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Before 'Breast is Best'

Laurence Totelin explains why, in an era before formula, the issue was not what, but who fed the baby

Earlier this year, the United States experienced a severe shortage of infant formula. Caused by complex factors, including issues in the supply and production chains, this shortage had a critical impact on the lives of infants and their families. The crisis reminds us that we live in a world where there are safe alternatives to breastmilk, which allow parents to make informed choices on how to feed their infants. Infant formulas, which are modified non-human animal milks, are a recent invention, dating to the second half of the 19th century, and have constantly improved since then.

Without infant formulas, the only safe option for infant feeding in antiquity was breastmilk. While some infants might have survived on a diet of watered-down non-human milk, they were most probably a tiny minority. Myths portraying gods and heroes feeding on non-human milk, for example Zeus being nursed by the she-goat Amalthea, or Remus and Romulus being fed by the she-wolf, served to stress these mythical figures' exceptional character – they were survivors.

Osteoarchaeological analysis (stable isotope analysis) shows that long-term breastfeeding was normal among ancient societies, and that, while infants were introduced to a more varied diet in the second half of their first year, they often received breastmilk until they were three or four years old. Ancient medical authors also recommended a slow weaning process, which they specified should not start too early, but were not prescriptive about when a child should cease to breastfeed. They acknowledged that when children were sick, they would benefit from increasing their consumption of breastmilk. Wet-nursing contracts from Ptolemaic and Roman Egypt also testify to long-term breastfeeding. These reveal that wet-nurses were hired for periods varying from roughly 18 months to three years, with two years being the period most indicated.

The ancients, then, did not debate whether 'breast was best' or whether 'fed was best'. Rather, they discussed whether maternal or wet-nurse feeding was best. Or to be more precise, wealthy members of society debated this; it is likely that most people in antiquity would not have been able to afford a wet-nurse and had to rely instead upon informal arrangements, for instance with another lactating family member or neighbour, when required.

The two sides of this ancient breastfeeding debate are best exemplified by, on the one hand, the philosopher Favorinus, an ardent defender of maternal breastfeeding, and, on the other hand, the physician Soranus, who while a supporter of maternal breastfeeding, accepted that it could be detrimental to the health of mother and child.

Favorinus' views are exposed in a long discourse preserved in the 12th book of Aulus Gellius' *Attic Nights*, where they are translated into Latin. The philosopher was visiting a man of senatorial rank, whose wife had just given birth to a son. Her labour had been difficult, and she was exhausted. Her mother, the child's grandmother, wanted to hire wet-nurses out of concern for the health of her daughter. Favorinus, however, tried to convince the family that, by not breastfeeding, the mother would offer her son 'a type of half motherhood, against nature and imperfect' (*Attic Nights* 12.1.6), launching into a long – and rather sanctimonious – discourse on the matter. We do not know whether

his arguments were successful or not, but it is undeniable that the mother's views were completely ignored by the philosopher.

Soranus, for his part, in the second book of his treatise *On Gynaecology*, recognised that it could be exhausting for a new mother to breastfeed. He therefore offered seemingly pragmatic advice on how to find an excellent wet-nurse:

One must choose a nurse who is not younger than twenty years and not older than forty years, who has been pregnant twice or thrice already, without disease, in good condition, of a good bodily size and colour. Her breasts should be of good proportion, loose, soft, and unwrinkled. The nipples should be neither big nor too small, neither too firm nor too porous, and offering an abundance of milk. She should be self-controlled, sympathetic, not irascible, Greek, and clean.

Soranus *On Gynaecology* 2.19.1

Soranus followed these general recommendations with further discussion about each of these characteristics. It might not have been particularly easy to find a wet-nurse fulfilling all these exacting criteria. This list must be seen as an ideal rather than reality. Concerns over a wet-nurse's character are also expressed in wet-nursing contracts and in a letter allegedly written by the Pythagorean Myia to her friend Phyllis. For the wet-nurse's behaviour, it was believed, could have an impact upon the quality of her milk, which in turn could affect the health and behaviour of her charge.

Soranus also discussed the quality of the milk, outlining several tests to use in determining its value. 'Good' breastmilk had a pleasant colour, smell, taste and texture. 'Bad' breastmilk, on the other hand, was foul and presented as a thick, semi-coagulated substance. It was difficult for the infant to swallow and could lead to choking. Soranus and other medical authors classified the first milk – what we now call the colostrum – as bad milk and extremely dangerous for the child. A mother could not breastfeed her new-born for a few days, but either entrusted the baby to a nurse, or gave them some honey.

Today, colostrum is considered to be an extremely powerful substance, with many health-giving properties, and it might seem surprising that the ancient Greeks and Romans rejected it. Taboos against the first milk, however, are common anthropologically. In the case of the Greeks, the rejection of the first milk might be linked to concerns over the fact that its production coincided with a period of heavy postpartum bleeding (the lochia). This blood risked tainting the milk. Indeed, Soranus had observed that 'bad' milk could contain what looked like filaments of blood.

This fear of mixing milk and blood also explains why ancient medical authors and wet-nursing contracts prevented lactating women from having sexual intercourse. Breastfeeding is accompanied by an absence of menstrual discharges (lactational amenorrhea). The ancients believed that sexual intercourse would bring back the menses, which would spoil the milk. Whether couples followed such prescriptions in these matters is difficult to determine.

While breastmilk could be dangerous, it was also seen as a very powerful substance. Beyond its ability to sustain the life of an infant, it could also allegedly heal an array of diseases. Drunk, it could alleviate respiratory illnesses such as phthisis, in children and adults alike. Applied, it could be beneficial to troubles of the eyes and ears, and for gynaecological ailments. Some early recipes, preserved in the gynaecological texts of the Hippocratic Corpus, demand the milk of a woman who has given birth to a male child.

To produce good, health-giving milk, women were encouraged to watch their diet. In addition, they could consume some plants that promoted lactation. One of these was lettuce, the white sap of which was believed to stimulate the flow of milk. Women might also have dedicated votive breasts in

sanctuaries either to request healthy lactation or in thanks for successful lactation. Numerous examples of such votive breasts survive in the archaeological record. Their link to lactation, however, remains understudied.

Also preserved in the archaeological record are examples of 'baby bottles', with a small spout that is well adapted to an infant's mouth. These bottles, usually found in infant tombs, are however more likely to have been used by older infants – toddlers – than newborns, and to have contained non-human animal milk rather than human breastmilk. That is, they were used to introduce children to a more varied diet after a period of exclusive breastfeeding to which, as we have seen, there was no real alternative.

Fig 1: Votive breasts, such as the classical Greek pair above, were sometimes offered in prayer or thanksgiving for lactation.

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Fig 2: A third century BC example of an infant's 'feeding bottle'. This example was probably made in Crete

(credit line: © The Metropolitan Museum of Art/Rogers Fund, 1971/Creative Commons License)

Fig 3: A limestone statuette of a nursing mother, mid-late 6th century BC, Cyprus

(credit line: © The Metropolitan Museum of Art/The Cesnola Collection, 1874-6/ Creative Commons License)