1 Perspectives on Feeding and Bonding: An Introduction

Giving, receiving, and sharing food provide powerful, deeply embodied experiences of self and others. All over the world, children are fed by the people around them. Humans do not just provide breast milk to infants but continue to feed older children in varying degrees and culturally specific ways. These experiences are central in shaping children's bodies as well as their emerging social and emotional worlds. As children receive food from others upon whom their very lives depend, they have regular experiences of being related to important others. As children grow, feeding and eating continue to be embedded in social relationships, which in many cases extend to the spiritual domain. While this socio-emotional relevance is true for children and adults around the world, the particular practices and meanings of feeding interactions vary considerably across contexts. Consequently, the particular ways in which children are fed by their caregivers have significant impacts on how they become connected to the people around them.

In this Element, we draw on our individually conducted ethnographic fieldwork in Morocco, Madagascar, Sri Lanka, Taiwan, and Costa Rica to explore how feeding contributes to the formation of social relationships in early childhood and beyond. Furthermore, we show that feeding practices vary greatly across these contexts and that they are embedded in particular social conditions and cultural meanings. We argue that these multiple modes of feeding contribute in various ways to the formation of social relationships. While our findings and arguments are embedded in anthropology and cultural psychology, we also hope to reach those in other academic and applied fields who are concerned with feeding and relationship formation, adding to the current psychological and pediatric research that dominates expert understandings of childcare and development.

This psychological and psychiatric research relies overwhelmingly on Euro-American research samples, institutions, and scholars while producing universalistic theoretical claims and guiding parenting interventions around the globe (Lachman et al., 2021; Scheidecker et al., in press). Henrich and colleagues (2010, p. 3) have pointed out that "96% of psychological samples come from countries with only 12% of the world's population." They have labeled this population "WEIRD" – Western, Educated, Industrialized, Rich, and Democratic – and argued that it is different in striking ways from most of humankind. Hence, dominant developmental science discourses and interventions are rooted in Western middle-class moral assumptions and ideas about family life that do not represent the wide variety of ways that families are organized in the

West or around the world or how feeding is practiced in everyday life. In these dominant discourses, cultural variations in child-rearing practices, socialization strategies, and developmental pathways from other sociocultural settings, even though well-documented in the ethnographic record, are regularly overlooked. If they are recognized at all, they are typically pathologized (Chaudhary & Sriram, 2020). These widespread biases and gaps are found throughout the developmental sciences and their applications. As we will show in what follows, they also have strongly influenced theories of relationship formation as well as universally applied standards of feeding.

1.1 Developmental Science and Cross-Cultural Challenges

The wide range of theories and models that the science of child development has produced inform social policy and filter down to interventions and the practice of medical professionals, social workers, educators, judges, and parents. By far the most influential theory of children's socio-emotional development is attachment theory.[1] This theory posits that children's "optimal" development depends on forming a close bond with a primary caregiver – usually the mother – to whom children can return for a feeling of safety as they explore the world. Within this model, "secure attachment" is understood to be produced when a child's primary caregiver responds "sensitively" to the child's signals in a prompt, developmentally appropriate, and consistent manner. Absent a certain level of sensitive responsiveness, children are predicted to develop less-than-ideal forms of attachment – insecure, anxious or avoidant, or even disorganized ways of relating – that are believed to have lasting negative effects throughout the life course (Mesman et al., 2016).

Anthropologists and cultural psychologists have critiqued attachment theory since its earliest iterations. Margaret Mead (1954) levied one of the first critiques, responding to a World Health Organization report on the practical implications of attachment theory by John Bowlby (1951). Over the past two decades, criticism from both disciplines has intensified (e.g., Keller & Bard, 2017; LeVine & Norman, 2001; Otto & Keller, 2014; Quinn & Mageo, 2013).

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[1] It is important to note that other theories of relationship formation have been developed within developmental science as well. Domain socialization theory, for example, offers a somewhat broader perspective on socio-emotional socialization, which includes attachment (or "protection" as it is called there) but at the same time acknowledges the existence of additional domains or fields of parent–child interactions (e.g., reciprocity, control, guided learning, group participation) in which socialization takes place (Grusec & Davidov, 2010, 2015). However, in this Element we focus our critical attention on classical attachment theory because it is still the dominant approach in the domain of socio-emotional development – on the theoretical level as well as in applied fields (see Rosabal-Coto et al., 2017).

A fundamental point these critiques make is that attachment theory rests upon cultural models derived from the Euro-American educated middle-classes, which undermines the theory's claim of universal validity (Keller, 2018; LeVine, 2014; Vicedo, 2014). Furthermore, cross-cultural research raises ethical concerns about globally implemented attachment-based interventions (Chaudhary, 2020; Rosabal-Coto et al., 2017).

In addition to the many other critiques raised by cross-cultural research, here we focus our objections on two of developmental science's claims that are central to our arguments: (1) the claim that feeding (and other body-centered care practices) is not particularly relevant for the formation of emotional bonds and (2) the claim that there is only one optimal feeding style, namely "responsive feeding." Instead, we argue that in many cultural contexts feeding and other body-centered caregiving practices are central to the formation and shaping of human bonds and that there are diverse, culturally valued ways that this may be done.[2]

1.2 Feeding and Attachment

In attachment theory, the practice of feeding has been ascribed only minor importance. Bowlby rejected secondary drive theories, including psychoanalytic theories, that assumed that children's motivation for attachment stems from the satisfaction of hunger or libidinous drives associated with the mother's breast. Instead, he insisted that mother–infant attachment is an independent psychological need (Bowlby, 1958; Cassidy, 2016; Van der Horst, 2011; Vicedo, 2014). Having cut the relationship between feeding and attachment, mainstream attachment research in the following decades rarely studied the role of feeding in caregiving relationships (Rozin, 2007).

The position that "sensitive responsiveness" is a necessary precursor to "secure attachment" between young children and their primary attachment figures has further prevented serious consideration of feeding in attachment theory. This construct foregrounds a particular, child-led, intimate, emotion-focused interaction style at the expense of body-centered care practices such as feeding. Caregivers are expected not only to attend and respond sensitively to their children's emotional expressions but also to engage in baby talk, to mirror their children's facial expressions, and to play with them frequently. In the child development literature, the focus is laid on the elicitation of

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[2] This argument does not imply, however, that feeding is more important for bonding than sensitive responsiveness. It depends on the sociocultural context whether feeding, sensitive responsiveness, or possibly even other aspects of the social interaction assume a central role in the formation and maintenance of attachments.

psychic-emotional intimacy, which is defined in terms of a "loving, responsive, and nurturing relationship" (Morris et al., 2018, p. 2), rather than physical care and nourishment that was foregrounded by theorists in earlier times (Burman, [1994] 2017).

However, the parenting style that is defined as optimal in attachment theory is simply not a global norm or valued way of interacting in all settings, as numerous cross-cultural (Crittenden & Clausen, 2000; Keller & Bard, 2017; LeVine & Norman, 2001; Morelli et al., 2017; Otto & Keller, 2014; Quinn & Mageo, 2013) and intracultural (Kusserow, 2004; Lareau, 2003) studies have pointed out. In many of the studied groups, caregiving practices that focus on children's physical needs such as feeding, washing, holding, and carrying are foregrounded, being variously described by these culturally grounded researchers as "pediatric" (LeVine et al., 1994), "proximal" (Keller, 2007), or "body-centered" (Scheidecker, 2023).

Heidi Keller (2007), for example, has contrasted the socialization strategies and developmental pathways of children from Western urban middle-class families with those from rural farming families in various non-Western contexts. She describes urban middle-class mothers as typically engaging in a "distal" parenting style characterized by a focus on children's verbal and emotional expressions and a quasi-equal mode of interaction based on face-to-face contact and verbal interaction – a parenting style that closely resembles "sensitive responsiveness" as described in attachment theory. In rural, non-Western contexts, by contrast, Keller sees mothers tending to use a proximal parenting style that focuses more on the physical needs of children through body contact and primary care such as feeding. Rather than leading to differences in attachment security, these two parenting styles highlight different dimensions in emerging social relationships: The distal style promotes an emphasis on *psychological autonomy* while the proximal style promotes *hierarchical relatedness*. Keller's research demonstrates that body-centered care practices like feeding may play a much more central role in caregiver–child relationships in some contexts than envisioned in attachment theory. Further, it could be argued that such body-centered care practices elicit *physical-material warmth* between mothers and children and hence contribute to the development of an emotional bond between them.

Body-centered care practices are often, but not always, accompanied by "proactive caregiving," a form of caregiving that we contrast with "responsive caregiving." In proactive caregiving, rather than waiting for young children to express needs and preferences, caregivers take the lead because they know what children require. While in popular Western discourse proactive feeding might

be seen as a harmful kind of force-feeding, this is neither the implication we have in mind when using this term nor reflective of the understandings of the participants in our research. Taken together, existing ethnographic evidence indicates that feeding may play a much more crucial role for bonding in many sociocultural settings across the globe than envisioned in attachment theory.

1.3 Responsive Feeding

Attachment theory's key concept of sensitive responsiveness has been particularly influential in broader cultural models of parenting, such as "attachment parenting" or "intensive parenting" (Faircloth, 2013; Lee et al., 2014), as well as in parenting interventions around the globe (Rosabal-Coto et al., 2017). The concept of responsive caregiving has been established as a globally applied parenting standard through the Nurturing Care Framework (WHO et al., 2018). Responsive caregiving has also been used to establish recommendations about optimal feeding, which are commonly labeled as "responsive feeding" (Engle & Pelto, 2011).

The fact that attachment theory is used to define and justify globally applied standards of optimal feeding appears to contradict our earlier point that feeding does not hold a prominent place in this theory. However, this paradox dissolves when distinguishing between *what* care is being provided (e.g., nourishment) and *how* that care is delivered (e.g., responsively). While attachment theorists do not consider the practice of feeding in itself as particularly relevant to attachment development, a caregiving style that is defined by sensitive responsiveness is what is seen to matter in any parent–child interaction, including feeding.

According to the principles of responsive caregiving, feeding interactions should be guided by children's signals of hunger and satiety; caregivers should follow children's lead rather than imposing their own ideas of when and what children should eat (Engle & Pelto, 2011; Pérez Escamilla et al., 2021; Vazir et al., 2013). Caregivers should sit on the same level with children, make sustained eye contact while feeding, and respond warmly to children throughout the interaction, smiling and offering praise. Caregivers should also provide finger foods to encourage early self-feeding (Aboud et al., 2009; Vazir et al., 2013). Inherent in the concept of responsive feeding is the assumption that eating is an individual, self-regulated activity in which caregivers only assume a transitory, assisting role.

Responsive caregiving and responsive feeding as allegedly optimal parenting practices have rarely been challenged directly. As a consequence of the

ethnocentric bias inherent in universalized developmental theories, attachment-based interventions amount to placing the sociocultural habits of Euro-American middle-class lifestyles at the top of a hierarchy of "good parenting." Parents who deviate from these valued behaviors are viewed only in deficit terms, for example as lacking the core characteristics of a loving parent (Vicedo, 2014). This ethnocentric bias implies serious ethical challenges to parenting interventions (Lachman et al.; 2021; Morelli et al., 2018; Scheidecker et al., 2021).

Proponents of parenting interventions might argue that even if the principles of responsive feeding grew out of a particular social and historical context, those practices might still be the ones most beneficial for children's development. For example, responsive feeding interventions are justified by the scientific claim that they reduce malnutrition in children. However, according to the only available meta-analysis about responsive feeding interventions in so-called low- and middle-income countries (Bentley et al., 2011), the existing studies could not provide consistent evidence for a resulting reduction in malnutrition. Given that there is no scientific proof for the interconnections between "responsive feeding" and desired developmental outcomes, we have to conclude that responsive feeding interventions are mainly motivated by cultural values rather than facts. We believe that a basic requirement for such interventions to be effective as well as ethically sound is to root them in existing local practices, strengths, and concerns rather than denouncing them from the outset as inferior.

1.4 Approaches from Anthropology and Cultural Psychology

Approaches from anthropology and cultural psychology offer useful perspectives for understanding local feeding practices, their connection to cultural meaning systems, and the formation of social relationships in childhood and beyond. The role of feeding in social bonding, which is the focus of this Element, has not previously been examined systematically within anthropology and cultural psychology. However, close ethnographies of family interactions in a range of places have noted ways that feeding and food-giving shape affective bonds between children and their caregivers (e.g., for New Guinea, see Barlow, 2013; for India, see Chaudhary, 2004, Kakar, 1981, and Seymour, 2013; for Taiwan, see Funk, 2022; for Micronesia, see Quinn, 2013; for Ecuador, see Rae-Espinoza, 2010; for Madagascar, see Scheidecker, 2017a; for Costa Rica, see Schmidt et al., 2023b; and for Indonesia, see Seymour, 2013).

Research within the anthropology of food (for overviews, see Klein et al, 2012; Mintz & Du Bois, 2002; Tierney & Ohnuki-Tierney, 2012), which describes and analyzes social practices involving food including commensality,

table manners, mealtime interactions, gender, and social differentiation marked by food, has regularly noted the significance of food in many social relationships. There is vast ethnographic evidence that food plays a crucial role in the socio-emotional lives of people in diverse sociocultural settings on both an individual and a societal level (for Amazonia, see Brightman et al., 2016 and Costa, 2017; for Southeast Asia, see Carsten, 1997 and Janowski & Kerologue, 2007; for Sri Lanka, see Chapin, 2014; for China/Taiwan, see Dos Santos, 2009 and Stafford, 1995; for New Guinea, see von Poser, 2013; and for Southern Africa, see Richards, [1932] 2004). The publications in this area that concern themselves with children tend to focus on feeding as it relates to issues of sexuality and reproduction, embodiment and subjective experience, and breastfeeding practices (e.g., Gottlieb, 2004; Hewlett, 1991; LeVine & New, 2008; Richards, [1932] 2004; Van Esterik, 2002).

Ethnography of family and daily life also contributes to understanding the cultural embeddedness of feeding. The new kinship studies led by Carsten (2000) and others directed attention at these processes, highlighting the lifeworlds of women and children. Social relationships were now described by using the term "relatedness," which comprised biological kinship as well as relationships that were produced through "kinning," that is, through diverse social practices aiming at making other persons one's kin, for example feeding and other forms of caregiving. In many parts of the world, people perceive themselves as related to each other when they live together and share food and other substances (e.g., milk, food, water; see Carsten, 1995).

Significant contributions also come from the anthropology of religion and from research about human–environment connections. In what has become known as the ontological turn, anthropology increasingly recognizes that human lifeworlds are entangled in manifold ways with diverse nonhuman beings including plants, animals, landscapes, and spiritual beings (Descola, 2013; Latour, 1996; Viveiros de Castro, 1998). In the last two decades, these insights emphasize the recognition of multiple worldviews, including those that depart from the natural sciences, a belief system that itself is based in European philosophical traditions. In many, if not most societies around the world, exchanges of food play a major role in creating or maintaining quasi-social bonds to ancestors, spirits, and deities. People in many parts of the world believe that they are only able to obtain their food because they are assisted by nonhuman agents.

Our inquiry is also grounded in research on childhood and socialization, beginning with Margaret Mead (1928, 1930), Ruth Benedict (1934), and others in the so-called Culture and Personality school and continuing through the comparative Six Cultures studies led by the Whitings (Whiting & Whiting

1975) and others who followed. An important trailblazer was the anthropologist Robert LeVine who has written on the entanglements between culture, social-ization practices, parenting, and child development (LeVine et al., 1994; LeVine & LeVine, 1966; LeVine & LeVine, 2016). We build on this century-long effort to examine how child-rearing practices vary across cultures and understand how these interactions shape children in culturally distinct ways. The methods we use grow out of this tradition, with its focus on close observations of everyday life in particular places. We also share with studies of childhood (e.g., Hardman, 1973; Prout & James, 1997; Schildkrout, 1978) a recognition that children are active participants in these processes, exercising agency in their interactions, pursuing their own goals, and assembling their own understandings of them-selves and the world around them.

1.5 An Element on Feeding across Cultures

The intention of this Element is to use close ethnography of how children are fed in particular places to examine the connections between feeding practices and the formation of social bonds in early childhood and beyond. The contributors to this Element are sociocultural anthropologists and cultural psychologists from Germany, the United States, and India who have carried out extensive long-term ethnographic field research in rural and urban settings in diverse regions across the globe focusing on issues of childhood and socialization. In each of the settings, we have documented how affective bonds between care-givers and young children are created and maintained through feeding practices like breastfeeding, hand-feeding, spoon-feeding, food-giving, and self-feeding. By presenting these ethnographic insights, we call for a revision of theories on human development to recognize the connection between feeding and the formation of social bonds as well as the diverse and valued ways that this may be done across the globe.

How we perceive the world is strongly influenced by the cultural models we have acquired during our own socialization in India, Germany, and the United States, as is our framing of what is interesting or notable about the settings in which we work. When writing about the people in our research settings in Morocco, Madagascar, Sri Lanka, Taiwan, and Costa Rica, the focus of our attention is inevitably directed by the values and norms of our own upbringing and by the constructs we use in our academic discourses. We strive to be mindful of that in this Element, making it clear from which perspectives we write and how we analyze what people say and do in our field sites. This approach is central to the methods of ethnography and the goals of our analysis, as we work to call into question the universal validity of attachment theory and

responsive feeding. Our discussion of the commonalities and differences in feeding practices in our research sites aims to develop a plural understanding of how culturally specific feeding relationships are endowed with diverse cultural meanings.

In what follows, we present descriptions of feeding practices that play an important role in the formation of social relationships in five sociocultural settings. Our ethnographic examples stretch over three continents and cover geographically distinct areas with different ecological environments, historical and political entanglements, socioeconomic organizations, and cultural beliefs and practices. One research site is located in a big city (San José, Costa Rica), while the others are situated in rural settings – two that are close to major cities (Douar Tahtani in Morocco and Villigama in Sri Lanka), one that is in a remote and sparsely populated area (Menamaty in Madagascar), and one on a formerly isolated island (Lanyu in Taiwan). In these snapshots of daily life in particular places, we cannot capture the full range of practices or experiences in these communities or the ongoing changes that are part of all communities. Nevertheless, these observations allow us to see how much wider the possibilities are for meanings, values, and practices than is typically envisioned by current developmental science.

The examples we present are ordered moving eastward around the world: In Section 2, Christine El Ouardani demonstrates how feeding practices, the larger sensorium of the family gathering, and affect-laden interactions with extended kin during a typical mealtime in rural Morocco serve to inculcate a sense of belonging and attachment not only to the mother but to the larger extended family. In Section 3, Gabriel Scheidecker describes practices of breastfeeding, spoon-feeding, and the provision of food as a central form of care in intergenerational relationships among the Bara pastoralists of Madagascar. He argues that through these practices children acquire a model of hierarchical relationships that is characterized by the transfer of life force in exchange for subordination and obedience. In Section 4, Bambi L. Chapin describes how hand-feeding children in a Sinhala-speaking village in central Sri Lankan grows out of valued cultural models of hierarchy, which children in turn assemble internally through these embodied, emotionally salient experiences with important others. In Section 5, Leberecht Funk argues that the socialization goal for Tao caregivers in Taiwan consists in the physical survival of the bodily selves of children who are in danger of losing their souls due to the evildoings of malicious spirits. Children obtain ancestral protection by following the instructions of elders and by being provided with nourishing food that makes their bodily selves strong and resilient against supernatural harms. Finally, in Section 6, Wiebke J. Schmidt explores how the growing popularity of attachment theory among

the urban middle-class in Costa Rica has influenced breastfeeding and other early childhood feeding practices to promote children's autonomy, while feeding also still promotes more traditional ideas about connecting to family. Following these ethnographic examples, we discuss salient themes and differences between each of the pieces and examine the implications of our findings for global feeding intervention programs promoted by international development projects.

2 Forming Kin Attachments during Mealtimes in Rural Morocco

In Morocco, as in most of the world, food plays a critical role in family life.[3] In media and everyday discourse, childhood memories of a mother's cooking and of gathering with family around the table are often nostalgically invoked and idealized. In conducting ethnographic fieldwork in a Moroccan village that I call Douar Tahtani from 2006 to 2008, I also observed an intense informal sociality during mealtimes, in which children were often central participants. Here, I want to consider how participation in mealtimes – both in interactions with kin and in the larger sensorium that the setting creates – structures not only attachment to their mothers but also a sense of belonging, kinship, and attachment to the larger extended family. I examine one typical mealtime interaction in particular and focus on three children under the age of five, focusing on feeding interactions between the children and their mothers, their interactions with other kin during these long meals, and the sensory experiences that the environment might create for these children. I suggest that the extended mealtime settings that children participate in several times a day may cultivate and reinforce attachments to multiple caregivers and the larger kin group. Mealtimes are thus central to kin formation, in part through feeding practices but also through other affect-laden physical and verbal interactions that occur during mealtimes. The fieldwork on which this Element is based included two years of intensive participant observation resulting in more than 1,000 pages of fieldnotes, 75 semi-structured interviews, and 10 hours of video recordings of mealtimes across 3 different households, all of which were conducted in the Moroccan dialect of Arabic. In all, I worked closely with approximately 20 adults and 40 children ranging from newborns to 15-year-olds and casually knew more than 100 adults and children in this village.