

Assen, 10th January 2012

Dear Mr. Hopmans,

In response to your message with the review of 'Slapen met je baby' as an attachment, I would like to give a more detailed reaction.

I will also discuss the wordings in the e-mail that was sent to an unknown number of health care providers in the Netherlands. I will try to address all the topics you dealt with.



1. Profession of the writer and the translator

Dr. McKenna is an anthropologist who has done extensive research into the field of physiologic sleeping patterns of human babies. Breastfeeding being the norm for mammals (and therefore also for human babies), there is no way that he could study sleeping babies without studying their breastfeeding mothers. The mother-baby dyad is an inseparable unity, because to achieve a normal, appropriate development, the baby needs the maternal habitat to thrive. Dr. McKenna's book is based on his thirty years of research and publishing in the fields of cosleeping and SIDS and on over 70 peer-reviewed scientific articles.

Marianne Vanderveen-Kolkena, as a lactation consultant IBCLC, has, on the basis of the IBLCE Exam Blueprint¹, the responsibility to have a certain level of knowledge regarding anthropology (Article G of the Exam Blueprint). A well educated IBCLC who has also been professional editor for years, is therefore definitely working within her scope of practice when translating a book like this. Close cooperation between writer and translator was established.

The book is still a publication of the author's work, though, not of the translator's view. If there is doubt about Dr. McKenna's statements, he can be contacted and is happy to answer questions. If the plans for a lecture in the Netherlands go through, all reviewers and those involved in the Stichting Wiegedood are invited to join his presentation to hear what he has to say and to ask questions.

Those who discover errors in the translation, are, again, invited to inform the translator about them.

2. American and Dutch culture

The reviewers state that there is a large difference between the American and the Dutch culture. That is true. There is also a large similarity between the American and the Dutch culture: both have not had a cosleeping culture for many decades. This is the essence of the book: many western societies do not have a cosleeping culture, because societal developments have dissuaded parents to stay in close nightly contact with their babies and infants. Separation and letting babies cry it out because of a perceived need for the baby to establish independence at an extremely young age has led to separate sleeping rooms and lack of parental care during the nightly hours. The reviewers (in their e-mail to a number of health care providers²) call his view "a position that is also considered dissident in the United States". The word 'dissident' means 'thinking differently', 'having a different opinion than the majority', 'resisting dominant convictions'. Dr. McKenna will not deny that he has a 'dissident' view when using the word in this sense. That is the whole point of his research as well as his book. Were he not of a different opinion, there would not have been the need to write the book in the first place. He challenges the fact that many medical and professional organizations warn against cosleeping/bedding-in without providing research studies that take the breastfeeding mother-baby dyad as the norm to compare other settings to and without proving separate sleeping conditions to be inherently safe on the short and the long term with regard to total health, physical as well as emotional and social.

In daily language 'dissident' has a connotation of 'disobedient' and 'rebellious' (which has led to severe political punishment of famous dissidents). Parents who cosleep with their babies (either through rooming-in or through bedding-in when they are breastfeeding) are, in fact, obedient to the biological blueprint and expectation patterns of their offspring. They create an emotionally and de-

velopmentally safe environment for their infants, allowing them to grow up in a way that fits their potential.

Dr. McKenna's book is therefore not a representation of the American culture as it is; it is also not a representation that needs to be adjusted to the Dutch society. The book is a representation of the biology of mammal babies that is valid for human infants across the world.

3. Terminology

The reviewers state that the terminology used in the book is confusing.

To prevent confusion for the reader, an explanatory list of terms has been added (of course with the author's consent) to the Dutch translation, where it was missing in the original version of the book. All key terms used throughout the book have been dealt with in this list. The readers can refer to it while reading the book.

I will discuss two examples.

- Cobedding is a term that is scientifically used for twins sleeping in the same bed. In Europe, Dr. Helen Ball has done a lot of research in this area. References for her studies are in the book.
- The term 'cot death' is an interesting term. It makes you wonder whether it arose because babies died while sleeping in a cot. The cot could then easily be seen as the cause of death. The phenomenon of babies dying unexpectedly is not caused by cots, though, so the term is not a descriptive term of what actually happens: the baby dying suddenly and unexpectedly without a known cause (even after autopsy). It is the immaturity of newborns and infants that makes separate sleeping (out of sensory reach of the parents) a risky procedure. It is not the place (either cot or cosleeper or parental bed) that decides whether the death of a baby is SIDS or not. It is the impossibility of finding a cause after a thorough investigation that defines it. 'SIDS' is a term that describes this (Sudden Infant Death Syndrome); 'cot death' does not describe this.

As for the term 'bedding-in': the book is translated in order to allow easy access to the information for those who do not master the English language. To use the word 'sharing' would then not be a good idea: it makes no sense in Dutch and it is hard to pronounce if you don't speak English.

For the rest the book closely follows the terminology used by Dr. McKenna.

4. Risks of sleep settings

Dr. McKenna is very clear in his advice: cosleeping in the form of bedding-in is something only breast-feeding mothers should do, because non-breastfeeding mothers lack the scientifically well established hormonally and interaction driven sensitivity towards their babies that breastfeeding mothers do have. He urges non-breastfeeding parents to create a separate sleeping surface, but keep their babies close. This means he advocates cosleeping in the form of rooming-in without bedding in or in the form of using a cosleeper where the baby is not on the same sleeping surface as the parents. The book is pretty clear about this and Dr. McKenna regularly warns against certain risks. Illustrations in the book underline these warnings; they do this in the original as well as in the Dutch version of the book.

All of this does not eradicate the fact that in the end, it is the parents who decide where their baby sleeps. From a sociological perspective, cosleeping in the form of bedding-in (either done safely or unsafely) is a given. Many parents do it secretly, because they know their health care provider is likely to 'reprimand' them for doing it. This creates dangerous situations: people will not ask for safety instructions on a behaviour for which they think they will be frowned upon. Dr. McKenna's book is meant to provide background information and safety instructions. All of this is part of what is needed for 'informed decision making'. Considering the ethical principle of parental autonomy, parents have a right (and a responsibility!) to avail themselves of this information.

In general, people will be very motivated to create safe circumstances for their children. This goes for highly as well as less educated parents. Using car seats is a comparable situation. Health care providers do not forbid transportation of children in cars because "only the strongly motivated and devel-

oped parents can afford [to meet the necessary conditions]". Parents need to learn how to transport their children safely and should not drink or be distracted while doing so.

5. Positioning of babies

All over the world, breastfeeding mother-baby dyads will assume a similar position while in bed: mother will be on her side, baby will be on its side toward her while breastfeeding and roll back when done. Pulled-up knees and the closeness of the breast create an orientation towards mother that keeps the baby safe. Dr. McKenna emphasizes this at various points in the book. Pictures illustrate the do's and don'ts; heavy bedding and stuffed toys are clearly among the don'ts, in words as well as in photos.

Varying baby's position during the parental wake hours of the day is good for motor development. When parents have their baby in sight to check its wellbeing regularly while they are doing chores (thereby giving auditory stimuli to their baby that prevents too deep sleep that increases the risk of SIDS), they create a safe sleeping environment for the baby.

With regard to the issue of CO₂, readers are referred to Dr. McKenna's personal note below.

6. Breastfeeding as the norm and artificial infant formula as deviation from the norm

Mammals need species-specific milk to guarantee normal development of their physical, social and emotional health. To achieve this, they do not only need the product (breastmilk), but almost even more the process (breastfeeding). Already in the late 50's, early 60's Harry Harlow determined the extreme need in young monkeys for their mother's physical presence.

As for gut health (an essential part of immunological health), there is now an enormous and undeniable body of evidence to show that infant formula poses risks. Stomach emptying takes longer when babies have to digest non-species specific milk. When cow casein breaks down, it makes compounds that can damage the human baby's gut. It also lacks specific enzymes that facilitate digestion. WHO acknowledges the evidence for the importance of exclusive breastfeeding "up to six months of age, with continued breastfeeding (...) up to two years of age or beyond."³

Breastfeeding being the norm for infant feeding also means that breastfeeding has no advantages and does not decrease risks. Deviating from the norm (so lack of breastfeeding) has disadvantages and causes or increases risks. This correct frame of reference has consequences for the statistical numbers. If one would say that breastfeeding halves the risk of certain illnesses, it means that lack of breastfeeding doubles the risk. The risk is then increased by 100% and is 200% of what it would be with breastfeeding. This means that if breastfeeding for 15-40 months results in a woman having only 30-40% chance of getting breast cancer compared with never breastfeeding⁴, her reduction is 60-70%. A reduction of 60-70% in the one direction means an increase of 150-230% in the other direction. Unfortunately, this is the truth, and not a matter of inducing fear. It is a matter of statistical reframing⁵ that allows for 'informed decision making'. Hushing up risks is not a good way to inform parents about infant feeding and the health consequences of different choices.

7. Recommendations for safe cosleeping practices

The reviewers object to the fact that the experts in the book second Dr. McKenna's recommendations for safe cosleeping practices. These experts are professionals in their own field and conduct their own research. This book, however, is not about their research, but about the research Dr. McKenna has done to shed more light on the healthy effects of safe cosleeping practices. If there is an interest in the research and publications of the experts mentioned, they can easily be found by a Google search.

Author and translator seriously regret the use of the term 'rabble rousing' with regard to the fact that experts advocate an anthropological approach that takes into account the mother-baby biology and physiology. Parents are free to make their own choices for their own babies and providing them with extensively scientifically underpinned notions is a respectable way to enable them to do so.

The ideas in the book are based on ideas and interpretations of data that have passed peer review by anonymous SIDS and developmental scientists from all areas of SIDS research and related pediatric

and developmental sciences. The references below show the existence of the research and can further testify to the book's validity. As Dr. McKenna says: "If people doubt what is written in the book, then they are doubting the scientific community itself, as all of these ideas passed the most rigorous peer review and were published in the most selective journals in the world. People are therefore invited to read these articles and investigate the science behind them." See all of these references below.^{6;7;8;9;10;11;12;13;14;15;16;17;18}

Personal note by Dr. McKenna

With regard to the cultural aspect and the CO₂-issue, Dr. McKenna would like to add a personal note.

Cultural aspects

The reviewers have misunderstood how the cultural factors have been used in my research. The cross-cultural data are not used to suggest that everyone needs to sleep together with an infant in the same way. Indeed part of my critique of the SIDS and infant sleep research community is that it promotes overly simplistic generalizations and a 'one-size-must-fit-all'-solution, where multifaceted or heterogeneous behaviors like cosleeping in the form of bedsharing are reduced to stereotypes. The cross-cultural data are used only to confirm the validity of how I conceptualized my cosleeping-breastfeeding research for the human infant as seen from a species point of view. Let me explain. In other pediatric research on infant sleep that emerged in the fifties, when only about 9% of American babies were breastfeeding, sleeping with an infant was thought a form of sexual abuse or behavioral psycho-pathology. Rather than using a singular western cultural model I conceptualized my research on infant sleep using evolutionary models and not recent western cultural constructions (that are fallacious). My critique is that early on when sleep polysomnography was invented, scientists erroneously thought that solitary bottlefed infants could be measured to derive what amounts to 'normal human infant sleep'. This is a fallacious assumption, as normal measurements must be derived from a cosleeping breastfeeding baby to derive normal sleep architecture because, as the cross-cultural data confirms, the human infant is designed to sleep in and out of contact with its mother while breastfeeding throughout the night. This biological fact is as true for the 2012 Dutch baby as it is true for the Dugam Dani baby of New Guinea. No cultural memos or declarations will change what babies feel and need. There has not been enough time for human infants to change genetically to adjust to recent modern changes, when the more conservative and slow changing biology of the human infant is considered.

How do we know this? When you look at the developmental schema of infants everywhere, they are the closest to each other (as humans) across different cultures as they will ever be and the closest any of us will ever be to a less culturally filtered expression of our genes. Infants are somewhat untouched by culture, at least when one views their reflexes and responses to sensory stimuli. When you examine and/or compare the Dutch infant in relationship to the Dugum Dani infant in terms of what kinds of experiences effect their hear rates, how they respond to mother's breath, their breathing, their absorption of calories, mother's smells and movements, including her vocalizations, they are exactly the same across all cultures. And all of these responses to contact and proximity, whether during the day or night, reflect the same needs and evolved human characteristics, again, across all cultures. The neurobiology of the growth of the human infant brain is pretty much the same the whole world over and cosleeping performs the same essential functions of maximizing infant health and development on a biological level, for an infant born the most neurologically undeveloped primate of all! An infant's sleep and feeding are integrated and interdependent and it all depends on the presence of the breastfeeding mother. This is why sleep architecture, to derive 'normal' human infant data can ONLY be measured in the context in which the biology evolved and the system achieved adaptation. The whole point of my research (confirmed by multiple laboratories in England, Australia and New Zealand) is that all human infants depend on and expect nighttime breastmilk and breastmilk's delivery, the exchanges of sensory stimuli in and around the ingestion of breastmilk and the mother's body

that delivers it. Indeed, the dismantling of the three fundamental adaptations of the human infant for nighttime sleep led to the deaths of hundreds of thousands of European and American babies from SIDS: lack of breast milk, babies placed prone (to promote deep, dangerous, uninterrupted sleep) and the absence of mother's body and engagement (infants sleeping in rooms by themselves). All of these three cultural innovations emerged from ideology and social values, not from any studies of who the infant is and what an infant expects and needs as assessed from its evolutionary and historical and cross-cultural context. Each of those cultural innovations is now known to be an independent risk factor for SIDS and/or infant death.

CO₂-issue

There is also a lot to say about the CO₂-issue. We, my research group and I, are the only people in the world that actually studied¹⁹ how much CO₂ babies are exposed to while bedsharing and we determined that it is safe if not potentially helpful in stimulating breathing.

Apneas are a normal part of infant breathing and periodic breathing with apneas less than 20 seconds or so are distributed across different sleep stages of the infant. They are thought to be normal and, indeed, a way in which infants respond to small perturbations in their metabolism and sleep cycle, and to externally induced arousals. Babies that have died of SIDS, it has been observed by Evelyn Tobin, before their deaths exhibited less apneas and not more apneas, showing an inability to respond to internal and external stimulation. Nobody has ever been able to totally provide evidence for an apnea based explanation of SIDS, and for two decades it was thought that apneas were the cause of SIDS, rather than, as is thought now, SIDS may be the result of an arousal deficiency among SIDS victims. In other words, apneas are not the problem, but nerve cells in the brain, possibly a deficiency of arousal cell sites that does not permit the baby to successfully terminate an apnea and to reinitiate breathing.

Cosleeping actually stimulates practice in arousals and induces arousals in infants that counteract an infant's arousal deficiency. Our hypothesis published in the prestigious journals 'Pediatrics' and 'Sleep' has passed peer review and argues that the lighter sleep that is induced among bedsharing infants makes it easier for arousal deficient infants to get awake more quickly to terminate apneas. In other words, we argue that the changes in sleep architecture (Mosko et al 1996) we documented in our laboratory studies among bedsharing infants are protective, because babies spend less time in deep sleep (stage 3-4) and more time in light sleep (stage 1-2) and it is harder for babies to arouse from deep sleep than it is to arouse from light sleep (see Mosko et al 1996, Mosko et al 1997). Our paper on arousals also shows that bedsharing-breastfeeding infants experience other potentially protective physiological changes, when bedsharing is done safely.

CO₂ is not the bogey man or inherently dangerous, but a part not only of an infant's life but all of our lives, as it is part of the environment in which we live and especially the social environment in which we live and is exchanged between people speaking to each other and processed in clinically positive ways, when there is normal airflow around us.

When mothers speak to their infants and blow into their faces, they are distributing on them more CO₂ than what they expel when sleeping next to them.

Do we want to ban speaking to our infants because someone has argued and speculated that under the most extreme situations where babies are trapped breathing into mattresses face down CO₂ can be dangerous?

The point to make is that normative exchange of CO₂ occurs in all aspects of human life when moms and dads hold their babies, when they interact with them. In normative contexts such as when mothers sleep next to their babies infants and all of us are constantly inhaling small amounts of CO₂ from each other and it is completely safe and normal, if not a stimulant to tell the body to breathe. It tells us to continue to breathe due to the actions of our chemoreceptors located in our noses that detect and respond to CO₂ by breathing (!) and in each carotid artery on each side of our necks.

There has never been any study showing the CO₂ levels are ever high enough in a cosleeping situation to be concerned about. The study by Thach and Kemp that proposed CO₂ build up, and the re-

breathing of CO₂ may cause some SIDS was conducted on rabbits being forced to breathe face down into a porous-fibrous mattress. I repeat: these rabbits were forced to breathe face down into this material, until they died. It is not a surprise that they died either from oxygen deprivation or too much re-breathing of CO₂.

The entire CO₂-idea has never been confirmed; it has not been established that SIDS babies or SUDI babies are dying only from that cause. It is a speculation and a hypothesis.

It is ridiculous to see CO₂ as being dangerous to babies in any sense as it is a normal part of the infant's environment and the human environment in general. Natural selection would not favor infants breathing in their parents CO₂ if it were toxic, or poisonous. ALL of us breathe in the CO₂ of other people, as I mentioned, while interacting with them, while speaking with them, and it actually helps stimulate steady and balanced breathing. It does not repress or depress it at all. Only in rare and extreme situations can CO₂ build up to those kinds of dangerous levels.

In the right amount, up to 5% CO₂ exposure, babies respond favorably by breathing more frequently and it has been one way apnea prone infants have been treated as it stimulates the phrenic nerve to evoke breaths.

Like the rabbits, it is only when babies are trapped face down and breathing into mattresses or when they are trapped in some space that blocks inflow of oxygen that CO₂ builds up to a dangerous degree. These are always extreme cases.

It is easier for babies to create a pooled CO₂-environment when sleeping alone, where no movement from another person can dissipate the CO₂ or re-position the baby who cannot otherwise move itself out of a dangerous place. Indeed a social sleeping environment makes it extremely difficult for CO₂ to build up, because it is an extremely light gas that can be dissipated and blown away with the wiggle of a finger. Movements during sleep by the mother or anyone disperse the CO₂ away from the baby's face. Even the movements of breathing itself help to dissipate pooled CO₂. As I mentioned, we tested how much CO₂ a baby is exposed to at various distances from its mothers breath: at 3 centimeters, 6 centimeters, 9 centimeters and even when mother breathes under the covers. The highest amount of CO₂ we could get was an increase of 5%, using a mass spectrometer. This amount was measured UNDER THE COVERS, presuming that both the mother and infant were breathing under the covers.

Conclusion

The extent, to which a baby feels safe and cherished and heard in the first years of life, largely depends on parental proximity and responsiveness. The first year is not about sleep consolidation, but about an infant growing and maximizing connections between nerve sites in its brain. Social contact and engagement not only during the day, but also throughout the night provides the neurological scaffolding for intelligence and such qualities as empathy, social and cognitive development and responses to stress, in other words: psychological and physiological resilience later in life. Babies' bodies are not designed to sleep alone or to be alone.

Apart from social and neurological aspects, there are anatomical aspects that influence the baby's safety while sleeping, such as the descent of the epiglottis, maturation of which takes place between 4 to 6 months (with peak incidence of SIDS between 3 to 5 months), and the use of pacifiers, pushing the tongue backwards and thereby creating a premature separation of the epiglottis/soft palate-connection.²⁰ Breastfeeding on demand, also during the night, increases chances of normal palatal and oral development, which is the best way to ensure that the oral cavity creates no obstacles for safe breathing and reduces the risk of OSA (Obstructive Sleep Apnea) that has potentially many and severe long term consequences. Dr. McKenna's team also found that bedsharing shortened the length of obstructive apneas in the deepest stage of sleep which from a clinical point of view may be advantageous.

There is a lot more to say about cosleeping in the form of bedding-in than the oversimplified statement: "It is dangerous, don't do it."²¹ (See also attachment for this article.)

Author and translator of 'Sleeping With Your Baby' hope that Dr. McKenna's book will contribute to more knowledge about what constitutes healthy development for babies and infants and about safe cosleeping practices, either through rooming-in or through bedding-in.

Sincerely,

Marianne Vanderveen-Kolkena IBCLC

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