

Back to the stone age? Some thoughts on evolutionary explanations in infant care

When I was pregnant with my son, I was anxious when I thought about taking care of a helpless new-born because I didn't have any experiences with infant care and felt ill-equipped for my job as a mother. So, I decided to do some research and acquire as much theoretical knowledge on infant care as possible. During my internet search I stumbled upon a book called *artgerecht* (species-appropriate) written by science journalist Nicola Schmidt (2015). It had a pretty high rating at the online store and it was the number one bestseller in the category *breastfeeding*. The positive reviews convinced me to buy the book and a few days later I held the 300-page hardcover in my hands. In the book, Schmidt recommends parents to sensitively respond to the infant's expressed needs (even if they don't seem to make sense in that moment). With its attention to the infant's innate needs, *artgerecht* is the German version of need-centred approaches to infant care that are becoming increasingly popular in industrialized Western countries and are also known as *empathic parenting*, *instinctive care* or *natural parenting* (see Schön and Silvén 2007). These approaches advocate close physical contact of infants with their mothers, carrying infants on caregivers' bodies (with the help of a carrying device), co-sleeping of parents and children, breastfeeding on demand for an extended period of time (2-4 years) and child-led weaning. Many of them use evolutionary explanations that reference adaptations to the Pleistocene environment.

Evolutionary explanations in the book "artgerecht"

Given my philosophical interests in evolutionary biology, I was intrigued but also slightly uncomfortable when I skimmed the first chapter and immediately came across an evolutionary approach to "understanding human infants in three steps" (Schmidt, 2015, p. 17, my translation). The argument presented by Schmidt similar to evolutionary explanations that originate from the conceptual frameworks of Evolutionary Medicine or Evolutionary Psychology. She draws on the assumption that humans are adapted to the environment of the Pleistocene and that our bodies and behaviour still function as if we lived in hunter-gatherer communities in the stone age. The environment in industrialized Western countries, she argues, differs considerably from the environment of the stone age and traits that were once advantageous are now useless or even maladaptive. Schmidt gives an example related to infant care: She argues that it used to be adaptive for infants in hunter-

gatherer communities that move around throughout the day, to cry when they are laid down and have no physical contact with caregivers. This way, stone age infants would make sure that they are not forgotten when the group moved to another place (Schmidt, 2015, pp. 160-61). This behaviour, however, is not necessary to ensure the infant's survival when the caregiver lays them down in a crib and goes to the bathroom because there are no immediate dangers like predators and the caregiver did not leave the infant behind but remains in the same apartment. Still, many infants that are raised in modern Western environments cry when they are put down and lose sight of and physical contact with their caregivers. Schmidt's explanation of why infants should be carried instead of laid down in a crib or pram can be summarized as follows: Infants should be carried because they are adapted to being carried and because carrying supports a healthy physical, emotional and mental development.

Many people are familiar with the type of evolutionary reasoning advocated in *artgerecht* because it is frequently employed in both scholarly and popular contexts to explain human behaviour. Evolutionary explanations can be found on social media, in magazines, popular culture and self-help books. They are for example employed to explain "why men don't listen and women can't read maps" or "why boys like things and girls like people" (Pease and Pease 2001). These evolutionary narratives have an intuitive appeal, are easy to understand and seem plausible but unfortunately, they are rarely questioned.

Philosophical critique of evolutionary explanations in infant care

I see several problems with Schmidt's reasoning and similar attempts to explain human behaviour or health with reference to adaptations that occurred in the Pleistocene (evolutionary explanations). First, Schmidt provides no scientific evidence for the evolutionary part of the explanation. Granted, *artgerecht* is not a scientific book, but other parts of the book contain references to scientific publications. The fact that modern hunters and gatherers and other great apes carry their offspring a lot is interesting but is not sufficient evidence to show that human infants are adapted to being carried. The question is how we actually know, or ever can know, about child rearing practices in hunter-gatherer communities in the stone age. Most of these practices (carrying, co-sleeping) don't leave traces in the fossil record, so there is not much, if any, empirical evidence to support the evolutionary part of Schmidt's explanation. Her argument thus relies on references to modern day hunter-gatherer communities, child rearing practices of other primates and evolutionary hypotheses.

Second, I am not convinced that the evolutionary part of the explanation actually does much (if any) explanatory work. The functional part of the explanation alone is a full-fledged explanation and does not require an evolutionary add-on or framing. On the other hand, the evolutionary part of the explanation alone (infants should be carried because they are adapted to being carried) is not convincing at all, especially considering the lack of evidence to support this claim (see Kranke 2022). The third and probably most problematic point concerns circularity. Put simply, Schmidt claims that infants (and mothers) are adapted to carrying because their bodies are designed for carrying (e.g., infants' grasping reflex, shape of female waist) and at the same time their bodies' design is taken as evidence that adaptation has occurred (e.g., shape of infants' spine and "frog" position of legs and hips). The explanation is circular because the selective scenario (hunter-gatherer environments of the Pleistocene) explains the observed traits and in turn, the only evidence for the selective scenario are the observed traits.

But with her argument Schmidt runs into another problem known as 'is-ought problem'. An is-ought problem occurs when someone bases normative claims about what ought to be on descriptive claims about what is without further explanation. For example, the claim 'Germans are very punctual. Therefore, when you interact with Germans, you should also be punctual' directly derives a normative claim (you should be punctual) from a descriptive claim (Germans are punctual). What is missing or implicit in this argument is a moral premise about punctuality, e.g., 'punctuality is good' or 'punctuality is desirable'. Schmidt's evolutionary explanations have a similar structure. She claims that hunter-gatherer communities in the Pleistocene carried their infants, that human infants are adapted to being carried and that children are less likely to develop hip problems when they are carried and therefore one should carry their infants. She bases the moral statement that one should carry one's child not only on what is (carrying can prevent hip problems) but also on what has been (hunter-gatherer communities in the stone age carried their infants). The implicit moral premises in this argument are 'it is good to behave like hunters and gatherers in the Pleistocene', 'it is good to live in an environment that one is adapted to' and 'it is good to keep your child healthy'. While the latter premise is rather uncontroversial, the former two premises require further explanation that is missing from Schmidt's argument. Why is it good or desirable to behave like hunters and gatherers of the stone age and to recreate the environment humans are (allegedly) adapted to? Schmidt's response seems to be 'because natural behaviour and environments are good'. Already the title of the book (species-appropriate) expresses the view that "natural" infant care practices are desirable. The view that the presumed natural childcare practices are good and desirable is also implicit in scientific texts on need-based parenting styles: "The described practices prevailed during

the evolutionary history of the human species and reflect the natural, innate rearing style of the human species to which the human infant has biologically adapted over the course of evolution.” (Schön and Silvéen 2007, p. 102). The same highly questionable reasoning strategy is also applied by anti-vaccinationists when they claim that vaccines are not natural or by advocates of Social Darwinism to justify social inequality.

The moral premise that something is good or desirable because it is natural renders child rearing practices that deviate from Schmidt’s recommendations unnatural or artificial and therefore bad and undesirable. In a paper on an evolutionary perspective on breastfeeding and co-sleeping, the authors refer to these practices as “evolutionarily inappropriate care behaviors” that include “supplementary feeds of water or formula, which reduce the infant’s desire to nurse and also have the potential to introduce pathogens to his undeveloped immune system” and “artificial formula feeding to treat ‘symptoms’ that are normal corollaries of breastfeeding in the period between birth and the onset of full milk production” (Ball and Klingaman 2007, pp. 228-229). In the first two weeks after my son was born, he wanted to nurse a lot. But even after hours of nursing I had the impression that he was still hungry. So, I decided to feed him formula until my body produced enough milk to satisfy him. I remember the relief I felt when he immediately fell asleep after the first time that I gave him formula. To me it felt more natural and appropriate to feed my infant formula than to see him cry from hunger. After all, we can’t know what hunter-gatherer communities in the Pleistocene did in these situations. Maybe other women in the community nursed the infant or maybe they fed them water.

Feminist critique of evolutionary explanations in infant care

The use of terms like ‘natural’, ‘species-appropriate’ and ‘evolutionarily inappropriate’ in the context of infant care frames human behavior within a nature-culture dichotomy. In the introduction of *artgerecht*, Schmidt (citing an anthropologist) states: “We *have* a perfect baby. Our problems only occur because we took a rather simple biological system – a dependent infant and a person who is there for the infant – and imposed culture onto it” (Schmidt 2015, p. 17, my translation). This framing is characteristic for need-based approaches to infant care and is also frequently applied by breast-feeding advocates (see Drouin 2013). From a feminist point of view the nature-culture dichotomy is problematic because it is gendered in the sense that ‘nature’ is associated with ‘woman’ or ‘female’ while ‘culture’ is associated with ‘man’ or ‘masculine’. By labelling need-based infant care

'natural', the recommended practices become associated with the (biological) mother as the primary caregiver.

Indeed, Schmidt (2015) reinforces heteronormativity and traditional gender roles of women as caregivers performing unpaid care work and men as the provider. In her chapter on carrying, for example, she implies that carrying is primarily the mother's task. She writes: "Mama's movement releases tension and her body gives a feeling of comfort and security. Some mothers walk up and down staircases or march through the house with the infant in the baby sling to let go of the day together with them" (p. 160, my translation). The father's role in carrying the child, on the other hand, is to "relieve the mother" (p. 177). Schmidt assumes that the mother is the primary caregiver, and the father's role is (at best) to assist and support the mother. In this scenario, the mother is the child's biological mother, an able-bodied heterosexual cisgender (upper) middleclass white woman who lives in a house with her husband and child (or children). Schmidt reinforces an image of female domesticity and disregards the diversity among women and parents (e.g., queer and non-binary parents, transgender parents, single parents, parents who have adopted their child, parents with health conditions and impairments). The way she presents her argument also implies that one has a choice with respect to parenting practices and thereby ignores the fact that many caregivers don't have the privilege to devote that much time and effort to child-care because they are constrained by socio-economic or other factors. Breast-feeding, for example, is not universally feasible as implied by need-based infant care approaches. For some women, particularly African American women and women of lower socioeconomic status, breastfeeding is a difficult, untenable, or even invisible option (Taylor and Wallace 2012, p. 79).

In a review of need-based approaches to infant care the authors state that these approaches use "evolutionary information to provide a description of what could be called an *ideal-case* scenario of infant care unconstrained by other competing demands" (Schön and Silvéen 2007, emphasis added). In *artgerecht*, however, Schmidt does not stress enough that her recommendations are an ideal that is hard or even impossible to reach. In the chapter on carrying, for example, she lists the advantages of carrying but does not discuss disadvantages or cases where the caregiver is unable to carry the infant for an extensive amount of time. She claims that carrying is great because you have your hands free to do other stuff, there is no struggle with staircases or narrow aisles, and it strengthens your muscles and sense of balance. She makes carrying seem easy, fun and "natural". Admittedly, in the beginning of the book she mentions that one should adjust her recommendations to one's personal situation and that caregivers should learn to ask for help if necessary. She also mentions the mother's needs in one section the chapter on

carrying: “It is important to pay attention to the needs of parents and children. If a mother cannot carry her eight months old baby with their eleven kilos for a long time, the child needs to sit in a buggy for longer distances. If an infant in their second year of life still cries when they sit in a buggy, they belong on the [caregiver’s] back where they feel comfortable.” Here, Schmidt seems to suggest that putting the child in a buggy is okay as long as they don’t cry. She makes it very clear that carrying is the default way of moving around with a child and that deviations from this norm are alright only if the child cooperates.

From my perspective, this kind of reasoning is highly problematic because it promotes a certain standard of motherhood that Joan Wolf (2007) fittingly terms “total motherhood”. Total motherhood is understood as a “moral code in which mothers are exhorted to optimize every dimension of children’s lives, beginning with the womb” (Wolf 2007, p. 615). It is an ideal that is both unattainable and unrealistic and promotes the mother’s near complete self-abnegation to ensure that her child’s needs for “optimal” care are met (Taylor and Wallace 2012). With her argument, Schmidt connects carrying and other practices like breastfeeding and co-sleeping with what it means to be a good mother by implying that putting an infant in a crib or bottle feeding are not only unhealthy for the child but also unnatural and evolutionarily inappropriate. The evolutionary part of the argument that biologizes and naturalizes certain types of behaviour puts additional pressure on mothers by urging them to create an environment for the child that simulates the hunter-gatherer environment of the Pleistocene. Women who are unable to achieve total motherhood often feel deficient not only as mothers but also as women (Carter 1995). If they are unable to breastfeed or decide to cease breastfeeding, for example, they feel guilt and shame because they are not able to live up to standards promoted by health care professionals, breastfeeding advocates and parenting books (see Taylor and Wallace 2012). Although breastfeeding is a particularly sensitive and emotional subject for many people, the feeling of inadequacy can also occur with respect to other recommendations promoted by approaches to infant care that revolve around the infant’s alleged needs (e.g., carrying, co-sleeping).

I cannot and don’t want to put my child’s needs above my own all the time. Also, I have learned that other people shame me as a mother no matter what I do. In my role as a mother, I am a constant target of people’s judgement and unsolicited advice. Occasionally, feelings of guilt and shame creep in and I am worried what other people think of me and how they judge my parenting abilities, but my main emotion when people criticise my parenting decisions is anger about our society that produces and perpetuates impossible standards of motherhood. In my opinion, parenting books should support mothers and other caregivers to take their own needs (e.g., physical, emotional, psychological and socio-

economic) seriously instead of promoting a standard of motherhood that is impossible to attain.

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