local research assistants, Wolf gathered a rich mine of data from multiple methods, such as natural observations, standardized interviews, and projective tests, but he never published systematic analyses from this archive. Decades later, my re-analysis of this archive provides a rare opportunity to reflect on the question of intersubjectivity in knowledge production.

Ethnographic records of close-knit, rural communities in post-war Taiwan, including Wolf's research in this village, noticed a common cultural model in parenting, that is, the prohibition of children from fighting, for the purpose of social harmony among neighbors. Parents readily intervened if they witnessed these conflicts or were called upon to help, and they did not hesitate to scold and beat children who got into fights. Results from a systematic analysis of the 'Mother Interview' with over 40 mothers in the Wolf Archive conformed to this ideology. However, children's audacious responses in the standardized 'Child Interview' (ages 3–10, 74 children) posed a stark contrast to their mothers' beliefs: 75 children (ages 3–10) responded to this first-person, hypothetical question: "Suppose another child (O) your age comes up and hits you: What would you do?" Fifty-seven children (76%) said they would intervene or avenge, contrary to the cultural model of "no fighting back" (Xu, 2020).

Children's narratives in another context, nonetheless, aligned with the cultural model and revealed the opposite pattern of their responses to the 'Child Interview'. Wolf's team conducted a survey called 'School Questionnaire' in local elementary schools. This questionnaire contained a similar hypothetical question about physical assault, but children tended to circle the answer "Do nothing," despite some boys raising their fists ready to fight back. Such a contradiction has to do with whom these two different types of data were collected by and how they were collected. 'Child Interview' was conducted in Taiwanese in a familiar, informal setting by a local research assistant, a Taiwanese teenage girl whom these children trusted, played with, and confided in—the

children even called her "older sister Chen." But the survey data were collected by Wolf himself, a foreign, white man whom these children were much less familiar with. Not only might the children have felt less comfortable interacting with Wolf than with "older sister Chen;" the classroom setting itself also mattered. During the martial-law era in Taiwan, schools were a key setting for authoritarian socialization. At the time of Wolf's fieldwork, the Kuomintang (KMT) regime was promoting a Chinese nationalistic language policy: Mandarin was the only language allowed at school and children were punished for not speaking it (Klöter, 2004). Children's cautious responses tell us what they thought would be the 'correct' thing to say.

I also analyzed 'Child Observation' data—over 1,600 episodes of timed observations of children's social interactions in their natural context—also collected by the research assistant, Chen. I found that children's fights appeared in over 20% of observations, and 81% of children were involved in fighting. Many scenarios described in responses in 'Child Interview' appeared in observational episodes. A few examples include "Hit him with a bench," "Hit him with my fist," "Slap him," "Call older brother to hit him," "Take a rock and hit him," "Hit him with a slingshot" (Xu, 2024). Taken together, these narratives and observations not only reveal children's explicit attitudes, but also normative knowledge and actual behavior. This case study alerts us to children's acute sensitivity to communicative contexts, partners and intentions in our research and prompts us to reflect on the nature of our knowledge production.

4.8. Uplifting authentic voices: A qualitative study of North Korean youth's cross-cultural journeys

Heejung Park

The process of socialization entails learning and internalizing cultural values and norms that govern a society, culminating in an individual's integration into their respective context (Gauvain & Parke, 2014; Hill, 2021). This process undergoes transformation when children and youth migrate to societies with divergent

cultural values and norms, necessitating adaptation (Portes & Rivas, 2011). This transformation is particularly pronounced among vulnerable migrant populations, such as refugees and persons of concern, necessitating research approaches that are both methodologically robust and ethically responsible (UNHCR, 2023). Here, I delineate best practices for conducting research with vulnerable groups of migrant children and youth, drawing upon insights from my qualitative study (Park, 2019) on the acculturation and identity formation of North Korean defector youth in South Korea (hereafter referred to as NK youth).

Ethnographic research and community partnership

Effective research with vulnerable populations requires a solid foundation in ethnography and community partnership. Prior to data collection, it is imperative to immerse oneself in the community's culture, norms, and history. Collaboration with community stakeholders further ensures that the research reflects participants' lived experiences. In my study, accessing the life stories of NK youth demanded establishing trust with the NK community, which often harbors wariness towards outsiders due to experiences of trauma and confidentiality concerns.

I dedicated significant time at a boarding school for NK youth, initially focusing on ethnography and respecting their privacy. Observing the community offered valuable insights into their social dynamics and cultural nuances. Over time, I transitioned from an outsider to a community member, earning the trust of the students, teachers, and administrators. This trust-building process culminated in a NK defector teacher inviting me to stay in their housing, recognizing my genuine commitment to understanding the community. This opportunity provided unparalleled insight into their lives.

My approach and relationship with the community marked a departure from past methods that lacked care and sensitivity. For instance, one participant disclosed their avoidance of another researcher in the past due to perceptions of a solely research-focused agenda. Furthermore, a teacher expressed dissatisfaction

with a biased research article that negatively portrayed the NK community and did not align with their experiences. As my two-month stay concluded, the community expressed appreciation for my presence and urged me to authentically represent their stories and perspectives.

Culturally sensitive and empowering design

The success of my research was also attributable to a participatory design that prioritized participants' agency and cultural sensitivity. The main approach involved life-line drawings and participant-led unstructured interviews, fostering a trauma-sensitive and participant-centric data collection process. Participants created life-line drawings depicting significant life events and predicted future trajectories (Figure 4.2), followed by narratives about their past, present, and future, articulated at their own pace, without external cues. This methodology empowered participants, contrasting with past studies that my participants said they found insensitive, stigmatizing, or irrelevant to their lived experiences.

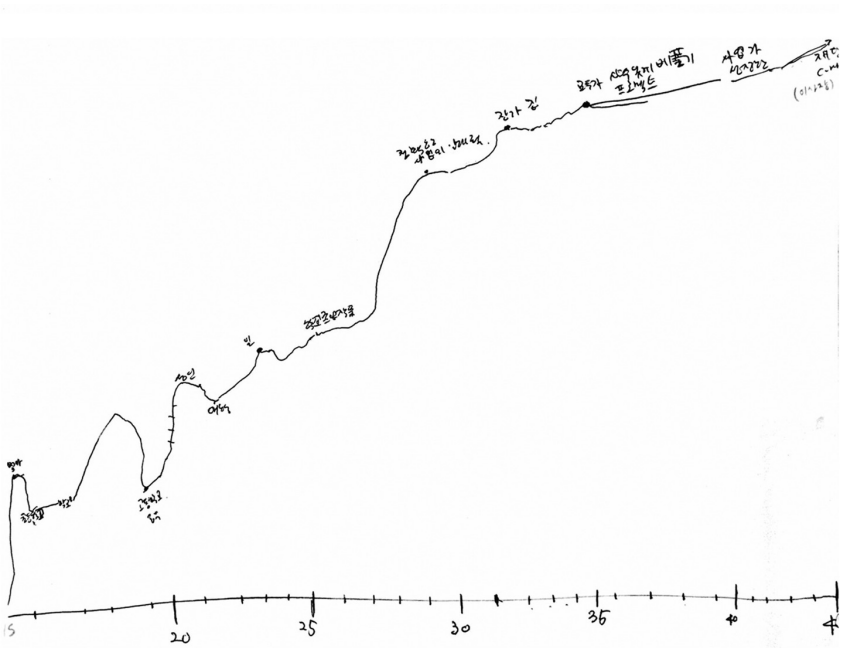

Fig. 4.2 A participant's life-line drawing. First appeared in Park (2019).

Data analysis and dissemination

In qualitative research with vulnerable populations, it is imperative to preserve the authenticity of participants' stories during analysis, considering cultural, political, and historical contexts. The analysis of NK youth narratives entailed an extensive review of data without preconceived assumptions, utilizing grounded theory, thematic analysis, and situational analysis. This approach revealed participants' multifaceted cultural adaptation and identity development, emphasizing not only their adversities but also their resilience and growth.

The dissemination of findings carries the dual responsibility of contributing to academic discourse while ethically representing the study population. Careful selection of terminology and balanced portrayal were prioritized to respect the dignity and privacy of participants. For instance, the term 'NK youth' was used due to aversions to the official term, 'North Korean defectors,' revealed in my interviews and reported elsewhere (J. E. Lee, 2024). My ongoing efforts to share these findings aim to challenge stigmas and misconceptions about the population.

Researcher bias and positionality

Addressing researcher bias and positionality is critical when working with vulnerable populations. Researchers must continually assess their assumptions, approach communities with humility and compassion, and stay attuned to political discourses. Given the susceptibility of vulnerable populations to marginalization and partisan discourses, understanding the political context is crucial for researchers to avoid being influenced by local, national, or international political agendas or ideologies. For instance, my position as a Korean American researcher with roots in South Korea, familiar with South Korean culture yet somewhat external to it, provided a balanced approach, especially given the politicized nature of narratives about NK communities in South Korea.

Another specific example illustrates my commitment to ethical considerations. I voluntarily withdrew from a highly attractive recruitment site due to internal politics among teachers and administrators, prioritizing the well-being of the study population. Despite the allure of a large student size, I chose to protect student narratives from potential censorship or coercion within the school context. This careful approach is crucial for all research studies but especially imperative when working with vulnerable populations.

Conclusion

This case study imparts crucial lessons for researchers working with vulnerable populations, underscoring the value of compassion, cultural sensitivity, and dedication to understanding and respecting participants' experiences. By prioritizing the voices and agency of NK youth, the study not only advances academic knowledge but also respects and empowers its study population. The lessons learned from this study, conducted with an understudied population that has endured trauma and cultural dislocation, are broadly applicable to research on cultural learning among other vulnerable groups of migrant children and youth.

4.9. Archaeological perspectives

Annemieke Milks & Felix Riede

While the archaeological record is often coarse-grained, the detailed examination of material culture as a proxy for social learning offers the unique opportunity to extend the temporal depth of our investigations. Archaeologists have devised numerous methods to reverse-engineer and hence infer processes of social learning from material proxies. These methods can be applied to contemporary objects, objects found in museum collections, as well as those retrieved from excavations. The strongest research design emerges in the combination of perspectives, as they allow us to connect the detailed observations offered by fieldwork in

the present with the temporal depth offered by the archival and archaeological records.

Several recent reviews have surveyed what objects forager children are known to play with ethnographically (Lew-Levy, Andersen, et al., 2022; Riede et al., 2023) and what evidence there is for object play in the archaeological record (Milks et al., 2021). These surveys provide a strong framework for focusing our attention on particular artifacts known to be common play objects and likely to survive the vagaries of preservation at least to some extent. In order to reconstruct social learning dynamics, a given object needs to be deconstructed into the technological elements it consists of, so that the sequence of actions that make up the production and use of the object may be reconstructed. Originally developed in ethnoarchaeological contexts of adult technology, this form of operational chain analysis has been successful deployed to qualitatively and quantitatively infer processes of social learning (Jordan, 2015; Tehrani & Riede, 2008) as well as cognition (Haidle & Stolarczyk, 2020)—and it can be transferred to play-object production and use. Moreover, this approach can be employed both when analyzing objects from ethnographic contexts, from museum collections and archives, and from archaeological excavations, each at different resolution and temporal depth (Table 4.1). Those designing studies that aimed to better understand the production and use contexts of children's material culture thus need to pay close attention to the raw materials used and their provenance, the time spent on manufacture and use, as well as the who and when of production and use. When working with museum or ethnographic objects, the latter information is only available where either direct observation or archival notes or photos provide such contextualization. Detailed recording schemes and photographic documentation are essential for descriptions to be useful, while standardized annotations of technological characteristics facilitate downstream quantitative analyses (Figure 4.3). New fieldwork programs provide fresh opportunities to gather such contextual information about existing and new collections of objects for museums.

Children's contributions towards the archaeological record can be particularly difficult to discern for myriad reasons, including

the potential for overlapping engagement with material culture attributed to adults, play with expedient objects, and use of materials that are less likely to preserve over time. Archaeologists frequently make use of existing ethnographic and ethnoarchaeological studies to interpret the material record, including the activities and material culture of children (Arnold, 2012). Ethnoarchaeological fieldwork can also deliberately be designed to capture new information that may leave an ambiguous archaeological signature, contributing to further identification of children's activities in the past. For example, a study of intertidal gathering of shellfish by Meriam children of the Eastern Torres Strait suggests that variability in shell middens in the past may indicate subsistence activities of younger group members (Bird & Bliege Bird, 2000). Similarly, a study of stone alignments made by Dukha reindeer herders sheds light on archaeological examples of constructed play areas (Mackie et al., 2015). Fieldwork designed to understand how spear hunting is learnt amongst BaYaka foragers illustrates how new data can show processes that may be virtually invisible in archaeological contexts (Lew-Levy, Bombjaková, et al., 2022; Lew-Levy et al., 2021). Whether designed to collect more data on objects and materials, or on behaviors and processes, new research projects benefit from interdisciplinary collaborations. These are best established at the outset, and in such a way as to benefit communities alongside a wider array of researchers who together pose different and/or intersecting questions. It is essential that all contributors are sensitive to understanding the pitfalls of the use of ethnographic data for archaeological purposes in both study design and publication (French, 2019; Gosselain, 2016; Warren, 2021).

Table 4.1. Summary of the strengths and weaknesses of different methodological approaches. In some cases, the pros and cons will vary depending on the scale and methods selected within an approach (-/+).

	Strengths & weaknesses		
Methodological approach	Resolution	Time-depth	Generalizability
Ethnographic fieldwork	+++	---	--

Cross-cultural research	--	-	+++
Ethnographic museum and archival research	+/++	+	-/+
Archaeological excavation	--	+++	-/+

Fig. 4.3 Images from a joint ethnographic and ethnoarchaeological study on BaYaka spear hunting led by Sheina Lew-Levy and Annemieke Milks. Clockwise from top left: (1) Research Assistant Francy Kiabiya Ntamboudila using a radar gun to capture throwing velocity of an adult thrower in the spear-throwing experiment. (2) An adolescent taking part in a spear-throwing experiment. (3) High-speed video still frame of a spear hitting a target in the spear-throwing experiment. 4) BaYaka children engaged in pretense hunting. ©Sheina Lew-Levy. All rights reserved.

4.10. Un-natural observation: Experimentation in the cross-cultural study of childhood learning

Roman Stengelin

Cross-cultural research on childhood learning is full of causal assumptions. Culture shapes children's learning, and children's

learning is foundational to human cultural diversity. Childhood learning is both a product of and a precondition for culture.

Experimentation is a leading paradigm to study how cultural experience affects children's learning, and vice versa. Assuming participants bring "the preferences and beliefs that they have acquired in the real world into the decision-making situation" (Henrich et al., 2005, p. 813), experiments shed light on cultural variation in childhood learning by testing and falsifying theories on how such variation comes into play. At the same time, experimental research often receives skepticism from cultural psychologists and anthropologists given its emphasis on standardization and related impediments in measurement equivalence (Broesch et al., 2020; Kline et al., 2018). Indeed, cross-cultural experiments are, like any other approach, limited in scope and prone to misinterpretation. However, they also have decisive advantages that make them essential to cross-cultural research on children's learning.

Before showing some of the unique opportunities of experimentation in cross-cultural research on childhood learning, I first want to reduce some of the definitional ambiguity relating to cross-cultural experiments. Experimentation is a scientific method in which a variable of interest (i.e., the independent variable) is manipulated to assess its causal effect on another (i.e., dependent) variable. Participants from a joint population are randomly assigned to one manipulation (or condition) while potential confounds, assessed prior to the experimental manipulation, are controlled for. Rigorously designed experiments ensure that group-level variation in the dependent variable is—by design—caused by the experimental manipulation.

Studies in which children from two or more cultural communities are observed in a somewhat standardized study are often labeled cross-cultural experiments. For example, researchers may test effects of culture on children's learning from instruction by testing participants in two communities varying in a cultural variable of interest to the study (e.g., high and low emphases on child-directed pedagogy). Such research typically tests the effects of culture on a dependent variable, treating experimentation loosely analogous to standardization. An obvious issue with

this is that participants cannot be randomly assigned to their complex cultural experience, they are already found nested within cultures. This approach is essentially quasi-experimental.[1] Indeed, cross-cultural quasi-experiments can barely single out variables driving cultural variation, given the immense complexity of human cultural experience. In our example, cultural variation in children's learning might indeed be driven by cultural emphases on pedagogy, or alternatively by variation in the role of adults versus peers as sources of learning more generally, or countless other variables that differ across the sampled communities. To establish causality, such variables could be unpackaged iteratively through cultural contrasts, or by priming culture via language or other aspects of cultural experience and thought (see also Ma-Kellams, 2021; Norenzayan & Heine, 2005; Pfundmair, 2017).

In a narrower sense, cross-cultural experiments subsume approaches in which participants from two or more cultural communities are randomly assigned to experimental conditions to investigate how cultural variation modulates the effects of independent on dependent variables of interest. In the example above, researchers may tap into cultural emphases on pedagogy by contrasting participants from the same cultural group in one condition in which children receive instruction, with a second condition relying on uninstructed observational learning. Such paradigms allow for causal inference by focusing on the relative gains in social learning from instruction across cultural communities.

Cross-cultural experiments designed as such can help identify universally or locally efficient variables that affect (i.e., promote or hinder) childhood learning, providing solid grounding for culturally informed learning contexts and pedagogical practices. Randomized assignment of participants to experimental conditions within cultural communities can help control for the

1 This is often discussed as a limitation or weakness of this research paradigm. Note that, strictly speaking, any mono-cultural research is just as much quasi-experimental with $n_{\text{cultures}} = 1$ whenever research findings are generalized beyond the cultural community from which participants were randomly sampled. This is almost always the case—true experimental research is a rarity in human social sciences.

countless confounds that make rigorous hypothesis testing and falsification so difficult in cross-cultural quasi-experiments and less standardized approaches.

Moving away from culture-level comparisons of children's absolute learning rates (e.g., instructed learning: community A > community B), cross-cultural experiments also enable more nuanced comparisons of learning within cultures (e.g., community A: instructed learning > observational learning; community B: instructed learning = observational learning), which can then be interpreted in context. Standardizing participants' responses within cultures can further prevent often stigmatizing misinterpretations of group-level variation in learning by focusing on relative, rather than absolute, variation in the dependent variable. Cross-cultural experimentation can also promote the reproducibility and replication of research procedures and findings as long as methodological details are communicated transparently. Although generalizability constraints are often discussed for experimentation (Yarkoni, 2022), adequate experimental design ensures that results generalize to the larger populations from which participants were recruited.

At the same time, the standardization inherent in cross-cultural (quasi-)experiments presents substantial challenges, often exacerbated in childhood research. Experimental manipulations (i.e., the communicative intent of child-directed instruction) may be differently interpreted and navigated by participants in different cultural communities (e.g., Hruschka et al., 2018). When this is the case, group-level variation in children's responses may not be driven by variation in cultural experience, but variant interpretations of the experimental manipulation. This threatens the equivalence assumption central to experimentation (Kline et al., 2018). These challenges can be mitigated through culturally informed research designs, and multiple rounds of piloting and revision that incorporate local expertise in cross-cultural research. Extensive piloting involving local researchers, adults, and children above or below the focus age range may help ensure sufficient sample sizes, while fine-tuning procedures to local settings. Testing study protocols in neighboring communities sharing

crucial features for cultural fit can further preserve sample sizes. Within-subjects (i.e., repeated measures) research designs and the careful selection of response formats with adequate psychometric properties can bolster experimental research in the face of statistical power issues common to quantitative cross-cultural research.

As a general note, experimental researchers working cross-culturally need to compromise between standardization and cultural adaptation, and to communicate such trade-offs transparently. For example, they may define standardized ways of refining study settings and instructions to local contexts in order to develop a reproducible and standardized protocol for designing culturally grounded sub-experiments, rather than exclusively focusing on rigid procedural outcomes. After all, paradigms that seem objectively similar to the researcher may be interpreted differently, and paradigms thought different may be interpreted much more similarly across cultures. The right decisions can only be made with local perspectives and experience. Finally, mixed-methods research designs can increase the cultural and ecological validity of experiments (see also Lew-Levy et al., 2021).

Cross-cultural experiments are tedious, artificial, and never free of context. To some extent, they need to be just that: by taking children's learning out of the everyday, experimentation provides helpful abstraction to establish causality by research design in the cross-cultural study of childhood learning.

4.11. Conversation analysis approach

Akira Takada

Conversation analysis emerged at the intersection of micro-sociology, linguistic anthropology, pragmatics, and cultural psychology. Although it is generally regarded as a qualitative research method, it is also highly empirical. According to Schegloff (1987), who established conversation analysis with his colleagues, the appropriateness of researcher's characterization (analysis) of interaction can be warranted by providing some evidence that it is

also appropriate for the participants to engage in interaction. This idea can be simplified as follows.

Suppose there are two interactants, A and B. Action X is performed with reference to context X and constitutes context X+1. When A and B meet in the morning (context 1), A greets B with a "Good morning" (action 1). In response (context 2), B also greets A with a "Good morning" (action 2). Following this (context 3), A asks, "Have you done the assignments?" (action 3). In response (context 4), B replies, "Not at all" (action 4). Here, the researcher characterizes each of the actions 1, 2, 3, and 4 as greeting, greeting, question, and answer, respectively. By greeting in action 2 and answering in action 4, B displays her understanding of A's actions 1 and 3 as greeting and question, respectively. Responding to greeting with greeting and responding to question with answer is determined by linguistic conventions. The meaning of each action characterized by the researcher here does not depend solely on its semantic basis. Rather, they are proposed, negotiated, and constructed in the course of interaction. And it is this exchange of meanings that shapes our social reality.

In order to analyze interaction in detail, audio or video data are first collected using video cameras and other equipment. The obtained data are transcribed, on which systematic analysis is conducted. In transcribing conversations, we first identify the speaker of every utterance by repeatedly viewing the data, and then carefully transcribe the content in a manner that follows the conventions of previous research. Non-verbal features such as eye gaze, gestures, and posture may be also transcribed (Schegloff, 2007). As discussed below, it is particularly important to consider such non-verbal features in interactions involving children.

Conversation analysis basics

Conversation analysis and related fields have empirically shown that even in our daily interactions, which we tend to take for granted, there are extremely elaborate rules by which social order is maintained (Schegloff, 2007). For example, our daily conversation is considered to be ordered by a turn-taking system

as the most basic mechanism. Since spoken language is primarily an auditory medium of communication, having several people speak at the same time about different things interferes with the listener's understanding and is therefore avoided. For this reason, the one-at-a-time rule, in which only one person is basically speaking at a time, is recognized. When a possible completion point is approaching, the speaker often indicates the next speaker explicitly or suggestively. If the next speaker is not indicated by the point at which the utterance can be terminated, any participant in the conversation can be the next speaker.

An adjacency pair is considered to be the smallest unit of speech exchange that constitutes the turn-taking system. Adjacency pairs include greeting–greeting, and question–answer shown above. In other words, each utterance is some kind of social action, and the former action is called the first pair part (FPP) and the latter the second pair part (SPP). The sequence of utterances consisting of FPP and SPP is called the base sequence. The most basic task in analyzing ordinary conversation is to find the base sequence in the conversation. However, base sequences are often developed in a much more complex way than mere adjacency pairs. Additional conversational elements may be added before FPP, between FPP and SPP, and after SPP, collectively called expansion. The turn-taking system, one-at-a-time rule, and adjacency pairs have normative characteristics. In other words, participants in interactions refer to them when selecting and implementing their actions. However, actions do not necessarily follow norms in their practice: situations frequently arise in which an action is misspoken or difficult to hear. For such conversational 'trouble', repair often occurs. The occurrence of repair reveals that the participants in the conversation are oriented toward a common norm.

Incorporating culture and children in conversation analysis

The basic analytical concepts of conversation analysis described above were derived mainly from the analysis of conversations in English-speaking communities, so it is necessary to examine carefully whether these concepts can be applied to interactions in

cultures that use languages other than English. Many researchers have expressed doubts about the universality of these analytical concepts (e.g., Gudykunst & Nishida, 1994; Agliati et al., 2005). In this respect, the theory of language socialization promoted by Elinor Ochs and her colleagues expands the scope of conversation analysis. Ochs and her colleagues have accumulated empirical data on language socialization in various societies and cultures around the world (e.g., Ochs, 1988; Duranti et al., 2012). They propose that children do not develop or acquire cognitive abilities during their development (as most psychologists assume) but rather develop appropriate actions in response to socio-cultural contexts. Their language socialization theory explores the reasons why an action is performed by a particular participant, in a particular way, at a particular time of interaction in the society under study. Specifically, they argue that "each community's habitus of communicative codes, practices, and strategies is to be judged in terms of its own socio-cultural logic" (Ochs et al., 2005, p.548). Relatedly, Takada (2021) demonstrated how caregivers of !Xun, Indigenous people of Namibia, socialize the behaviors of young children into socio-culturally constructed actions. This involves reframing, which refers to "a change in what the discussion is about," and often accompanies rekeying, which refers to "a change in the tone or tenor of an interaction" (Tannen 2006, p. 601). Reframing and rekeying mobilize a constellation of multiple semiotic resources. For the !Xun, central among these resources is gymnastic behavior, namely, holding infants upright or moving them up and down (bouncing). Takada (2021) examined how !Xun caregivers reframe and rekey infant behavior from distress to playfulness in the course of multi-modal interactions.

4.12. The emergence of social smiling: Linking ethnotheories to the dynamics of social interaction and child development

Joscha Kärtner

In research on the emergence and further development of infant social smiling, it is a basic assumption—as in many other domains of child development—that caregivers establish interactional routines that organize children's experience and behavior. As time progresses, these interactional routines are internalized and manifest in child development. Importantly, caregivers' interactional routines are informed by specific ethnotheories on good parenting and optimal child development that may differ between cultures, potentially leading to culture-specific developmental pathways.

In order to provide evidence for the cultural differences in maternal ethnotheories and their consequences for social interaction and child development, we combined different methods: (i) standardized assessment of maternal ethnotheories on infant smiling in postnatal week 7; (ii) longitudinal assessments of semi-standardized observations of mother-infant interaction from week 8 to 18; and (iii) standardized assessments of developmental outcomes in week 12 and 18 (see Figure 4.4).

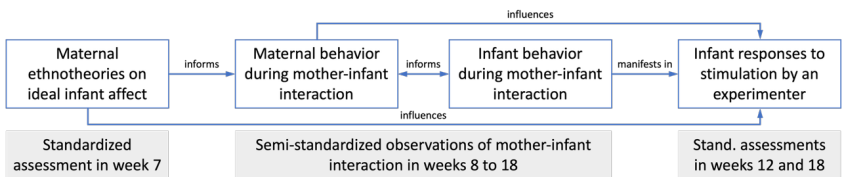

Fig. 4.4 Conceptual model and methods of project on social smiling.

In this project, we contrasted two cultural contexts, namely educated urban middle-class families in Münster, Germany, and Indigenous Kichwa families living in villages around Cotacachi and Otavalo in the Northern Andes in Ecuador. The project was realized in cooperation with the University of Otavalo, mainly planned at the University of Münster and organized by Helen Wefers, who initiated the project and took the main responsibility for its implementation. Although the project was well received by the participating families and local research assistants, future projects would ideally start as joint endeavors from the beginning in order to minimize biases (Wefers, Krüger, et al., 2023).

Assessment of maternal ethnotheories

Maternal ethnotheories are often implicit and difficult to reflect on, so we based our assessment of ethnotheories regarding ideal infant states on a series of short video clips of a Münster and a Kichwa infant with different states of positive affect and activity. Based on these clips, mothers could indicate which of the two states they preferred when presented with a series of pairwise comparisons (see Figure 4.5), and, in a more open format, mothers were invited to comment on how they would react when interacting with an infant after looking at specific video clips again. As expected, mothers in Münster preferred higher levels of positive affect than Kichwa mothers (Wefers et al., 2022).

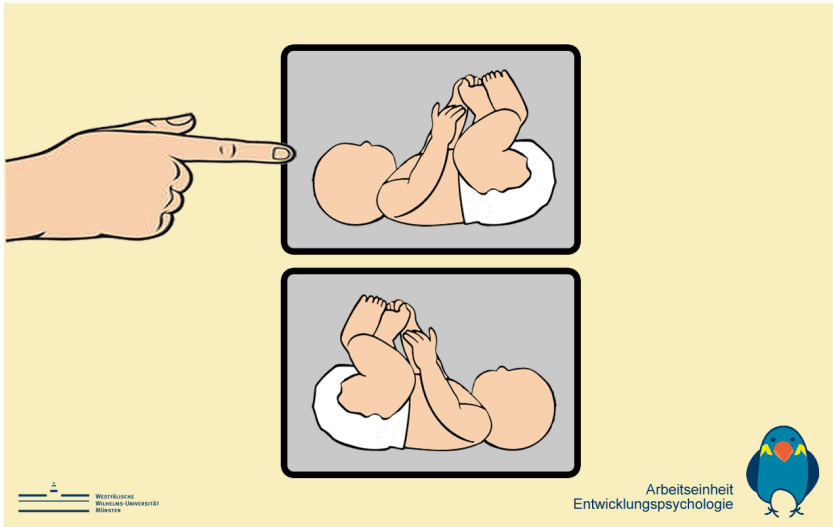

Fig. 4.5 Assessing maternal ethnotheories about ideal infant affect. Figure shows initial tablet screen: mothers were shown stills of clips of one of 10 pairwise comparisons. Originally appears in Wefers et al. (2022).

Longitudinal assessments of mother-infant interaction

While the main analyses of mother-infant interaction are still pending, a mixed-method analysis of a subsample of 10 mother-infant dyads per culture at week 9 and 13 showed that the Münster mothers' accentuated preference for high-intensity infant smiling

manifested in their mother-infant interactions. More specifically, a quantitative analysis of infant smiling showed culture-specific developmental pathways, as there was a significant increase in the frequency of Duchenne smiles (i.e., high-intensity infant smiling) from week 9 to 13 in the Münster sample but not the Kichwa sample, resulting in cross-cultural differences in week 13 (Kärtner et al., 2022). The qualitative analyses explored whether interactional preludes to infants' Duchenne smiles were similar across the two cultural contexts, which in fact was the case: mothers used similar means to make their infants laugh, consisting of, first, intense and multimodal stimulation with repetition and theme variation and, second, positively tuned and mutually contingent responsiveness, often in the form of prolonged proto-conversations (see Figure 4.6).

Fig. 4.6 Images taken from a prolonged proto-conversation between mother and infant. The mother acknowledges the infant's second turn by a head nod (left), then she mirrors and intensifies the infant's smile (middle), further exaggerating her smile to a voiceless laugh as the infant peaks.

Standardized assessments of infants' responsiveness

From the mother-infant observations alone, one cannot determine whether differences in infant behavior are a result of differential input (e.g., frequency with which mothers try to make their infants smile) or differential development (i.e., differences in expectations

and habitualized ways of experiencing and responding to specific events). To probe the latter, infants were confronted with a female experimenter who stimulated the infant in a standardized way when they were 12 and 18 weeks old.

In a variant of a still-face paradigm, the experimenter showed a medium and a high level of positive stimulation via gaze, voice and smile for one minute each, before showing a still face. While the infants showed the still-face effect (i.e., decrease in gaze and positive affect and an increase in negative affect) in both cultures and at both ages to similar degrees (Wefers, Schuhmacher, Chacón, et al., 2023), culture-specific patterns appeared in how infants responded to positive stimulation during the first phase. More specifically, while the 12-week-olds in both cultures showed similar smiling responses to medium positive stimulation, Münster infants showed higher smiling intensities in response to more intense positive stimulation (Wefers, Schuhmacher, & Kärtner, 2023). At 18 weeks, in contrast, the infants from both cultures responded with an increase in smiling when there was an increase in positive stimulation, which suggests that, by then, infants from both cultures have had enough interactional experience around high-intensity smiling to engage in highly positive interactions with others.

Summary and conclusion

Combining the strengths of both standardized assessments and more ecological observations of mother-infant interaction, the overall design of this project allowed us to test the different assumptions underlying developmental theories and provided converging evidence for cultural differences in maternal ethnotheories on infant smiling. Further, it helped reveal how these ethnotheories affect both maternal and infant experience and behavior across the first weeks of life and how they resulted in differences as well as similarities in infant smiling development.

References

Acosta, L. J. (2023, June 10). Four Colombian children found alive in jungle weeks after plane crash. *Reuters.* https://www.reuters.com/world/americas/four-missing-colombian-children-found-alive-jungle-sources-2023-06-10/

Aladsani, H., Al-Abdullatif, A., Almuhanna, M., & Gameil, A. (2022). Ethnographic Reflections of K–12 Distance Education in Saudi Arabia: Shaping the Future of Post-Pandemic Digital Education. *Sustainability, 14(16)*, Article 16. https://doi.org/10.3390/su14169931

Agliati, A., Vescovo, A., & Anolli, L. (2005) Conversation patterns in Icelandic and Italian people: Similarities and differences in rhythm and accommodation. In L. Anolli, S. Jr Duncan, M. S. Magnusson, & G. Riva (Eds). The hidden structure of interaction: From neurons to culture patterns (pp. 223–235). IOS Press.

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

Apicella, C., Norenzayan, A., & Henrich, J. (2020). Beyond WEIRD: A review of the last decade and a look ahead to the global laboratory of the future. *Evolution and Human Behavior, 41*(5), 319–329. https://doi.org/10.1016/j.evolhumbehav.2020.07.015

Arnold, J. E. (2012). Detecting Apprentices and Innovators in the Archaeological Record: The Shell Bead-Making Industry of the Channel Islands. *Journal of Archaeological Method and Theory, 19(2),* 269–305. https://doi.org/10.1007/s10816-011-9108-1

Barr, R. G., Konner, M., Bakeman, R., & Adamson, L. (1991). Crying in !kung San Infants: A Test of the Cultural Specificity Hypothesis. *Developmental Medicine & Child Neurology, 33(7)*, 601–610. https://doi.org/10.1111/j.1469-8749.1991.tb14930.x

Bengtsson, S. (2014). Faraway, so close! Proximity and distance in ethnography online. *Media, Culture & Society*, *36*(6), 862–877. https://doi.org/10.1177/0163443714531195

Berl, R. E. W., & Hewlett, B. S. (2015). Cultural Variation in the Use of Overimitation by the Aka and Ngandu of the Congo Basin. *PLoS ONE, 10,* e0120180. https://doi.org/10.1371/journal.pone.0120180

Bird, D. W., & Bliege Bird, R. (2000). The Ethnoarchaeology of Juvenile Foragers: Shellfishing Strategies among Meriam Children. *Journal of Anthropological Archaeology, 19(4),* 461–476. https://doi.org/10.1006/jaar.2000.0367

Blurton-Jones, N. G. & Marlowe, F. W. (2002). Selection for delayed maturity: Does it take 20 years to learn to hunt and gather? *Human Nature, 13(2)*, 199–238. https://doi.org/10.1007/s12110-002-1008-3

Bock, J. (2002). Learning, life history, and productivity: Children's lives in the Okavango Delta of Botswana. *Human Nature, 13(2)*, 161–198. https://doi.org/10.1007/s12110-002-1007-4

Broesch T., Crittenden, A. N., Beheim, B. A., Blackwell, A. D., Bunce, J. A., Colleran, H., Hagel, K., Kline, M., McElreath, R., Nelson, R. G., Pisor, A. C., Prall, S., Pretelli, I., Purzycki, B., Quinn, E. A., Ross, C., Scelza, B., Starkweather, K., Stieglitz, J., & Mulder, M. B. (2020). Navigating cross-cultural research: methodological and ethical considerations. *Proceedings of the Royal Society B, 287*, 20201245. https://doi.org/10.1098/rspb.2020.1245

Broesch, T., Lew-Levy, S., Kärtner, J., Kanngiesser, P., & Kline, M. (2023). A roadmap to doing culturally grounded developmental science. *Review of Philosophy and Psychology*, *14*(2), 587–609. https://doi.org/10.1007/s13164-022-00636-y

Burger, O., Chen, L., Erut, A., Fong, F. T., Rawlings, B., & Legare, C. H. (2023). Developing Cross-Cultural Data Infrastructures (CCDIs) for research in cognitive and behavioral sciences. *Review of Philosophy and Psychology, 14(2)*, 565–585. https://doi.org/10.1007/s13164-022-00635-z

Cooperrider, K. (2019, January 23). What Happens to Cognitive Diversity When Everyone Is More WEIRD? *Aeon*. https://aeon.co/ideas/what-happens-to-cognitive-diversity-when-everyone-is-more-weird

Crittenden, A. N., Conklin-Brittain, N. L., Zes, D. A., Schoeninger, M. J., & Marlowe, F. W. (2013). Juvenile foraging among the Hadza: Implications for human life history. *Evolution and Human Behavior, 34*, 299–304. https://doi.org/10.1016/j.evolhumbehav.2013.04.004

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

Dennis, W. (1940). *The Hopi child* (pp. xi, 204). Appleton-Century.

Doyle, L., Brady, A.-M., & Byrne, G. (2009). An overview of mixed methods research. *Journal of Research in Nursing, 14(2),* 175–185. https://doi.org/10.1177/1744987108093962

Duranti, A., Ochs, E., & Schieffelin, B. B. (Eds). (2012). *The handbook of language socialization*. Blackwell.

Endicott, K. M., & Endicott, K. L. (2008). *The Headman was a Woman: The Gender Egalitarian Batek of Malaysia.* Waveland Press, Inc.

Fargas-Malet, M., McSherry, D., Larkin, E., & Robinson, C. (2010). Research with children: Methodological issues and innovative techniques.

Journal of Early Childhood Research, 8(2), 175–192. https://doi.org/10.1177/1476718X09345412

French, J. C. (2019). The use of ethnographic data in Neanderthal archaeological research. *Hunter Gatherer Research, 4(1),* 25–49. https://doi.org/10.3828/hgr.2018.3

Gauvain, M., & Parke, R. D. (2014). Socialization. In *Handbook of cultural developmental science* (pp. 239–258). Psychology Press.

Gelman, A., Vehtari, A., Simpson, D., Margossian, C. C., Carpenter, B., Yao, Y., Kennedy, L., Gabry, J., Bürkner, P.-C., & Modrák, M. (2020). Bayesian workflow. *arXiv preprint arXiv:2011.01808.* https://doi.org/10.48550/arXiv.2011.01808

Gosselain, O. P. (2016). To hell with ethnoarchaeology! *Archaeological Dialogues, 23(2)* https://doi.org/10.1017/S1380203816000234

Gudykunst, W. B., & Nishida, T. (1994) *Bridging Japanese/North American differences.* Sage.

Haidle, M. N., & Stolarczyk, R. (2020). Thinking Tools. With Cognigrams from Reconstructions and Interpretations to Models about Tool Behavior. *Intellectica, 73(2),* 107–132. https://doi.org/10.3406/intel.2020.1967

Hall, J., Gaved, M., & Sargent, J. (2021). Participatory Research Approaches in Times of Covid-19: A Narrative Literature Review. *International Journal of Qualitative Methods, 20,* 16094069211010087. https://doi.org/10.1177/16094069211010087

He, A., Greenfield, P. M., Akiba, A. J., & Brown, G. (2022). Why do many parents expect more help from their children during COVID-19? *Current Research in Ecological and Social Psychology, 3*, 100052. https://doi.org/10.1016/j.cresp.2022.100052.

Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H., McElreath, R., Alvard, M., Barr, A., Ensminger, J., Henrich, N. S., Hill, K., Gil-White, F., Gurven, M., Marlowe, F. W., Patton, J. Q., & Tracer, D. (2005). "Economic man" in cross-cultural perspective: Behavioral experiments in 15 small-scale societies. *Behavioral and brain sciences 28*, 795–815. https://doi.org/10.1017/S0140525X05000142

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The Weirdest People in the World?. *Behavioural and Brain Sciences 33*, 61–81. https://doi.org/10.1017/S0140525X0999152X

Hill, N. E. (2021). In search of the individual embedded in context: Applications of the specificity principle. *Journal of Applied Developmental Psychology, 75*, 101289. https://doi.org/10.1016/j.appdev.2021.101289

Hill, K. & Hurtado, A. M. (1996). *Ache Life History: The Ecology and Demography of a Foraging People.* Aldine de Gruyter.

Holding, P., Anum, A., van de Vijver, F. J. R., Vokhiwa, M., Bugase, N., Hossen, T., Makasi, C., Baiden, F., Kimbute, O., Bangre, O., Hasan, R., Nanga, K., Sefenu, R. P. S., A-Hayat, N., Khan, N., Oduro, A., Rashid, R., Samad, R., Singlovic, J., Faiz, A., & Gomes, M. (2018). Can we measure cognitive constructs consistently within and across cultures? Evidence from a test battery in Bangladesh, Ghana, and Tanzania. *Applied Neuropsychology: Child, 7*(1), 1–13. https://doi.org/10.1080/21622965.2016.1206823

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, 115,* 11428–11434. https://doi.org/10.1073/pnas.1721166115

Jordan, P. (2015). *Technology as human social tradition: Cultural transmission among hunter-gatherers.* University of California Press.

Kaplan, H. S., & Bock, J. A. (2001). Fertility theory: The embodied capital theory of life history evolution. In J. M. Hoem (Ed.). *International Encyclopedia of the Social and Behavioral Sciences* (3.3, 155, pp. 5561–5568). Elsevier Science.

Kärtner, J., Schwick, M., Wefers, H., & Nomikou, I. (2022). Interactional preludes to infants' affective climax – Mother-infant interaction around infant smiling in two cultures. I*nfant Behavior and Development, 67,* 101715. https://doi.org/10.1016/j.infbeh.2022.101715

Kievit, R., Frankenhuis, W. E., Waldorp, L., & Borsboom, D. (2013). Simpson's paradox in psychological science: a practical guide. *Frontiers in psychology*, *4*, 54928. https://doi.org/10.3389/fpsyg.2013.00513

Kline, M. A., Boyd, R., & Henrich, J. (2013). Teaching and the life history of cultural transmission in Fijian villages. *Human Nature*, *24*, 351–374. https://doi.org/10.1007/s12110-013-9180-1

Kline, M. A. (2015). How to learn about teaching: An evolutionary framework for the study of teaching behavior in humans and other animals. *Behavioral and Brain sciences*, *38*, e31. https://doi.org/10.1017/S0140525X14000090

Kline, M. A. (2016). TEACH: An ethogram-based method to observe and record teaching behavior. *Field methods*, *29*(3), 205–220. https://doi.org/10.1177/1525822X16669282

Kline, M. A., Shamsudheen, R., & Broesch, T. (2018). Variation is the universal: making cultural evolution work in developmental psychology. *Philosophical Transactions of the Royal Society B: Biological Sciences, 373*, 20170059. https://doi.org/10.1098/rstb.2017.0059

Klöter, H. (2004). Language Policy in the KMT and DPP eras. *China Perspectives*, *2004*(6), Article 6. http://journals.openedition.org/chinaperspectives/442

Konken, L. C., & Howlett, M. (2023). When "home" becomes the "field": Ethical considerations in digital and remote fieldwork. *Perspectives on Politics*, *21*(3), 849–862. https://doi.org/10.1017/S1537592722002572

Kramer, K. L. (2021). Childhood Teaching and Learning among Savanna Pumé Hunter-Gatherers. *Human Nature, 32*(1), 87–114. https://doi.org/10.1007/s12110-021-09392-x

Lancy, D. F., Bock, J., & Gaskins, S. (2010). *The Anthropology of Learning in Childhood*. Rowman Altamira.

Lancy, D. F. (2008, 2015, 2022). *The Anthropology of Childhood: Cherubs, Chattel, Changelings* (1st, 2nd, and 3rd ed.). Cambridge University Press.

Lancy, D. F. (2015). Children as a reserve labor force. *Current Anthropology, 56,* 545–568. https://doi.org/10.1086/682286

Lancy, D. F. (2016). Playing with knives: The socialization of self-initiated learners. *Child Development*, *87*, 654–665. https://doi.org/10.1111/cdev.12498

Lee, J. E. (2024, February 12). More than half of South Koreans reject 'defector' labels for North Korean escapees. *Radio Free Asia*. https://www.rfa.org/english/news/korea/defector-refuegee-escapee-north-korea-south-korea-terminology-07152024154618.html.

Leighton, D., & Kluckhohn, C. (2013). Children of the People: The Navaho Individual and His Development. In *Children of the People*. Harvard University Press. https://doi.org/10.4159/harvard.9780674423558

LeVine, R. A. (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

Lew-Levy, S., Pope, S. M., Haun, D. B. M., Kline, M. A., & Broesch, T. (2021) Out of the empirical box: A mixed-methods study of tool innovation among Congolese BaYaka forager and Bondongo fisher–farmer children. *Journal of Experimental Child Psychology, 211,* 105223. https://doi.org/10.1016/j.jecp.2021.105223

Lew-Levy, S., Andersen, M. M., Lavi, N., & Riede, F. (2022). Hunter-Gatherer Children's Object Play and Tool Use: An Ethnohistorical Analysis. F*rontiers in Psychology, 13,* 824983. https://doi.org/10.3389/fpsyg.2022.824983

Lew-Levy, S., Bombjaková, D., Milks, A., Kiabiya Ntamboudila, F., Kline, M. A., & Broesch, T. (2022). Costly teaching contributes to the acquisition of spear hunting skill among BaYaka forager adolescents. *Proceedings of the Royal Society B: Biological Sciences, 289(1974),* 20220164. https://doi.org/10.1098/rspb.2022.0164

Lew-Levy, S., Milks, A., Kiabiya Ntamboudila, F., Broesch, T., & Kline, M. A. (2021). BaYaka Adolescent Boys Nominate Accessible Adult Men as Preferred Spear Hunting Models. *Current Anthropology, 62(5),* https://doi.org/10.1086/716853

Lupton, D. (2021). *Doing fieldwork in a pandemic*. https://docs.google.com/document/d/1clGjGABB2h2qbduTgfqribHmog9B6P0NvMgVuiHZCl8/edit#heading=h.ze8ug1cqk5lo

Mackie, M. E., Surovell, T. A., & O'Brien, M. (2015). Identifying Stone Alignments Created by Adults and Children: A Case Study from a Dukha Reindeer Herder Summer Camp, Khövsgöl Aimag, Mongolia. *Sibirica, 14(2),* https://doi.org/10.3167/sib.2015.140202

Ma-Kellams C. (2021). Using true experiments to study culture: Manipulations, measurement issues, and the question of appropriate control groups. *Methods in Psychology 4,* 100046. https://doi.org/10.1016/j.metip.2021.100046

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, 28(1),* 82–105. https://doi.org/10.1080/10888691.2022.2151445

McElreath, R. (2018). *Statistical rethinking: A Bayesian course with examples in R and Stan.* Chapman and Hall/CRC.

Milks, A., Lew-Levy, S., Lavi, N., Friesem, D. E., & Reckin, R. (2021). Hunter-gatherer children in the past: An archaeological review. *Journal of Anthropological Archaeology, 64,* 101369. https://doi.org/10.1016/j.jaa.2021.101369

Norenzayan A., & Heine, S. J. (2005). Psychological Universals: What Are They and How Can We Know? *Psychological Bulletin, 131,* 763–784. https://doi.org/10.1037/0033-2909.131.5.763

Ochs, E. (1988). *Culture and language development: Language acquisition and language socialization in a Samoan village.* Cambridge University Press.

Ochs, E., Solomon, O., & Sterponi, L. (2005). Limitations and transformations of habitus in Child-Directed Communication. *Discourse Studies, 7(4-5),* 547–583. https://doi.org/10.1177/1461445605054406

Odden, H., & Rochat, P. (2004). Observational learning and enculturation. *Educational and Child Psychology, 21,* 39–50. https://doi.org/10.53841/bpsecp.2004.21.2.39

Onwuegbuzie, A. J., & Leech, N. L. (2005). On becoming a pragmatic researcher: The importance of combining quantitative and qualitative research methodologies. *International journal*

of social research methodology, *8*(5), 375–387. https://doi.org/10.1080/13645570500402447

Park, H. (2019). A model of identity development: Life-course narratives of North Korean youth resettling in South Korea. *Journal of Adolescence, 6*, 162–172. https://doi.org/10.1016/j.adolescence.2019.08.014

Pearl, J. (1995). Causal diagrams for empirical research. *Biometrika, 82(4),* 669–688. https://doi.org/10.1093/biomet/82.4.669

Pearl, J. (2000). *Causality: Models, reasoning, and inference.* Cambridge University Press.

Pearl, J., & Mackenzie, D. (2018). *The book of why: the new science of cause and effect*. Basic Books.

Pfundmair M. (2017). Cross-Cultural Experimental Research. In Y. Y. Kim (Ed.) *The International Encyclopedia of Intercultural Communication* (pp. 1–8). Wiley. https://doi.org/10.1002/9781118783665.ieicc0099

Ploder, A., & Hamann, J. (2021). Practices of Ethnographic Research: Introduction to the Special Issue. *Journal of Contemporary Ethnography*, *50*(1), 3–10. https://doi.org/10.1177/0891241620979100

Portes, A., & Rivas, A. (2011). The adaptation of migrant children. *The Future of Children, 21,* 219–246. https://doi.org/10.1353/foc.2011.0004

Pretelli, I., Borgerhoff Mulder, M., & McElreath, R. (2022). Rates of ecological knowledge learning in Pemba, Tanzania: Implications for childhood evolution. *Evolutionary Human Sciences, 4,* e34. https://doi.org/10.1017/ehs.2022.31

R Core Team. (2023). R: A Language and Environment for Statistical Computing [Computer software]. *R Foundation for Statistical Computing.*

Ratih, K., Syah, M. F. J., Nurhidayat, N., Jarin, S., & Buckworth, J. (2021). Learning Patterns during the Disruptive Situation in Informal Education: Parents' Efforts and Challenges in the Adjustment of Progressive Learning. *Indonesian Journal on Learning and Advanced Education (IJOLAE), 3(3),* Article 3. https://doi.org/10.23917/ijolae.v3i3.15151

Riede, F., Lew-Levy, S., Johannsen, N. N., Lavi, N., & Andersen, M. M. (2023). Toys as Teachers: A Cross-Cultural Analysis of Object Use and Enskillment in Hunter–Gatherer Societies. *Journal of Archaeological Method and Theory, 30(1),* 32–63. https://doi.org/10.1007/s10816-022-09593-3

Sandberg, H., Sundin, E., & Sjöberg, U. (2022). When ethnographic work turns into distant screen visits: A note on flexible inflexibility during the COVID-19 pandemic. *Contemporary Issues in Early Childhood, 23(3),* 361–365. https://doi.org/10.1177/14639491221107361

Schegloff, E. A. (1987). Between micro and macro: Contexts and other connections. In J. C. Alexander, B. Giesen, R. Munch, & N. J. Smelser (Eds). *The micro-macro link* (pp. 207–234). University of California Press.

Schegloff, E. A. (2007). *Sequence organization in interaction : A primer in conversation analysis* (vol. 1). Cambridge University Press.

Sousa, E. L. (2022). Ethnography with children in times of pandemic: An ethical and methodological reflection. *Cadernos de Pesquisa, 52*, e09122. https://doi.org/10.1590/198053149122_en

Stan Development Team. (2021). Stan Modeling Language Users Guide and Reference Manual [Computer software].

Sullivan, A., Brewis, A., & Wutich, A. (2018). Studying Children's Cultural Knowledge and Behaviors Related to Environment, Health, and Food: Methods for Ethnoecological Research with Children. *Journal of Ethnobiology, 38(2),* 276–294. https://doi.org/10.2993/0278-0771-38.2.276

Takada, A. (2021). Pragmatic reframing from distress to playfulness: !Xun caregiver responses to infant crying. *Journal of Pragmatics, 181,* 180–195. https://doi.org/10.1016/j.pragma.2021.05.021

Tannen, D. (2006). Intertextuality in interaction: Reframing family arguments in public and private. *Text & Talk, 26(4–5),* 597–617. https://doi.org/10.1515/TEXT.2006.024

Tehrani, J. J., & Riede, F. (2008). Towards an archaeology of pedagogy: Learning, teaching and the generation of material culture traditions. *World Archaeology, 40(3),* 316–331. https://doi.org/10.1080/00438240802261267

Thajib, F., Stodulka, T., Haun, H., Meng, T., Sun, W., Masaquiza, S., Arroyo Garcia, B., Junker, M., Petrovic, L., Striegler, B., Weyrowitz, J., Sunderarajan, J., Swastyastu, M., Taek, D. J., Abis, A., Tjizao, D., Kanngiesser, P., Shishala, D., & Liebal, K. (under review). No Safe Distance? Reflections on decolonising large-scale, remote collaborative research during and beyond COVID-19. *Ethos*.

Tsuji, S., Amso, D., Cusack, R., Kirkham, N., & Oakes, L. M. (2022). Empirical research at a distance: New methods for developmental science. *Frontiers in Psychology, 13,* 938995. https://doi.org/10.3389/fpsyg.2022.938995

UNHCR. (2023). Figures at a glance. Retrieved October 14, 2023, from UNHCR website: https://www.unhcr.org/figures-at-a-glance.html

Volpe, C. R. (2019). Digital diaries: New uses of PhotoVoice in participatory research with young people. *Children's Geographies, 17(3),* 361–370. https://doi.org/10.1080/14733285.2018.1543852

Warren, G. (2021). Is There Such a Thing as Hunter-Gatherer Archaeology? *Heritage, 4(2),* 794–810. https://doi.org/10.3390/heritage4020044

Watson, A., & Lupton, D. (2022). Remote Fieldwork in Homes During the COVID-19 Pandemic: Video-Call Ethnography and Map Drawing Methods. *International Journal of Qualitative Methods, 21*, 160940692210783. https://doi.org/10.1177/16094069221078376

Wefers, H., Krüger, V., Iza Simba, N. B., & Guandinango, Y. A. (2023). Ethical challenges of cross-cultural research – The example of a psychological research project in the Andean context. *Journal of Empirical Research on Human Research Ethics, 18*(4), 233-245. https://doi.org/10.1177/15562646231181880

Wefers, H., Schuhmacher, N., Chacón, L. H., & Kärtner, J. (2023). Universality without uniformity – infants' reactions to unresponsive partners in urban Germany and rural Ecuador. *Memory & Cognition, 51(3),* 807–823. https://doi.org/10.3758/s13421-022-01318-x

Wefers, H., Schuhmacher, N., & Kärtner, J. (2023). Developmental changes in infants' affective reactivity across cultures. Manuscript Submitted for Publication.

Wefers, H., Schwarz, C. L., Hernández Chacón, L., & Kärtner, J. (2022). Maternal ethnotheories about infants' ideal states in two cultures. *Journal of Cross-Cultural Psychology, 53(6),* 603–625. https://doi.org/10.1177/00220221221096785

West, E. (1992). Children on the plains frontier. In E. West & P. Petrik (Eds). *Small Worlds: Children and Adolescents in America, 1850–1950* (pp. 26–41). University Press of Kansas.

Xu, J. (2019). Learning "Merit" in a Chinese Preschool: Bringing the Anthropological Perspective to Understanding Moral Development. *American Anthropologist*, *121*(3), 655–666. https://doi.org/10.1111/aman.13269

Xu, J. (2020). The Mischievous, the Naughty, and the Violent in a Taiwanese Village: Peer Aggression Narratives in Arthur P. Wolf's "Child Interview" (1959). *Cross-Currents*, *9*(1), 180–208. https://doi.org/10.1353/ach.2020.0003

Xu, J. (2024). *"Unruly" Children: Historical Fieldnotes and Learning Morality in a Taiwan Village*. Cambridge University Press.

Yarkoni, T. (2022). The generalizability crisis. *Behav Brain Sci, 45*, e1. https://doi.org/10.1017/S0140525X20001685

Yilmaz, K. (2013). Comparison of quantitative and qualitative research traditions: Epistemological, theoretical, and methodological differences. *European journal of education*, *48*(2), 311–325. https://doi.org/10.1111/ejed.12014