

# Bringing nature to the fore



**Suzanne Colson** argues that it is time to draw up breastfeeding competencies in order to promote the 'nature' perspective within early breastfeeding support

*This article has two aims: first, to give an historic overview of the nature-nurture debate in relation to how mothers learn to breastfeed. The overview will relate how the 'nurture' perspective came to dominate our understanding of the ontogeny of breastfeeding. The second aim is to propose professional breastfeeding competencies in an attempt to integrate the 'nature' perspective within early breastfeeding support. These are under development and written with a view to stimulating peer review and discussion.*

## Introduction

In 1955, Mavis Gunther, a well-known English obstetrician, published a landmark research paper in which she stated categorically that 'modern mothers' lacked breastfeeding instincts. Gunther (1955) theorised that mimicry, not instinct, informs homo sapiens and other primates how to breastfeed the first baby. She based this notion on her clinical observations, together with reports of the inability of zoo chimpanzees to breastfeed. Taken together, these suggested that the deprivation of the visual breastfeeding experience in childhood

leads to maternal rejection of the offspring and breastfeeding failure.

From a zoological perspective, mimicry is a protective resemblance of one animal species (the mimic) to another (the model) or to part of the environment. This is a biological strategy, the function of which is concealment, entrapment or camouflage (Morris 1990). The mimicry involved in breastfeeding is better classified as what Desmond Morris (1977), the well-respected ethologist, terms an absorbed action or one acquired unknowingly from social interactions. According to Morris, there are three other ways in which human actions or behaviours are acquired: taught, discovered and inborn. Inborn or innate behaviours are not learnt. Instead, they are genetically pre-programmed or hard-wired, accomplished without any prior experience. There are two kinds: reflexes and instincts.

Although innate behaviours are recognised as part of the neonatal repertoire (for example, sucking, rooting and smiling), there is much controversy concerning the role played by inborn behaviours – and instincts in particular – in

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the adult. This controversy is central to the ongoing, age-old nature-nurture debate about the origins of behaviour. For example, many suggest that human aggression is pre-programmed, part of human 'nature', and is therefore a natural and unavoidable behavioural trait mandating fights and war; whereas others, citing examples of peaceful societies where war is unknown, suggest that aggression is culturally determined, a learnt response – part of 'nurture'.

### TABLE 1 Midwifery breastfeeding competencies – aim, abbreviations and materials

*The overall aim is to provide a hormone-enhancing environment, supporting the initiation of exclusive breastfeeding.*

- Biological Nurturing: **BN**
- Skin-to-skin contact: **S2S**
- Hospital acquired infection: **HAI**
- Mother-Baby Nurturing Diary: **ND**
- Oxytocin: **OT**
- Mother-Baby Nurturing Diary
- Breast/Bottle Feeding Reflex Assessment (BRA)
- BRA Action Plan
- 'The Little Pocket Book of Big Feeding Facts'

### TABLE 2 Midwifery breastfeeding competencies – skills

1. Develops a professional health advocacy role.
2. Promotes exclusive breastfeeding as the biological norm (at least) during the time of metabolic adaptation (first three postnatal days).
3. Is familiar with BN and reflex theory in relation to breastfeeding initiation.
4. Recognises normality, detecting any feeding problems as soon as possible.
5. Promotes breastfeeding initiation in an appropriate neonatal behavioural state.
6. Prioritises care, keeping mothers and babies safe.
7. Recognises the difference between information-giving and advice.
8. Recognises cultural interpretations and offers information with sensitivity, respecting informed choice.
9. Increases mother's confidence in her ability to care for her baby through purposeful conversation.
10. Minimises intervention, ensuring dignity and comfort, supported by a hands-off practice as appropriate.
11. Recognises as soon as possible any deviation from the normal and can teach positioning and attachment skills if needed.
12. Maintains a high standard of hygiene.

**TABLE 3 Role and behaviour (bracketed numbers link to skills listed in Table 2)**

**A. Health advocate**

- Listens to mothers and encourages them to identify their feelings and anxieties about breastfeeding and the related changes to themselves and their lives (2).
- Gives the mother the ND, promoting baby-holding regardless of ethnicity and feeding choice (1,4,5).
- Gives a brief explanation of how to use the ND, responding to questions through purposeful conversation educating about cultural expectations and the difference between culture and physiology (1,2,4,5).

*Specifically:*

- a. Promotes early S2S followed by BN.
- b. Clarifies how the mother's body can continue to nourish and nurture her baby as an integral part of maternal comfort, rest and postnatal recovery.
- c. Responds to fears about spoiling and needs vs. habits, sharing nurturing definitions and styles while demonstrating cultural awareness.

**B. Breastfeeding assessment**

- Washes hands before seeing the mother and in between mothers, using this as an opportunity to discuss the importance of hand-washing and infection risks (8).
- Introduces self and maintains level eye contact (2).
- Asks mother's permission before touching or picking up baby (6).
- Recognises when it is productive to touch mother's breasts, and asks permission to do this (6,7).
- Maintains a neutral thermal environment, and promotes baby-holding (3).
- Discusses the ND when baby is (may be feeding) in mother's arms (3).
- Listens (actively) to the mother's assessment, and responds empathetically while pointing out physiological criteria indicating successful milk transfer (2,3,6).
- Promotes biological choices – S2S, exclusive breastfeeding and BN (1).
- Assesses maternal, neonatal positions and neonatal lie at a glance (3).
- Assesses age-appropriate milk transfer and maternal-infant well-being (3).
- Suggests BN in sleep states in response to any problems (3).
- Asks mother if nipples, areolas or breasts hurt (3).
- Uses anatomy and physiology to respond to questions about milk insufficiency, breastfeeding frequency and sore nipples (3).
- Integrates the BRA within the postnatal examination (3).
- Follows the BRA action plan, with accurate recognition of the healthy vs. the sick neonate.
- Recognises the need for hand expression and/or cup feeding and suggests this to the mother, emphasising that during the first three postnatal days small amounts of EBM are normal (3).
- Records breastfeeding initiation, S2S, BN, breastfeeding exclusivity and the BRA accurately in the mother's notes (3).

### Competing breastfeeding arguments

Gunther's (1955) mimicry theory about breastfeeding behaviours was firmly anchored within the 'nurture' side of the debate, where she suggested that cultural factors such as 'small families, housing allowing privacy and traditional conventions of modesty' prevented the 'modern' mother from breastfeeding spontaneously.

Decades later, biologists such as Pryor (1973: 69) continued to suggest that

maternal breastfeeding behaviours were a mixture of nature/nurture, where hormones and innate behaviours – the 'nature' component – provide a 'rough framework' enabling mothers to initiate breastfeeding. However, Gunther's mimicry thesis made more sense and gained wide acceptance, overshadowing the 'nature' component of the ontogeny of breastfeeding. Interestingly, the mimicry theory came with an obvious solution: just as mother chimps in captivity could be

## A new set of midwifery competencies under development aims to increase breastfeeding initiation, with the immediate objective of bringing the part played by 'hard-wired' breastfeeding behaviours to the fore

taught suckling skills by male zoo keepers, human mothers could acquire the skills of breastfeeding through active training and teaching.

Through the years, the Gunther hypothesis, although untested, became a 'fact', reinforcing the idea that, in the absence of a breastfeeding culture and because they lack instincts, mothers require advice and training (Wells 2006). Today, this maternal deficiency – or 'instinctual failure', in Gunther's words – lies at the heart of our current understanding of the ontogeny of breastfeeding.

The paper has been widely cited, providing the rationale for using a skills-teaching approach to support breastfeeding initiation. The 'nurture' perspective has provided the theoretical framework underpinning public health initiatives to promote and support breastfeeding as well as the professional observations and competencies required to teach mothers the skills.

### Time to re-assess?

Today, recent research findings suggest that there has been an over-reliance on this nurture-only perspective. An ever-increasing bank of well-designed research studies demonstrates that oxytocin, one of the principal breastfeeding hormones, is at the root of all love relationships, releasing behavioural effects as well as the well-known contraction and ejection effects (Pedersen 1992).

An investigation examining the mechanisms of biological nurturing (BN), a ►

# Bringing nature to the fore

**TABLE 4 Midwifery breastfeeding competencies – knowledge**

*Understands:*

- current definitions of breastfeeding initiation and why there is such variation
- the difference between the constituents of breast milk and artificial milk
- why exclusive breastfeeding is important
- the importance of S2S following birth
- the difference between S2S and BN
- the difference between culture assumptions and biology in relation to breastfeeding support
- breast anatomy and the physiology of lactation
- the mechanisms of BN and how positional interactions release reflex activity, either helping or thwarting latch
- the importance of neonatal behavioural state.

*Demonstrates knowledge of:*

- the NMC Code of Conduct (Nursing and Midwifery Council 2008)
- the Midwives Rules, and specifically can detect ASAP any deviation from the norm and can describe appropriate action. (Nursing and Midwifery Council 2004).

**TABLE 5 Midwifery breastfeeding competencies – knowledge outcome measures**

- Can describe how to record breastfeeding initiation accurately, both in the mother's notes and on computer.
- Can give five baby- and five mother-related evidence-based reasons to breastfeed exclusively.
- Can list the 10 steps of the WHO warm chain (World Health Organization 1997).
- Demonstrates understanding of HAI and baby's immature immune system, and the importance of hand-washing
- Can describe the difference between BN and S2S.
- Can make four observations that compare and contrast culture vs. biology, using research to support both arguments.
- Can give four evidence-based reasons why high OT pulsatility is important during the time of breastfeeding initiation.
- Can list six observable behavioural and six observable mechanical characteristics of high maternal OT pulsatility.
- Can list five environmental threats to high OT pulsatility, and give four examples of how to avoid neocortical stimulation.
- Can describe how the breast works during lactation using the Hartmann and Geddes (Ramsay et al 2005) findings concerning breast anatomy.
- Can describe how to modify the latch when mothers say breastfeeding hurts or when the assessment of milk transfer is unsatisfactory.
- Can state in ml the age-appropriate capacity of a baby's stomach, and relate that to research showing mother's milk production during the time of breastfeeding initiation.
- Can define suckling ketosis and state its role during breastfeeding initiation.
- Can give three reasons why the mother's position is central to pain-free effective breastfeeding.
- Can recognise and differentiate three neonatal lies at a glance.
- Can describe the difference between back (dorsal) and front or 'tummy' (ventral) baby feeding positions.
- Can describe six neonatal behavioural states and list six baby reflex feeding cues.
- Can describe age-specific changes in neonatal stooling patterns.
- Can describe normal neonatal urine output during first postnatal week.
- Can describe age-specific differences in suck/swallow patterns during the first postnatal week.
- Can give three criteria indicating successful milk transfer.
- Can give three reasons for hand expression and/or cup feeding.

Survey findings demonstrate that 12 per cent of bottle-feeding mothers experience feeding problems in hospital. Manual release of the breastfeeding reflexes observed during Biological Nurturing is often an immediate solution

newly developed approach to breastfeeding initiation, suggests that maternal-infant positional interactions release some 20 neonatal reflexes as well as what appeared to be emerging patterns of maternal instincts (Colson et al 2008). Spontaneous maternal nesting, transportation, identification, placing, grooming, greeting and imitation behaviours were observed appearing to aid mothers and babies to establish the breastfeeding relationship without any skills-teaching. Taken together with known physiological benefits associated with skin-to-skin contact during the first postnatal hour, the importance of supporting a hormone-enhancing postnatal environment conducive to breastfeeding initiation may be an urgent midwifery priority.

## **New midwifery competencies**

This priority underpins a new set of midwifery competencies (see Tables 1-5). The competencies are under development as part of a pilot project carried out alongside the implementation of the productive ward and funded by Eastern and Coastal Kent PCT. The ultimate aim is to increase breastfeeding initiation, with the immediate objective of bringing the part played by 'hard-wired' breastfeeding behaviours to the fore. The project seeks to translate the above research findings into practice, introducing BN in a hospital with low rates of breastfeeding initiation. The materials that have been developed to implement the competencies include a mother-baby

nurturing diary, a breast/bottle feeding and reflex assessment instrument (BRA), a BRA action plan and a 'Little Pocket Book of Big Feeding Facts' (See Table 1).

### The mother-baby nurturing diary

The diary is designed to empower mothers, informing them of newborn feeding patterns. It also provides a guide to initiate purposeful discussion with midwives and other health professionals. Numerous pictures illustrate a range of comfortable BN positions, and mothers can use any of the combinations. Six neonatal behavioural states are described and illustrated; mothers are then encouraged to:

- recognise the baby reflex feeding cues illustrated in each state
- hold their babies when they are asleep in comfortable and full BN positions as a proactive way to respond to any breastfeeding problems.

Information concerning normal urine output and stooling patterns is given, illustrating the day-by-day changes of the first week. In that way, mothers can self-assess. This self-assessment assumes that the mother knows more about her baby than anyone else, and this is made explicit within the diary. Adopting such a professional attitude may increase maternal confidence and save midwifery time.

### Breast/Bottle Feeding Reflex Assessment (BRA)

The UNICEF UK Baby Friendly Initiative (2008) recommends that, before making a final decision concerning feeding method, all mothers be given the opportunity to hold their newborn babies in skin-to-skin contact. This should take place as soon as possible after birth in an unhurried environment, continuing for as long as the mother wishes. Clinical experience suggests that after one or two hours of skin-to-skin contact, many mothers wish to get dressed. The evidence supporting biological nurturing suggests that the positional interactions stimulating latch occur even when mothers and babies are lightly dressed (Colson et al 2008). Biological nurturing extends the time of baby holding; mothers are encouraged to cuddle their babies in full biological nurturing positions, in as much

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## The Breast/Bottle Feeding Reflex Assessment is used to assess maternal/infant wellbeing and milk transfer in both breast- and bottle-feeding, attempting to reverse the impression that bottle-feeding is the norm

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skin-to-skin contact as desired, sustaining frequent baby cuddling for at least three days, the time of metabolic adaptation. However, many mothers enjoy this close contact and continue to carry their babies during the first months. This is sometimes called attachment parenting (Granju and Kennedy, 1999). BN extends this period in as much skin-to-skin contact as the mother wishes. The BRA instrument is used to assess maternal/infant wellbeing and milk transfer in both breast- and bottle-feeding, attempting to reverse the impression that bottle-feeding is the norm sometimes observed in hospital infant feeding charts.

Survey findings demonstrate that 12 per cent of bottle-feeding mothers experience feeding problems in hospital (Bolling et al 2007). Manual release of the breastfeeding reflexes observed during BN is often an immediate solution. Clinical experience suggests that, as a result, some of those bottle-feeding mothers become interested in breastfeeding initiation.

It is particularly important to understand that BN is not about encouraging the mother to hold the baby and then letting her get on with it. The BRA instrument uses hormonal complexion and other salient characteristics of milk transfer, building upon and developing further aspects of the daily postnatal examination. The idea is to reduce teaching time and intervention for those mothers without problems while detecting as soon as possible any deviation

from the norm. Midwives are encouraged to discuss the diary with the mother as part of the daily postnatal examination, and to follow the steps outlined in the BRA Action Plan when problems are identified.

### BRA Action Plan

This is a flow chart laid out in A3 poster format to be displayed in the midwifery office, offering guidelines for problems and to ensure a seamless hand-over.

*The Little Pocket Book of Big Feeding Facts* provides aspects of the diary and the BRA in condensed form for maternity care assistants and support workers.

Future articles will introduce these aids fully as they are still in the development stages.

BN is an intervention attempting to restore the nature-nurture balance, enhancing the nature component. The competencies in Table 1 are also under development, mixing and matching standards from a variety of sources to promote and support breastfeeding initiation. **TPM**

**Suzanne Colson is Senior Midwifery Lecturer, Canterbury Christ Church University**

*A biological nurturing DVD is now available – see [www.biologicalnurturing.com](http://www.biologicalnurturing.com)*

refs overleaf

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