

From the womb to the tree

Child rearing practices and beliefs among the Toraja of Sulawesi

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ABSTRACT¹

This article documents beliefs about pregnancy, birth, infant, and maternal health and infant death in Toraja, Sulawesi. We interviewed 42 mothers of babies between one week and six months old, a dozen traditional and contemporary midwives, the ritual specialist *to minaa* Tato' Dena', a physician and two traditional healers. We performed a cursory examination of the extent to which mothers and health professionals still adhere to the beliefs of *to dolo* (the ancestors or the people from before). Examples of rejected beliefs are that intercourse adversely affects breast milk and that it should await the end of the recommended two-year breastfeeding interval. While modern biomedical discourse plays a role in contemporary Toraja society, ancestral beliefs still guide practices related to the well-being of mothers and babies. Rather than total assimilation of contemporary beliefs, we discerned a dynamic interaction between medical discourse, common sense practices, and *aluk to dolo* proscriptions.

KEYWORDS

Aluk to dolo; Sudden Infant Death Syndrome (SIDS); *to minaa* Tato' Dena'; traditional and contemporary midwives; maternal and infant health; abortion; Toraja; ethnography; anthropology.

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“Toraja is a good place to study babies. Where else have babies who died before their teeth appeared been buried in the trunk of a *tarra'* (breadfruit) or kapok tree so that according to original *aluk to dolo* beliefs,² their souls could ascend to heaven directly” (Stanislaus Sandarupa)³

INTRODUCTION

The primary objective of this paper is to document beliefs about pregnancy, birth, infant and maternal health and behaviour as well as infant death. Our data enable us to perform a cursory examination of the extent to which around 2007 and 2008 mothers and health professionals still adhered to the beliefs of what they call *to dolo*, the ancestors or “the people from before”. This paper is the product of an interdisciplinary collaboration between a neuroscientist and two anthropologists.

Starting in 1972, I (the first author) have devoted my career as a neuroscientist at the University of Southern California in Los Angeles, to the study of Sudden Infant Death Syndrome (SIDS). The diagnosis of SIDS was adopted by the American Medical Association in 1972 and reflects the unexplained nature of an infant’s death, often during sleep. Despite thousands of investigations, the definitive aetiology remains a mystery. Some mothers in the US have been planting trees to commemorate their babies who died of SIDS. This provocative confluence between tree planting in the US and tree burial in Toraja sealed a collaboration with Stanislaus Sandarupa that had begun as an internet search. During frequent prior travels to Indonesia, I observed various rituals for infant births and deaths that, though interesting, were not germane to my study of SIDS. In retirement, I have revisited these ritual phenomena, thinking the documentation of these would be a compelling culmination of my research with babies. Being a neuroscientist, I searched for a collaborator trained in anthropology. I found this person in my co-author Stanislaus Sandarupa, who obtained his doctoral degree in linguistic anthropology from the University of Chicago and hailed from Toraja Indonesia.

Stanislaus Sandarupa’s unexpected death in January of 2016 threatened the dissemination of our rich findings about mothers and babies in Toraja. After his death, Aurora Donzelli, a linguistic anthropologist who has been doing ethnographic fieldwork in Toraja since the late 1990s, assisted me in the completion of this paper.

BABIES IN A LIVING TREE

In Toraja, besides the fear of loss, there is the fear of death at the wrong time.

² *Aluk to dolo* means the way of the ancestors. The term is currently used to refer to Toraja ancestral religion.

³ One of the reviewers alerted us to the fact that Professor Takashi Sugishima has observed infant tree burial in Ende, Flores, East Nusa Tenggara.

In order to understand this, it is necessary to grasp their concept of timely death. As is the case in a large part of Eastern Indonesia, Toraja is rich with an elaborate form of verbal art consisting of parallel couplets.⁴ The excerpt below, drawn from Stanislaus Sandarupa's corpus of ritual couplets, illustrates the concept of timely death.

1) *Lellengannamo kenna punti,*

'If it were a banana tree it was time to cut it down,'

2) *Allu'namo kenna loka situang daun*

'If it were a banana tree with its leaves, it had reached its time,'

3) *Mate matua induk,*

'It is to die as old as palm tree,'

4) *Ga'tu banu' karurung,*

'It is to die as old as the skin of palm tree,'

A timely death of the banana tree is to be cut after it has produced fruit, and for the palm tree when it has produced *ballo* (palm wine). In other words, one can have an ideal death if one has provided benefits to the community. The Toraja people select two features, softness associated with the banana tree and hardness with the palm tree. Strategies for coping with the death of an infant include creating a second womb inside the tree. Why a tree?

The body consists of bones, flesh, and fluids. In the case of an adult's death, Toraja believes that the former are hard (*batang rabuk*)⁵ and the latter two are soft or *borro*.⁶ When death occurs, these substances should be separated. Bodily fluids in a temporary coffin are buried in the ground. A tiny sapling of a *lamba'* tree (banyan tree) is planted on top and it will grow because it feeds on the body fluid. The mature tree in turn attracts water that will ultimately provide for irrigation and drinking water for the community. This symbolizes an ideal death.

Because a baby before its teeth have come through is very malleable, its entire body is considered soft. By burying the baby in a living tree, the baby will become one with the tree and this second womb will allow its growing into hardness, a symbol of perfection. When the tree dies, a timely death has been achieved.

TATO' DENA' AND RITUALS OF THE EAST AND THE WEST

As a ritual specialist in *aluk to dolo*, the *to minaa* officiates in rituals of the East or Rising Sun.⁷ The elder, *Tato' Dena'*, is the quintessential *to minaa*,

⁴ On parallel speech, see also Fox (2006, the first edition in 1988), to speak in pairs. This resonates with many anthropological studies of death. On the idea of a good and timely death among the Yolmo (Nepal), see Robert Desjarlais (2016: 21).

⁵ Bones or the hard remains of a corpse.

⁶ Bodily liquids from a decomposing corpse.

⁷ *To minaa* 'the wise person', the term for ritual specialists; *to minaa* has also been referred to

and compared to younger ritual officiants whose speeches and rhetoric display beautiful poetic language, *to minaa* Tato' Dena' is the consummate speaker for *aluk rampe matallo* (ritual of the rising sun) because his discourse is based on depth of knowledge.⁸ Tato' Dena''s memory is the repository of many traditional beliefs. He is not just a ritual specialist; he is the mediator between the people and heaven as well. He represents one of the last articulate spokesmen for the *aluk to dolo* religion, into which many spheres of life such as law, science, politics, family, birth and death, and cultural rituals are interwoven.

Not surprisingly, numerous anthropologists have consulted *to minaa* Tato' Dena' (Figure 1). Publication of their findings has fostered a discourse among anthropologists, citizens and civic leaders in Toraja. In turn, the dialogue between him and his interlocutors has shaped his articulation of an oral history and he himself has grown in stature and authority locally and internationally.⁹



Figure 1. Ritual Specialist *to minaa* Tato' Dena' (photograph by the first author, 2007).

Our meetings with *to minaa* Tato' Dena' between 2006 and 2011 took place on the verandah of his *tongkonan* (ancestral house). Past the halfway mark of an interview, he would typically send out one of his sons to obtain

as 'he who ponders' (Hetty Nooy-Palm 1979).

⁸ *Aluk rampe matallo* is the 'ritual of the rising sun' and *aluk rampe matampu'* is the 'ritual of the setting sun'. In spite of their names, these rituals are not necessarily performed at dawn or dusk, respectively. Their names refer more generally to Toraja cosmological space and to the meanings associated with certain directions, namely northeast (associated with life rituals) and southwest (associated with death). Life-related rituals are also called *rambu tuka* 'smoke ascending'; while mortuary ones are also known as *rambu solo'* 'smoke descending' rituals.

⁹ See Eric Crystal (1974, 1976), Tsintjilonis (1997, 1999, 2004), Aurora Donzelli (2007, 2013), Roxana Waterson (2009).

palm wine. Comparing his responses across five years, we discovered that consistency tended to be the norm. Nonetheless, his thoughts evolved on some occasions as highlighted below. The findings reported here make yet another contribution to preserving elements of *aluk to dolo* as they relate to mothers and infants. One additional goal is the exploration of the influence of modern biomedical discourse on childrearing practices based on *aluk to dolo* beliefs. To demonstrate this we compared narratives from *to minaa* Tato' Dena's with narratives we obtained from traditional and medically trained midwives (*to ma' pakianak* and *bidan*, respectively), and from mothers.

A century-long process of Christianization eroded life-related rituals in Toraja (see Toby Alice Volkman 1985; Elisabeth Coville 1988; Terance Bigalke 2005; Roxana Waterson 2009; Aurora Donzelli 2013). As clearly pointed out by Stanislaus Sandarupa (1984) *rambu tuka* ('smoke ascending' rituals) have been overshadowed by *rambu solo* ('smoke descending' rituals).¹⁰ In his writings (1984, 1996, 2004), Stanislaus Sandarupa bemoaned the fact that the balance between life and death rituals has evaporated to the point that people no longer recognize some of the *rambu tuka* rituals. As eloquently described by Volkman (1985), this has produced hypertrophy of *aluk to mate* (funerary rites).¹¹

In a later edition of his book (1996), Stanislaus Sandarupa listed the seven rituals that form a complimentary union of opposites in the Eastern sphere (associated with life) and the Western sphere (associated with death). The first, *to lollo rara* the lowest level of funeral rites, is for babies that died from a miscarriage. It is a smoke descending ritual; its counterpart smoke ascending ritual is the *songan tallo*, *piong saki*, making offerings to deities such as eggs with rice cooked in a bamboo container. The seventh and highest mortuary ritual throughout Toraja is the *rapasan*. Its pair in the Eastern sphere is the *bua'* festival during which young girls are trained to become ritual specialists or *tumbang*.¹² Nowadays, this ritual is seldom performed—partially due to its expense.

When we asked Tato' Dena' about life rituals, he frequently gave us a list of the appropriate offerings as a function of social class. Upon being asked the location and timing of the ritual and how it was performed, he would provide a quick context, but it was as if he assumed that we would know the answers. In terms of location, it would typically be part of the *tongkonan* or its surrounding yard.¹³ In other words, unlike the ostentatious funerary

¹⁰ The former is also referred to as *aluk rampe matallo*, the sacrificial ritual of the East. North and East are associated with the Gods who are believed to be guardians of plants, domestic animals, and human life. These rituals begin in the morning when the sun rises. One important one is the marriage ritual.

¹¹ Toby Alice Volkman 1985.

¹² *Tumbang*, the young women or girls who fulfil a ritual role during the *bua'* *kasalle-feast*, an important ritual to promote the wellbeing of humans, animals, and crops (see Netty Nooy-Palm 1979).

¹³ Toraja have a quite pragmatic view of rituals that avoids symbolic and metaphoric interpretations. An observer should probably reject unique projections that could be valid in other contexts and cultures. Even so, one wonders whether the low status of mothers and infants anywhere in the world has contributed to Toraja forgetfulness about life rituals.

rituals, these mother-infant rituals seemed extremely modest and part of the ordinary life of the household.

METHODOLOGICAL ISSUES

When Stanislaus Sandarupa and I first met in 2006, I brought him a lengthy set of semi-structured questions that he immediately translated. Lembaga Ilmu Pengetahuan Indonesia and the Institutional Review Board of Children's Hospital Los Angeles had permitted us to use these questions while interviewing mothers of young babies.

We learned, as others had, that taking note of conditions on the ground required jettisoning some unexamined assumptions we had and adopting place-appropriate strategies of investigation. For instance, the personnel of the Public Health Department in Makale and, in later years, in Rantepao gave us their full cooperation; initially, they could only provide handwritten forms of births and maternal and infant causes of deaths. Even after these data were computerized, the sources of their information were deaths that occurred in three Toraja hospitals and in outlying areas where personnel of *puskesmas*¹⁴ could provide that information. Not all deaths were tabulated and, more importantly, the official number of births in Toraja seemed to be based on a conflation of: (1) actual births reported by the three hospitals, the existing *puskesmas*, and *posyandu*¹⁵ at the time; (2) estimates of unknown origin, perhaps population statistics; and (3) targets for deliveries in each *puskesmas*. Such numbers could not be used to establish an accurate rate of yearly births between 2006 and 2011.

In order to obtain more precise data in some areas, we carried out 450 reproductive histories; the complete results of which will be reported elsewhere.¹⁶ We learned from these histories that 82.6 percent of mothers in Ratte Talonge delivered at home, with the help of traditional midwives (*to ma' pakianak*) who were not typically queried. Even about 120 deliveries per year in *bidan* Maria's clinic close to Rantepao were not systematically counted. In remote Simbuang, as many as 98.8 percent of the mothers saw one of two *to ma' pakianak* in Pongbembe, *Ne' Rande* and *Ne' Tada*. In Tondok Kanan, an hour's hike from Pongbembe, there was no *to ma' pakianak* and mothers delivered with the assistance of family members and neighbours. Knowledge of these births was unlikely to reach the Public Health Department. Moreover, we were to discover that some *to ma' pakianak* such as *Ne' Tallo* Mariali prided herself on her independence and didn't keep records of deliveries for the Public Health Department; even *Tato' Dena'* declared that with one exception, he never took his children to the hospital but treated them with herbs such as *liapana mabusu* (white ginger), *bangle* (zingbeir cassummunar, also referred to as *lebih keras*,

¹⁴ An Indonesian acronymous for *Pusat Kesehatan Masyarakat* 'Community Health Centres'.

¹⁵ An Indonesian acronymous for *Pos Pelayanan Terpadu* 'Integrated Health Service Post', a free service from the health care system provided to pregnant women.

¹⁶ Toke Hoppenbrouwers et al. 2009.

a root stronger than ginger), and *kariango*.¹⁷ Only when his children caught dysentery did he take them to the hospital.

Since our proposed epidemiological study could not be carried out, we turned to an inductive strategy: interviews of 42 mothers who at the time were taking care of babies between birth and six months of age, the time that in Europe and the US most deaths from SIDS occur. This sample was drawn from a group of 240 mothers who had participated in a survey that will be discussed elsewhere. We had ample opportunity to interview *to minaa* Tato' Dena', and a dozen *to ma' pakianak* and *bidan*. We also spoke with an intersex healer (*to burake*) who we will call Swarita, with Pine, a healer in Pongbembe, Doctor Eddy, Chief of Lakipadada hospital, and *bidan* Teresa, who at the time was the woman in charge of implementing medical policy regarding the collaboration between *bidan* and *to ma' pakianak*.

Given that I was initially drawn to ceremonies for babies, some of the questions for our interlocutors focused on such rituals.¹⁸ I wondered whether mothers would feel comfortable when confronted with questions about their infants' deaths and concluded that an introduction to the study via sleep questions would probably be less threatening and thus yield more authentic responses when I brought up the topic of death.

One reason that SIDS still had a hold on me rests on the fact that the aetiology of SIDS remains a mystery. I had anticipated a medical answer to the mystery of SIDS during my 40-year career and hoped to contribute to that answer. Thus, the bulk of the questions we posed dealt with my quest for the aetiology of SIDS and mothers' beliefs about and their experience with their babies' sleep. My fellow sleep researcher, anthropologist Dr James McKenna from Notre Dame University offered a number of questions that dealt with sleep issues from the mothers' point of view, such as what mothers thought was optimal sleep during pregnancy and after the baby was born, or, whether there existed any kind of sleep to worry about for the baby?¹⁹

Early on, we had established that with few exceptions health professionals in Indonesia at large were not familiar with the diagnosis of SIDS. The question "Do you know of healthy babies not waking up from sleep?" was one way we tried to ascertain whether mothers and midwives knew about SIDS. It became clear immediately that it was not the right question. "No, all healthy babies wake up," or, "Not in this village, but perhaps in a neighbouring hamlet," *to ma' pakianak* Ne' Desi answered while she pointed in the distance.

¹⁷ *Kariango* 'sweet flag' or *acorus calamus*, a root similar to ginger, used to protect babies from *batitong* or bad spirits. Ne' Tallo used a mixture of these three to help expel the placenta. Without the white ginger, she and Tato' Dena' used the mixture to massage babies if stomach pains were suspected.

¹⁸ Lauren Dundes' book *The manner born, birth rites in cross-cultural perspective* (2003) has a wealth of information and Carol Laderman's *Wives and midwives; Childbirth and nutrition in rural Malaysia* (1987) constituted a source for potential questions for *to ma' pakianak* and *bidan*. Doug Hollan and Jane Wellenkamp devoted three chapters to mothers and babies in their book *The thread of life* (1996).

¹⁹ Lane E. Volpe, Helen L. Ball, and James McKenna 2013.

This was such a uniform response that we began to suspect that we should be looking for a condition or illness known to them that to us might seem to be a masquerade for SIDS. I developed the question: "Is there any illness or condition that you fear most for your baby?" and this turned out to be quite revealing. Almost every mother answered *mata tinggi*.²⁰

There was one other item in which we were off in our choice of words, albeit less consequential. As a means of targeting age, we included in our question the "naming ritual", which occurs around four months of age after teething has begun. "How did your infant's sleep change after the baby was named?" Virtually all mothers said: "Not at all", because unlike us, they had not associated age with the naming ritual.

The book *Death without weeping* by Nancy Scheper-Hughes (1993) led to the question whether in Toraja mothers would identify newborns who stood little chance of survival and, as among Brazil's poorest, would refrain from vigorously nurturing them toward growth. Although not enforced rigorously as in China, the Indonesian edict that limited families to two children may have emboldened parents to sacrifice the most vulnerable infants, who were likely to die anyway, such as preterm infants or babies with congenital anomalies such as Down syndrome.²¹

In the interviews with mothers, special attention was given to answers that began with "according to the people from before", implying the ancestors, followed by evidence that the counsel in question was heeded or rejected. We asked *to ma' pakianak* and *bidan* about their role with mothers before, during, and after pregnancy. Questions for *to minaa* Tato' Dena' were wide ranging and, depending on what we discovered, adjusted across the years to obtain clarifications and elaborations. His answers have been sorted into categories that reflect the sequential stages of conception, pregnancy, labour, and delivery up to weaning the infant from the breast. We also include responses from *to burake* Swarita, who is not only a healer, but also a *ma tiro tiro*, a person who can foresee the future.²² In order to temper a bias toward glorification, we explored abortion, a darker and more controversial issue about which Swarita could speak.

We interviewed mothers and health professionals throughout Toraja and made an effort to include individuals from several educational backgrounds

²⁰ Literally 'high eyes'. According to Dr Eddy, Chief of Lakipadada Hospital, the term refers to febrile seizures that may affect infants and young children. *Mata tinggi* is one of the most feared illnesses. Children who survive it allegedly develop special perceptual and psychic abilities and become able to see spirits and ghosts. Over the years, we examined the beliefs and knowledge about *mata tinggi* and have presented this in two separate papers, one in the neuroscience literature (Hoppenbrouwers 2014), another one forthcoming. For the present paper, the deductive method was replaced with an inductive strategy and we feel that change helped snatch our effort from defeat.

²¹ Among babies who died of SIDS in the United States, an occasional baby has been murdered. In rural Mexico, infanticide was discovered although the death is attributed to witches that surreptitiously enter at night and kill the baby. See also Mohit Sahni et al. 2008.

²² Swarita was raised in the *to dolo* religion but converted to Islam as an adult.

and class strata.²³ The young men we trained to obtain an initial survey all possessed motorcycles and they fanned out toward their own family villages where they knew mothers with young babies. The resulting 240-woman sample remained a convenience sample with a reasonable representation of all-educational and class levels. The findings presented here pertain to the 42 individuals we interviewed in depth; we cannot make any claims for the universality of the answers across Toraja.

ETHNOGRAPHIC CONTEXT

Toraja is a stratified society in which noble men have reigned for hundreds of years. Their wealth is concentrated and evident in their *tongkonans*, the amply decorated ancestral houses that stand regally in the countryside.²⁴ Minor nobles aspired to match their wealth and commoners performed their work – mostly agriculture. At one time slavery was common. Coffee and cacao are the main crops besides rice, but individual farmers also raise cassava, corn, taro, beans, and peanuts for private use.

According to publications of the Biro Statistik (2007) only about 3% of the Toraja population continues to adhere to *aluk to dolo*. However, as of 2008 in remote Simbuang, where we collected data, more than 85% of the inhabitants still adhered to the religion of the ancestors, according to Mr Pallinggi, the chief of Pongbembe who had converted to Christianity only in 1980.

Simbuang, although located in Tana Toraja, has always been different according to historians. A class system has largely been absent. People have practiced *si saro sang tondok*, a work exchange system where neighbours rely on each other for the cultivation of the land, preparation of the soil for planting, removing rocks from rice paddy fields, harvesting the rice, and irrigation. Cooperation for the larger good of the community dominated their *adat*.²⁵

Neighbours also helped protect one another. These isolated settlements were once vulnerable to invasions from the Bugis of the coastal lowlands. In Simbuang, the houses in the hamlets are built close together and the rice barns that ordinarily sit opposite the traditional houses are spread randomly so as to confuse the enemy of yore. Entry doors to their houses are still not much larger than a dog door (Figure 2) so that when an enemy tried to enter, the inhabitants presumably could decapitate him swiftly.²⁶

²³ 23 Mothers ranged in age from 18 to 37. The majority (58%) carried the rank of *biasa* (working class), 33% were *menengah* (middle class), and 9% *bangsawan* (noble class).

²⁴ See Kis-Jovak 1988.

²⁵ Adams R. L. 2001.

²⁶ Harry Wilcox (1949: 264) also provided a reference to the small doors in the highlands of Simbuang.



Figure 2. A small entry door in *Tongkonan*, Pongbembe, Simbuang (photograph by the first author, 2008).

“I’ll show you unspoiled and beautiful Simbuang”, Stanislaus Sandarupa promised me. Our journey in a Kia began in Makassar, the capital of Sulawesi. We drove via Pare-Pare to the village of Nozu, a twelve-hour trip. A number of men gathered at some *warung* (roadside vendor), looked under our car and warned that the road ahead would be impassable for us. Stanislaus Sandarupa knew that men feared to drive at night on that steep, mud-filled trail strewn with boulders. I learned later that they were afraid, not because it was difficult, but because rumour had it that their penises might shrink if evil spirits accosted them on the way. So, we were lucky to find a driver and a four-wheel-drive vehicle to bring us to the very basic inn at the beginning of our hike.

The next morning, we set out on foot early and followed a trail through rice paddies that blanket the hills. At nearly 70 years old, I could still do this hike. We needed to cross the river Nozu that, after the monsoons ended, could be negotiated by wading through it. A few women sitting behind their long looms were weaving the traditional ultra-fine cotton cloths that will be made into dresses for weddings and funerals (Figure 3). In the early afternoon, we reached Chief Pallinggi’s stilt house where we would stay for four days.



Figure 3. Weaver of traditional material in Pongbembe (photograph by the first author, 2008).

As an anthropologist, Stanislauss Sandarupa had spent a number of seasons in Pongbembe to document how people live in this remote area. He took me on a hike to one of the highest dwellings from where the entire countryside can be seen. The foreground of the view, interrupted occasionally by a scarecrow, was made up of bright green rice paddies where plants gently waved in the breeze. In the far-distance, craggy mountains rose, still covered with forests, though there was some evidence of slash and burn activity. Small hamlets with no more than 20-40 families dotted the mountainside.

In other parts of Toraja, when people die they are considered sick and their bodies are wrapped in cloths and put in a cylinder in the house. Families tend to these bodies, sometimes for years. According to Stanislaus Sandarupa, in these highland villages, the body of the deceased is crushed and the body fluids separated from the bones. The latter are kept, as elsewhere in Toraja, while the fluids are left to drip into the soil. We wandered past the place where the fluids are spread out, a lush green area. It is said that these fluids attract ground water and springs arise when *lamba'* seedlings are planted in the vicinity. This age-old mini forest leading to the entry of Pongbembe had many mature, sacred *tabang*²⁷ plants while water trickled down a stone wall (Figure 4).

²⁷ *Cordylinelaua terminalis*, a plant believed to be sacred for its healing properties in Toraja.



Figure 4. Location at the entrance of hamlet Pongbembe where body fluids from the deceased are dripped into the soil. Vegetation is promoted as trees and the colourful *Tabang* plants testify (photograph by the first author, 2008).

DREAMS, SPIRITS, AND GHOSTS

In our Toraja research, dreams came up in several contexts. We will first discuss pregnant mothers' dreams that have a predictive quality and the dreams that mothers and others presume the babies have. In speaking of dreams during pregnancy, *to minaa* Tato' Dena' told us, "A dream may pronounce on the future. For instance, if a pregnant woman dreams of catching birds: if the bird is a male, she will have a boy; if it is a female bird, the baby will be a female. If in the dream, another bird flies by and snatches the first one, the baby will die."

He also spoke of *batitong*²⁸ that try to enter a mother and as a result she has a bad dream or a *kamorokan* (stomach ache) produced by the *batitong* trying to get a taste of blood.²⁹ According to *to minaa* Tato' Dena', her husband should be right next to her so that he can awaken and re-assure her. Rituals must accompany good and bad dreams. The sacrificial animals are chicken, pig, and buffalo. This ritual is often performed at birth as well.

²⁸ *Batitong* are half-human-half-ghost creatures, similar to vampires. They can fly and walk, and sometimes will kill and eat humans. They are not really spirits, but humans who got sick. They generally behave normally, but in fact are evil. Two signs that help identify *batitong* are darkness around their eyes from sleep deprivation and/or the fact that they have at the corners of their mouths saliva that never dries or cankers that do not heal.

²⁹ The *batitong*, before killing a victim by drinking all the blood, would test it first to see if he likes it; this test leaves one with bruises and a stomach ache called *kamorokan*.

In the early 1960s, dreams became a legitimate topic in the neuroscience community when rapid eye movement (REM) sleep was discovered first in babies and later in adults.³⁰ Awakened from sleep, adult respondents were more likely to report dreams in that stage of sleep compared to quiet or slow wave sleep (SWS).³¹ I started my career in a sleep laboratory where we performed studies of pregnant women and recorded foetal movements simultaneously. We were the first to discover that the 90 to 110 minute REM-SWS sleep cycle in mothers had its counterpart in a faster, 60-minute REM-SWS sleep rhythm in the foetus. Our question, “does the baby dream?” was inspired by this discovery.³²

To minaa Tato’ Dena’ brought us to *Ne’ Tallo* Mariali, a *to ma’ pakianak* who still adheres to *aluk to dolo*. In the past, he had known her mother who was, like *Ne’ Tallo*, a midwife and healer. Not surprisingly, our interview with her echoes in some respect the teachings of Tato’ Dena’. *To minaa* Tato’ Dena’ and *Ne’ Tallo* were absolutely certain that babies dream. This question elicited interesting responses from our mother interlocutors, but first we should discuss the role of the placenta and its spirit.

In Toraja, the placenta is considered the sibling of the foetus. After birth, it is treated with great respect and it is preferably one of the grandfathers who buries the placenta in the southeast corner of the ancestral home. It marks the location to return to for every Toraja, no matter where they go in the world. In the womb, the placenta is considered the foetal “pair”. After birth, mothers imagine that babies play and interact with their placentas and, like all children, sometimes fight. To the question “Does your baby sometimes have trouble falling asleep?” One mother answered: “When one night David was restless I thought he was looking for his pair.” To the question whether the baby sometimes lies awake at night, many mothers replied affirmatively, especially between 1:00 AM and 5:00 AM. “The baby plays alone or with the placenta, makes noises, sucks her thumb, looks at the ceiling.” Another mother said: “When I talk to him he is happy and smiles. It’s good that he plays when I’m sleeping.” Or, “she plays during or after breastfeeding. One time the baby didn’t sleep but just played—it is part of normal growth and only bad if it is excessive.” About another boy his mother said: “He smiles when he is playing with the placenta. When he smiles he is winning, when he cries he has just lost.” “When he wakes up between 4:30 AM and 5:00 AM, he will get his wishes fulfilled when he grows up.”

Does the baby dream? “I don’t know but when she smiles she plays with the placenta and that is probably a dream.” Several mothers echoed this statement. “If he plays with the placenta, perhaps this is a dream.” Or, “she never dreams because she is so pure—old people who dream can be

³⁰ During this phase of sleep characterized by low voltage, fast EEG waves, elaborate dreams are often reported.

³¹ Portion of sleep characterized by high voltage slow EEG waves. Dreams tend to be absent and if they are reported during this phase of sleep, they are short and fragmented.

³² H.M.B. Serman and Toke Hoppenbrouwers 1971.

contaminated by Satan (*sanbara*). That can't be true for a baby." This same mother said: "When she smiles at night she is playing with the placenta.³³ They love each other." Another mother added: "When the baby feels tense, she may have been fighting and was defeated by the placenta. That's when I kiss the baby's forehead." Or, "The baby activates his brain which makes for clever people. It's not so great when it lasts too long because Mom can't sleep." "The ancestors say that playing with the *sanbara* and the placenta is not a dream," according to another mother.³⁴

When asked the baby dream question, *Nenek Desi* who is in her nineties, answered as follows: "If the baby laughs, smiles, or cries during sleep, perhaps then the baby is dreaming." According to this *to ma' pakianak*, the baby is connected to the placenta after the placenta is buried. "If the baby cries, the placenta 'wins' in the interplay. If the baby smiles and laughs, the baby 'wins'."³⁵ Thus, this midwife confirmed the belief that the mothers had expressed.

Traditional or contemporary midwives followed dream prescriptions when they chose midwifery as their profession. When we talked with a *to ma' pakianak* or *bidan* we often began by asking her how she saw herself. Maria Kuta, *Ne' Desi*, *Ne' Uru* and *Ne' Bassang* were believed to be in their eighties and nineties when we talked with them. Maria Kuta told us she derived her expertise from God, and was taught by her mother. She dreamt of a trembling, sick man with skin problems. Another white-haired man asked her to get the leaves that could cure that man. The spirit did not tell her the disease the man suffered. When she bore a child in 1953, she began looking for leaves and herbs that could cure diseases and from that time on, she became a midwife. Maria Kuta, who has since died, was of a generation who did not know their ages. When asked when she was born, she answered in 1921 or 1923, when the church in Rantepao was built.

Indo' Minggu, also known as Lidya, is in her early fifties and lives in Salaputti, about an hour drive from Makale. She is the sister of the locally revered midwife *Indo' Tato'*, also known as *Indo' Butu*. According to our reproductive histories, *Indo' Tato'* had delivered at least 224 infants in the area where she lived. *Indo' Raba* was *Indo' Minggu's* and *Indo' Tato's* mother, so midwifery ran in the family. *Indo' Tato'* had trained her own daughter *Indo' Kappin*, whom we interviewed as well. *Indo' Minggu* saw a man with white

³³ The term *sanbara* was used by a number of our respondents: *Ne' Tallo Mariali* declared that everybody has their own deity who guards the individual; the *sanbara* is the spirit of the placenta. *To ma' pakianak* Maria Kuta referred to *sanbara*, the spirit inside the baby, as *satan* (not the placenta). In the case of *mata tinggi* this spirit gets startled, when the baby gets startled. One mother equated *satan* with *popok*, a flying version of a *batitong*. However, we could not find that term in other literature about Toraja.

³⁴ For this mother *to minaa Tato' Dena'* and *Ne' Tallo Mariali* deviate from the "ancestors". Alternatively, the mother who made that statement may have gotten the message wrong.

³⁵ Ample research has shown that babies grimace, twitch, smile and vocalize when they are in REM sleep. I have begun to wonder whether every mom accurately noticed whether her baby was awake or asleep. In dim light, some sleepy mothers might mistake grimaces and vocalization for wakefulness.

gloves in a dream and she opened her arms. Her skills come from her mother who died early but she remains open to dreams in which relevant skills may appear, or an angel who asks her to help other human beings.

Ne' Tallo Mariali declared that her expertise arrived in dreams also. A number of these women reported that they initially resisted the idea of becoming midwives but ultimately relented. *Ne'* Rande and *Ne'* Tada, two *to ma' pakianak* in Simbuang adhere to *aluk to dolo*. *Ne'* Rande refused to become a midwife when her dying mother asked her but later she became interested. She never went to school but as a child, she had followed her mother when the latter visited pregnant women at home.

Finally, *bidan* Maria and *bidan* Ribka were in their fifties and owned their own clinics. *Bidan* Juliana and *bidan* Chalinglin, in their twenties, worked at the *puskesmas* in Salaputti. *Bidan* Maria, who never uses herbs and leaves, began her nursing training after a dream in which she was ordered to cure the sick. In the dream, she entered a cave where sick people were congregated. She managed to cure them all. She is Catholic and relies on God. *To burake* Swarita is in her fifties and though she was raised in the religion of the ancestors she had, according to Tato Dena's son Hedrik, converted to Islam as an adult.

FEARS CONCERNING INFANTS' WELLBEING

We discovered that virtually all our mothers most feared one condition for their infants: *mata tinggi*. According to Dr Eddy, Chief of LakiPadada Hospital in Makale, the provincial capital of Toraja, these are febrile seizures. In retrospect, mothers may have also referred to more serious convulsions that could have accompanied death.³⁶ When asked whether they were ever afraid that in bed they would crush the baby, almost half of the mothers answered affirmatively. A third of these mothers were primarily concerned that other people in bed would come too close. By cradling they protect the baby from encroachment by father and siblings. These sleeping arrangements would be frowned upon in the United States where there continues to be a debate about bed sharing.

The ancestors said: "sweating is healthy and needed," one mother explained. "I don't know if it is good; not sweating is *not* good." The remaining mothers all expressed that sweating signals good health. "A sweating baby makes me happy." "It is an indication that the baby is getting rid of some bad stuff." They were adamant about this point but a bit more confused about snoring. One woman declared it means sound sleep according to the ancestors, an idea echoed by a dozen mothers. One mentioned that snoring predicted that in the future the child would be good at raising pigs. Three others, however, thought it indicated something wrong with the baby's neck, a more contemporary idea. A number of mothers did not know how to answer this question, but three mothers had heard their babies snore. I suspect most women in the US would not be able to answer this question. In the US, one tends to worry about snoring only in older children because it

³⁶ Hoppenbrouwers 2014.

could be a precursor or sign of obstructive sleep apnoea, which in the long run could produce chronic lack of oxygen and severe sleep disturbances. This is an example where at least some ancestors had conveyed an opinion about a feature of infant sleep that tended to re-assure mothers.³⁷

According to several respondents, ancestors believed that crying makes the baby stronger. The majority of mothers echoed this idea: "I'll let him cry a little to make his body stronger (more likely during the morning)." However, they seemed hesitant to follow this injunction to the extreme. A few gave their reasons: "It can make the baby's throat dry" or "It is dangerous because the tongue will get stuck in the throat or perhaps the umbilical stump may start bulging. It's disturbing in particular for the father" or, "I feel sorry for my baby." *Ne' Tallo* told us that "babies who cry all the time may be disturbed by the tutelary spirit."³⁸ Not one mother used a pacifier as a remedy. Women chose to breast feed, walk around with the baby, sing and massage the baby. They were measured in their willingness to let babies soothe themselves.

The question, "Is there anything to worry about when the baby sleeps?" brought up some common sense practices. When blankets cover the baby's head and face or when there is a risk the baby could fall off the bed or out of a sling. Yet this question also elicited some responses that stem from "the people from before": "You change the baby's sleeping position because you don't want to see her head flattened or getting out of shape. A round head signifies the baby is clever." "Bad spirits do not come in the afternoon. When they come around 9:00 PM, they produce sounds that you can hear. If the baby cries a lot, *batitong* appear at night. *Batitong* can suck the baby's blood and cause it to die. Don't place the bed close to the window because bad spirits may snatch the baby." "Ginger pinned to clothes wards off bad spirits, or you can place a knife under the mattress." "Bad spirits walk like people or they fly." "Bad spirits come early in the morning, they eat the baby." A contemporary version of this is: "There is nothing to worry about; before going to bed you have to pray so that bad spirits do not come."

Some restlessness is normal, for instance when the baby gets wet. Frequent arousals and restless sleep, however, caused mothers anxiety because according to many mothers these may indicate that the baby is sick. It could, for instance, signify a stomachache to be treated with herbs such as *bangle*. Live eel rolled over the baby's body starting at the breast and going toward the feet, was one grandma's suggestion to calm a baby, a strategy used by a mother and grandfather as well.³⁹ It helps for stomach aches. *Ne' Tallo* advised mothers to hang a pineapple in the room when the baby is restless. Difficulty

³⁷ Nicholas Fitzgerald and Dominic Fitzgerald (2013).

³⁸ *Ampu padang* 'owner of the land'. The term is used in reference to the spirit of a place, which is generally believed to be sacred and taboo. At times, the *Ampu padang* spirit can take the form of animals or tall humans, which are not visible to everyone. See also Hetty Nooy-Palm 1979, who translates the term as the spirit of the earth.

³⁹ Hetty Nooy-Palm (1979: 126). Eels typically provide blessings to children and in turn, eel spirits receive blessings.

falling asleep was, according to the old people, a sign of good health, one mother told us.

We asked to what extent grandmothers were involved in helping with the baby. For every grandmother who was involved, there was at least one who lived far away, had died or was uninvolved. Eight mothers explicitly stated that a grandmother looked after the baby when Mom had to go to market; occasionally they helped with medical advice. Mothers were reluctant to leave young babies for whatever reason, and they preferred to be within earshot working around the house and the yard.

Most mothers favoured awakening their babies if they did not spontaneously awaken for feeding. *Matuktu* refers to a child who can't walk, a disability that is feared for a baby who shows excessive sleepiness. Thus, you sometimes should awaken the sleeping baby, according to mother Rita. However, mothers had their reservations about sleep interruptions. Both mothers and midwives agreed that startling babies could induce the most feared condition of *mata tinggi*, which as mentioned earlier, consists of febrile seizures or convulsions. The baby could also lose its spirit when sleep is interrupted. *Bidan* Ribka and Dr Eddy indicated that the incidence of *mata tinggi* had diminished dramatically, and it would currently be treated with diazepam. Mothers' anxiety belied that statement, however, and they as well as the *to ma' pakianak* we spoke with had a variety of ideas about causes and treatments that included giving babies coffee, applying pepper to the forehead and giving the baby water in which the father's underwear had been boiled.⁴⁰

Another question dealt with the food mothers ate to promote breast milk or delivery. In the case of the former, virtually everybody mentioned vegetables with cassava leaves and green beans leading the list. Papaya was the favourite fruit. Only six women out of 42 consumed additional fish or meat for this purpose. Of all the *to ma' pakianak*, *Ne' Tallo* Mariala and Maria Kuta were most likely to use herbs when they assisted women. For instance, they both used ginger root for morning sickness. *Ne' Tallo* also used this herb as well as *samba* (tamarind) to get the placenta out. Both massaged mothers with coconut oil and shallots or red onions (*lassuna mararang*) to get the foetus in the optimal position for delivery. *Daun Waru* (yellow hibiscus) has that same function. Maria Kuta used a paste made of betel nut (*bolu*) leaves to massage the mother around the birth canal to make it slippery and thus ease expulsion.

TORAJA IDEAS ABOUT CONCEPTION, PREGNANCY, DELIVERY, AND DEATH

Through a series of interviews with *to minaa* Tato' Dena' and ethnographic observations, we were able to gather the following information regarding Toraja beliefs about conception, reproduction, delivery, and infant death.

Conception

To minaa Tato' Dena''s wife had trouble for two years getting pregnant with

⁴⁰ A detailed description of this issue is presented in a forthcoming paper.

their first child. It was as if she were barren. The *to ma' pakianak* advised them to make a potion with betel leaves and spread it over the woman's forehead; the prospective mother also needed to chew it. She became pregnant and once their first baby was born the *to ma' pakianak* suggested Tato Dena perform a simple ritual with offering of eggs, chicken, and rice in a bamboo container.

Barrenness in *aluk to dolo* means the gods fail to bless the marriage with children. Men or women can be barren. Sometimes there are cures. For instance, a woman has no children because she is selective and does not accept interested men as mates. When a couple has no children, how do we know who is responsible? "We can know from a divorce. After a man marries several times and does not get children, it confirms his barrenness. We have known that for a long time," *to minaa* Tato' Dena' answered. Besides, "men have fluid or thick semen. The fluid kind is not conducive to creating babies. A womb can be compared to a betel nut or a coconut. Sometimes there is no meat inside" (in this case eggs). Barrenness is a cause for divorce in Toraja according to Tato' Dena'. Here is a concrete example: Puang Marimbun who couldn't get pregnant encouraged her husband to find another woman with whom he could get children.

In addition, in *aluk to dolo* barrenness is related to the birth date of the mother. Tato' Dena' pointed to a calendar on his verandah wall. If born when the moon and the sun travel together in the sky during the day, she will not find a husband and probably will not have a child, even if she is beautiful. But these same astronomical conditions are good for a man. He will be a smart person, a wealthy and brave man.

Regarding braveness or the lack thereof, Tato' Dena' volunteered: "Husbands who suck their wives' breasts are not brave but have become cowards." Presumably to make up, if the man is interested in marrying this woman, he must give her "seven" kisses at the first intercourse, on the head (1), cheeks (2), breasts (2), navel (1), and penetration (1). "These seven kisses symbolize the complete love for the woman. If he can do that, the woman will always follow his orders. This strategy is only valid during the first intercourse," Tato' Dena' learned from the old people. During our discussion with *to ma' pakianak* Maria Kuta, *bidan* Ribke suggested it would be good for the father to suck the nipple when the milk flow was weak. Maria showed surprise bordering on indignation: "No, fathers cannot suck their wives' nipples." The reason for this taboo is unclear, but it jives with *to minaa* Tato' Dena''s suggestion.

We have encountered the number seven in the matter of kisses. It will appear again in the seven elements that accompany the burial of the placenta (see Figure 5). According to Tato' Dena' seven is an odd number that symbolizes life. He also told us that when a woman is seven months pregnant, she is extremely vulnerable to *batitong* and *rondongan*.⁴¹ Tato' Dena' referred

⁴¹ Sometimes the foetus has a pair in the form of centipedes (eel, crocodile, snake, or fish). It is called a *rondongan*. These centipedes cause difficulties during delivery, for instance death or a deformed foetus.

to a myth about *adat* rules when he pointed out the significance of the number 7, but otherwise did not elaborate.⁴²

Pregnancy

Early in pregnancy, the mother is asked to go to the *to ma' pakianak*. *Mabuk Mabanda* means 'she is heavy'. Heaviness is also associated with the notion of heat (*malassu*). "That's why we get warm when we sleep next to her," Tato' Dena' pointed out.

The pregnant woman is vulnerable to magic and disease. The ancestors said "Don't go to the river or rice field when you are pregnant because a *rondongan* can get into the womb." It is difficult for a traditional healer to cure this disease, according to Tato' Dena'. A *rondongan* is associated with the tutelary spirit of the earth. Tato' Dena' gives the following example: when two men are interested in the same woman and one of them gets to marry her, the envious one may place black magic on her in the form of a *rondongan*. Also, normal human beings turn into centipedes or bad spirits. "Don't underestimate these," Tato' Dena' cautioned me, when I spoke of the unexpected death of infants in the US.⁴³

On a subsequent visit, we queried Tato' Dena' again. He explained: *rondongan* reside inside the womb.⁴⁴ They are caused by going to the river, to the puddles in the rice field, or to the well. Women should not go there while pregnant. These animals can penetrate the body. They come out of the womb at the same time as the baby, but you can't see them. This is caused/influenced by the tutelary spirit of the earth (*ampung padang*). "Is the *ampung padang* angry with the woman?" "No, definitely not. The *ampung padang* likes to be inside the body of the pregnant mother.⁴⁵ However, we know that this will make her sick. 'It's the law of nature.' Swimming in the river does that." Who controls this phenomenon? "It's a higher power, not a matter of one or two centipedes/animals." In addition, we must make sure the pregnant woman doesn't get sick due to the presence of evil creatures like *batitong* or *po'pok*.⁴⁶ The *to ma' pakianak* can help her with massage and herbs. "For earth spirits like *batitong*, babies in the womb are the very best food. Seven months is a particularly vulnerable time."

⁴² Hetty Nooy-Palm recites a myth when the "Foam of heaven", son of the first *to minaa* married Kembong Bura (Full of foam). In heaven, this couple had received from Puang Matua 7777 *adat* rules. A slave, Pong Pakalando, asked to help carry these rules to earth, found the package too heavy and decided to bring only 777 down (Nooy-Palm 1979: 138).

⁴³ One ritual is to separate the rice hull from the rice by shaking it in a circular way. This symbolizes that the child is separated from bad slugs, presumably centipedes. *Batitong*, *rondongan*, and the spirit of the landowner (*ampung padang*) seem to refer to evil or dangerous influences.

⁴⁴ This illustrates the consistency in the answers of *to minaa* Tato' Dena', mentioned earlier.

⁴⁵ The sexual allusion is rather striking.

⁴⁶ Another type of semi-human entity, known to feed off human blood, causing sickness and possibly death.

"A pregnant woman has many cravings. We should listen carefully to her and provide her with what she craves. If we don't fulfil her requests, her children may drool when they grow up. Often an egg yolk is given to the mother during pregnancy. She is encouraged to associate with beautiful, smart, and athletic men or women besides her husband, so that these characteristics will rub off on the foetus." During one of our latest visits, Tato' Dena' spoke about the genetic inheritance of traits. Angry parents beget angry babies, clever parents beget clever babies.

Delivery

"There are many *batitong* that smell blood; therefore, delivery can be quite dangerous. When mother is about to deliver, father and other men stay outside and make a fire to prevent *batitong* from disturbing the mother." With the delivery of their first baby, a daughter, Tato' Dena''s wife had a very hard time. She was in labour for three days. The grandmother, who had failed to observe the taboo of eating rice during a funeral, came to her daughter in labour and touched her hair. According to Tato' Dena', the grandmother had mixed life and death. "Half of the child was already in the grave." The *to ma' pakianak* advised the grandmother to go back to her village. Afterwards, the delivery went on smoothly.

Leaves of the kapok tree are used to massage a pregnant woman's birth canal. These same leaves help make the birth canal slippery. *Ne' Tallo*, in the presence of Tato' Dena', added that ancestors can stall the delivery. The problem can be resolved if the mother acknowledges a minor infraction such as quarrelling with a neighbour. To prevent excessive water from breaking, mothers must drink boiled rice water. *To ma' pakianak Neh Tallo* uses magic with this water to help the delivery along. While the delivery takes place inside the house, its exact location depends on a higher, superior power according to Tato' Dena'. "It becomes a matter of destiny. Only women are allowed inside the house, unless the midwife happens to be a man who can touch the baby's head for a blessing. The husband can come inside but other men must remain outside." After the delivery, the *to ma' pakianak* helps the mother to flatten her stomach with massage and tight clothes/bandages.

"When the mother delivers the baby, a ceremony is performed. Many people don't know this now," Tato' Dena' asserts. "The midwife usually advises us to use *betel* leaves. Twelve layers of *betel* leaves are held and passed down from the forehead of the mother to the belly and from the crown to the butt (three times). The woman must lie down during this ritual. When a woman has difficulty in labour, one does the same thing. The arteries in the leaves have to meet." (Tato' Dena' walks away to find some betel leaves that do and do not fulfil what he calls the "forking road" requirement). The correct leaves symbolize that the blessing comes from different directions. Half cooked rice in a bamboo container is desirable in the hope that babies never get sick. At the "seventh" night after birth, *to ma' pakianak Ne' Tallo* offers to massage the mother so that she can return to normal life.

Eating prescriptions depend on the mother's condition, according to Tato' Dena'. During and after delivery, the woman is cold. She cannot stay outside for long because she would get too cold, so her family urges her to stay inside. Drinking some palm wine is fine, but otherwise uncooked food is not recommended. Father is responsible for taking over the tasks mothers ordinarily perform: gathering wood and going to the well for water. Otherwise, she might become sick and run a fever. To prevent the woman from getting too hot she should eat fresh fruit such as papaya, banana, and mango. We urge her to eat a lot of vegetables especially to prevent *maruan* (fever). There are two kinds of fever: (1) when the mother can't open her eyes. This kind of fever is treated with betel leaves. (2) *Maruan kale* is associated with trembling of the whole body. The *to ma' pakianak* will massage her and she needs to eat pork and cooked food. After a massage, the mother must make an offering that consists of cooked rice in a bamboo container. Colostrum should not be given to the mother. It's not fresh milk, according to Tato' Dena'. A wet nurse is sometimes called in, especially with a twin when the mother may not have enough food for both babies. Feeding babies' masticated food is not common anymore. "After all, there is now rice powder," Tato' Dena' argued. *Indo' Kappin*, however, confessed she masticated food for her babies because that way they ate more.

In the olden times, people and their family felt blessed and lucky when a woman became pregnant. Unlike in Bali where pregnant or menstruating mothers may not enter the temple, in Toraja delivery is not considered dirty and neither is pregnancy. Purification is not performed or necessary. Some mothers, however, express and experience shame when they defecate or urinate while delivering, according to Tato' Dena'. The most important thing is to help the mother getting her womb, her insides, clean so that she is not smelly anymore. The contemporary availability of soap has helped in that respect.

Placenta

According to Tato' Dena', the placenta sucks nutrition from the mother; it is like "a leech that can return back into the womb. You have to make sure it stays out. If it re-enters the womb it can cause dangerous bleeding." *Ne' Tallo* wraps the placenta in a *sarong* and holds on to it so that it does not retract into the womb.

The placenta needs to be washed before it is placed in a bag and buried. *Ne' Tallo* knows that failure to wash the placenta influences the child's character in that he could be messy later. Ideally, a grandfather or the father buries the placenta. In 2007, Tato' Dena' told us that women are not allowed to bury the placenta but in 2011 he stated that they were allowed to do it, provided they knew how. Among our sample of mothers, there was only one grandmother who buried the placenta. However, *to ma' pakianak Indo' Minggu* told us that

she had buried many placentas. One proscription: Do not look at the placenta while you bury it; it contains material that causes blurring of the eyes.⁴⁷

The placenta is buried with a *kapipe* (a small bag woven of reeds) that contains yellow rice and *manik riri* (three tiny yellow beads) so that it will be quietly satisfied in its burial place under the house. The burial site is often set apart by stones or a small fence (Figure 5).⁴⁸



Figure 5. Burial location of the placenta (photograph by the first author, 2006).



Figure 6. The small plants (*Lolo daringing*, *rapa rapa*, *lolo rapang* and *lolo passake*) each with their roots are planted on the gravesite (photograph by the first author, 2009).

⁴⁷ See Jodi Selander 2011.

⁴⁸ *Kapipe* also used to bring rice for lunch to people working in the fields. In Figure 6 a large leaf labelled Lu-pang holds the small plants and their roots to be placed on the gravesite. The Lupang or *kapipe*, those four plants, a sliver of metal from an iron pot and three shiny yellow beads add up to the number *seven*, referred to in the text.

On two occasions several years apart, Tato' Dena' spoke about a way to stem bleeding in the uterus. In olden days, a specialist could stop bleeding from a strong placenta by giving the mother a drink of water and an element that the specialist failed to tell Tato' Dena'. To ma' pakianak Ne' Tallo and RK use herbs such as bitter cucumber leaves (*paria*). Indo' Minggu uses leaves of a cotton tree to stem bleeding; touching the nipple helps as well.

The cord is cut after the delivery of both the baby and the placenta. Those present chant "Hey, hey, hey" if it is a girl, or "Yo, yo, yo", for a boy. A noble-class girl is called *Lai'*, a commoner's boy is *Tato'*, and a noble-class boy is called *Laso'*. The baby is put on the windowsill and turned around three times, clockwise. This is done so that the baby won't startle even when there is lightening; startles can cause *mata tinggi*. Also, this is considered protection from *batitong*.

Tato' Dena' knows about the caul.⁴⁹ Supposedly, when this appears over a baby's head it shows that a mother had intercourse late in pregnancy, but he considers this not true. His view is that instead, mothers ate an excessive amount of uncooked food. Many babies come out very clean; that means mothers did not eat uncooked food. The presence of a caul has no further consequences for the baby. This statement contradicts the observations of several midwives (*Ne' Tada*, *bidan Maria*, *Ne' Rante*) who advise mothers to dry the caul and use it later in boiled water as medicine for fever. *Sappu* is the name Maria Kutu gave to a baby born in a caul.

Death

When a pregnant mother dies, measures are taken to prevent her from becoming an evil spirit that wanders in search of other mothers' babies. When she is buried in a stone grave, two eggs are placed in her hands or in her armpits that symbolize the baby she lost; she needs to avoid dropping these.

"Miscarriage is very frightening and dangerous; the spirit of the miscarriage, especially in case of abortion, travels to the edge of the world and the upper world of the Gods where it cannot reach *Puya*, the after world. God is mad," according to Tato' Dena'. "Animals will not grow and it is also dangerous for human beings if the spirit travels back to earth. Animals may suffer diseases because of this spirit of miscarriage."

Aborted tissue is placed in an empty coconut shell or another container that is buried. Guava leaves are part of the offering. Guava trees mark the transition to the upper world; perhaps they form a signpost. *Sillaku*, stillborns (older than *miskrams*), are buried on the southwest side of the house (Figure 7).⁵⁰

Babies who died before their teeth appeared were buried in a living tree such as a *kapok* or a *tarra'* (breadfruit) tree. One pig is sacrificed near the tree and then meat and sweet potatoes are cooked in a bamboo container. This is a ritual that seemed to have died in Toraja. However, to *minaa* Tato' Dena' and his daughter-in-law walked us to a tree not far from their respective

⁴⁹ Caul: part of the amnion sometimes covering the head of the baby at birth.

⁵⁰ *Miskram* is the term used for foetal death or spontaneous abortion before 20 weeks of age.

residences; he had buried his grandson in that tree only a few years before. It was the same tree in which he buried his own daughter decades ago (Figure 8).



Figure 7. Tato' Dena' shows Stanislaus Sandarupa the site where the urn of a stillborn was recently placed (photograph by the first author, 2007).



Figure 8. Baby tree in which Tato' Dena' buried his 3-months-old grandson just two years before. It is the same tree in which he buried his daughter decades before (photograph by the first author, 2007).

When the baby dies having teeth, a pig has to be sacrificed as well. At this age, the baby is buried in a stone grave, not a tree. The child is wrapped in white clothes; there is no coffin. Tato' Dena' sums it up: "Many kinds of trees for burial but no coffins for babies."

After teething

Ma ku'ku' or the hair cutting ritual takes place in the northeast of the yard. The place is called *pa persungan*, the place where they make offerings. This place varies among hamlets. In Balik, for instance, the place of offering is in the house. In the *ma ku'ku'* ritual, threaded bracelets are tied around the left arm, the neck, the belly, and the ankles, with the expectation that the baby will have a long life. These threads are meant to make the body strong. It is a taboo to take these threads off; they should come off spontaneously. If they fall off early, it is a symbol of a short life. In the case of middle class families, one chicken and one pig (with black and white spots) are offered; rich people are expected to sacrifice two pigs, one rooster that has red colour and white legs (*sella'*), plus one buffalo. It is a taboo not to sacrifice a pig at this haircutting ritual. In 2011, Tato' Dena' described a ritual for a transitional time in a child's life when he seemed to be talking about *ma ku'ku'*. In the end, he seems to say that the hair cutting ritual is not the essence of this ritual; it just coincides with this timing of the transition.

At the time of our visits, preterm infants weighing less than 2250 gram were typically not viable according to the two obstetricians in Makale. One of a preterm twins in our sample died early from respiratory problems. The question whether Toraja sometimes shorten the life of a vulnerable baby was uniformly answered negatively. These infants should be protected; many grow up to be smart and successful, *Ne' Tallo* tells us. *Indo' Kappin* considers these babies a blessing. Hair lips are the most common congenital anomaly. "A hair lip is the ditch where water flows." About a baby with deformed fingers, *Indo' Kappin* says: "the child will grip wealth in the future." Tato' Dena' and every *to ma' pakianak* were of one voice when it came to the absence of infanticide. However, to say that infanticide does not exist requires stronger evidence.

Weaning

To minaa Tato' Dena''s children enjoyed no ceremony for this occasion. A knife on the breast stops the milk of the pregnant woman, according to him. Several midwives offered some suggestions for getting one or two-year-olds to stop nursing. A betel nut or green onions on the nipple may accomplish it according to Pine and *to ma' pakianak* Maria Kuta. *Indo' Kappin* suggested bitter herbs such as *paria* (bitter gourd or *momordica charantia*) leaves on the breast, or better yet, bring the infant to the grandma who lives far away. *Ne' Rande* feels that by refusing the breast, the infant indicates she is ready to stop; in other words, children have some control over their micro-environment.

Resumption of intercourse

To minaa Tato' Dena' and every *to ma' pakianak* offered an opinion about this topic. Interviews with *to ma' pakianak* often took place among a bevy of listeners and the question elicited lively comments and often giggles. In the past, it was believed that the quality of breast milk was affected by intercourse and semen. Here is an example, similar to the value of *colostrum*, where many people have absorbed new teachings, including the seventy-year-old *to ma' pakianak* in Pongbembe. This was *to minaa* Tato' Dena''s comment: "During breast feeding there shouldn't be any sexual intercourse. It affects the milk that becomes unhealthy and thus affects the wellbeing and growth of the baby. Many mothers now become pregnant again a few months after birth. The best is to let the baby grow so that the older child can take care of the younger one." Unlike Tato' Dena', the *bidan* and all but one *to ma' pakianak* told us that intercourse does *not* negatively affect the breast milk.

To ma' pakianak Ne' Rande said she doesn't recommend intercourse after birth. "That's no good," a statement that met with obvious approval from the bystanders. "It may take years!" However, a mother can get pregnant when she is breastfeeding. "Breastfeeding, however, should stop when she gets pregnant." Ne' Tada in the same hamlet exclaimed: "It's up to the couple whether they want intercourse after the baby's birth. It may take up to one year!" However, she explicitly states that intercourse does not spoil the breast milk even though it makes it more acidic. "It's good that the baby nurses for a long time," she says to the hilarity of the mostly female onlookers.

Indo' Minggu, Maria Kuta, and Ne' Tallo stressed how infants should nurse for two-three years. The younger *bidan*, Juliana, in Ratte Talonge talked about 40 days after the baby's birth that intercourse can resume; she refers to the residual acute bleeding that should cause reticence immediately after birth. Juliana cautioned: "We cannot forbid it. However, there is bleeding inside."

Abortion

A large proportion of people in Toraja are Catholic (17%), Protestant (69%) or Muslim (10%) for whom abortions are anathema. Indeed, all the midwives we consulted were adamant about abortion that it was sin and they refused to assist. They advised the woman to continue with the pregnancy, even if she was not married.

Whispers about the opportunity for abortions guided us to an elderly *to ma' pakianak* (NB) and a specialist in abortions (RK) who volunteered their expertise. These interlocutors shared how they operated cautiously. Swarita said she was also frequently consulted.

We asked NB whether she knew how far along in her pregnancy a woman was. She touched the belly to establish how old the foetus was. When the belly was cool that indicated that the baby was dead. She talked about one of the women from the north who came to her and her belly felt cold and the baby was dead. She told this woman to go to the hospital. Do you ever help a woman who is pregnant but does not want to be pregnant? Damita gave a

long introduction to this question. She mentioned that there could be already many children in the family or the husband and wife were busy and wanted a longer interval between pregnancies. NB's prompt answer was that when the foetus is still very young in the blood stage, she would massage the mother with downward hand movements (*dirunggang*) and remove the foetus. But she never induced these removals after the third month of pregnancy. Her adult granddaughter interrupted to remind her grandmother that she sometimes gave a young pregnant woman juice of a very young pineapple to induce abortion. NB shushed her in Toraja, "We don't talk about that." When later I asked whether she used any substances to induce a miscarriage she answered "No", without mentioning the juice of the unripe pineapple.

RK had a dream when she was fifteen: An old man came and said: "our creatures have been eaten by animals. For that reason you make this ritual. Put three grains of rice and eggs on the ground, especially for the foetus that is three months old like the placenta." This ritual is for the mothers who had abortions and buried the foetus under the house. RK said she only performed abortions if foetuses were already dead and otherwise would make the mother sick. Foetuses attach to the wall of the uterus, and in order to disconnect them she massages the woman so that the foetus will be expelled. RK uses massage and her hands to establish the condition of the foetus. "If it is soft, it is dead and it smells." It's then that RK is willing to help. If the foetus is still alive, she urges the woman to continue pregnancy. However, she does provide some abortifacients: If the woman is already pregnant, she should drink herbal tea made from guava leaves and dark beer at 4:00 AM. Dark beer can also act as a birth control method when you drink it before and after intercourse.

In case of an older foetus that is still alive and healthy, she would rather have the mother commit suicide than take the foetus out. RK calls herself the mediator and the saviour, and when the mother has sinned, she needs to repent and confess. RK claims to have the blessing of a priest to help women as long as the condition of the foetus is poor. The concept of sin is rather foreign in Toraja. That RK brings this up is perhaps attributable to her impression that we as interviewers wanted to hear this as well as that she had sought the approval of a priest. Like *to minaa* Tato' Dena', RK talks about centipedes such as an eel without a head or tail or a lizard-like creature that she has encountered in the bloody stage of pregnancy.

Asked about abortion, Swarita mentions that she has seen many girls who are pregnant without being married. Many young girls from high school or university come for an abortion, typically when they are between three and five months pregnant. It is difficult to help them when they are five months pregnant. The optimal time to perform an abortion is when the foetus is two-three months; she uses various kinds of herbs. She massages the womb and urges the mother to take an upside down position. The skin of the iron tree or the heart of banana is made into a potion for the girls to drink. This has to happen three times during early pregnancy.

We have compiled a list of frequently used abortifacient herbs, drinks, and potions: Tea from *alang alang*, a herb that grows on the small dikes surrounding rice fields; *kelor* root from the horse radish tree; root and bark from *cempaka* (*frangipane*); lemon juice or juice from an unripe pineapple; *pallan* or castor oil (initiates labour); dark beer (interrupts menstrual cycle); *kapa* or bitter root, and tea from yellow *sepatu* (*hibiscus*).

THE RELATION BETWEEN *BIDAN* AND *TO MA' PAKIANAK*

When we spoke with *bidan*, we asked whether they collaborated with *to ma' pakianak* and vice versa. Given that the vast majority of mothers elected to be delivered by *to ma' pakianak*, two young *bidan* in Salaputti stressed how they appreciate collaborating with *to ma' pakianak*. At one time, *bidan* offered tools such as a scissor to *to ma' pakianak* in the hope that they would alert the *bidan* as soon as problems during delivery arose.

The main tools of the *to ma' pakianak* are massage and herbal medicines. By virtue of her experience, the *to ma' pakianak* can establish the age, the sex, and position of the foetus using her hands. *Bidans* are not allowed by law to change the foetal position, but they have learned to disentangle the cord if it is wrapped around the baby's neck. *To ma' pakianak* are very skilled at helping to position the baby optimally for delivery. By virtue of massage, they can create space in the womb so that a breech position can be reversed close to delivery time and the cord around the neck can be disentangled carefully. *Bidan*, however, are supposed to refer such women to a hospital. In addition, *bidan* cut the cord after the baby is delivered but before the placenta has been expelled. *To ma' pakianak* wait until after the placenta is expelled before they cut the cord.⁵¹ There are far fewer *bidan* than there are *to ma' pakianak* although their number, age, and experience must have changed dramatically since our last visit in 2011. Efforts are made to make *bidans* the sole birth assistants because they are better equipped to prevent infections. When complications arise, they will make hospital referrals.

An interview with *bidan* Teresa was revealing in that respect. We began the discussion by explaining that Stanislaus Sandarupa and I had the permission to study babies and mothers here in Toraja. We had gone to the Public Health Department in Makale, but we doubted the accuracy of the data. She agreed they were in all likelihood not accurate because of incomplete reporting from remote areas.

I mentioned that I had heard from *bidan* Maria close to Rantepao that she could not collaborate with *Ne' Uru*, a healer, yet the *bidan* in Rante Talonge, among them Juliana emphasized that they needed to collaborate with *to ma' pakianak*. *Bidan* Teresa mentioned that Maria was a special case because she let *Ne' Uru* do massage (in other words, too much) and the official *bidan* association had explicitly forbidden *bidan* Maria to work with this healer.

⁵¹ Early or late cord clamping has been part of the obstetrical debate for decades. A longer connection to the cord and maternal oxygen is considered optimal by many midwives across the world.

Bidan Dina in Makale had no such problem. Both Maria and Dina are in charge of private clinics. Teresa implied they needed to be regulated. "Under all circumstances, the *bidan* needs to be in charge."

I pointed out that at least 75% of the women are attended to by *to ma' pakianak*. Are these women now illegal? She vehemently said that they were not. "All the mothers that are coming to either *puskesmas* or *posyandu* are free to make their own choices."

We discussed how the switch from 75% *to ma' pakianak* to 75% *bidan* would take place, over how many years? She said the government is aiming for 90%. One program of subsidy for poor mothers is currently in place. Teresa felt optimistic, but together we recognized some of the factors that stood in the way of that switch to 90% *bidan*-assisted deliveries.⁵²

In the eyes of mothers, most *bidans* are young and relatively inexperienced. They work with a model that is foreign to mothers who prefer the immersion in the life of the family that *to ma' pakianak* provide. Women complained that *bidan* had cold hands, compared to the hot hands of the *to ma' pakianak*. Most *bidans* are not immersed in the life of the community. They dislike being far away from "home" in the villages (*desa*). Accommodations for the *bidan* in the *desa* are relatively primitive. Community chiefs are less likely to invest in the *bidan* program either in a real estate sense, in money or in other ways. They want the government to pay for these programs.

I pointed out that many *to ma' pakianak* were old and often had no heirs, so by attrition alone, the shift was inevitable albeit would be slow. Teresa was proud about the growing numbers. Besides, the *bidan* would gain experience and trust with increasing age and success as well.

Teresa mentioned one program in Southern Sulawesi that had been successful. Two thirds of the money for the delivery went to the *bidan*, and one third to the *to ma' pakianak* who brought a mother in for delivery. In other words, the *to ma' pakianak* received money as a sort of commission without assisting in or attending the delivery. Teresa felt this was the model for the future that rendered her optimistic. That program also left no doubt that the aim of the government is to bypass the *to ma' pakianak* entirely in the future. If the government were to be successful, wouldn't this cause another crisis: far more women would be identified at high risk and pushed toward Caesarian sections? The current two obstetricians Dr Welly and Dr Richard would not be able to handle all these sections. She agreed that that would be so.

I told Teresa about the medicalization of childbirth in the US and that some mothers' yearning to get away from that model had promoted the midwife and "natural childbirth movement". "Is there any aspect of the *to ma' pakianak* approach that is worth keeping?" I asked. She reiterated that mothers in Indonesia were free to make their own decisions. She also mentioned that Indonesian *bidan* standards were in line with those in other countries. By this, it appeared that she could not quite visualize the medicalized or illness

⁵² For further discussion see: C.R. Titaley, et al. 2011 and Ranerjee Keberi and Thind Amardeep 2004.

model of childbirth, which included such practices as timing births for the convenience of the attendant (doctor or midwife) by using C-section or oxytocin-induced delivery.

CONCLUSION

Drawing on intermittent fieldwork conducted between 2006 and 2011, this paper presents an account of Toraja beliefs surrounding pregnancy, delivery, and childrearing practices. Our data show the resilience of traditional beliefs in spirits and the widespread use of medicinal herbs and traditional forms of massage, which are administered by *to ma' pakianak*. These practices coexist with a gradual augmentation of contemporary, medically trained *bidan*.

In 2011, Stanislaus Sandarupa and I examined our results and took note of the *aluk* rituals and influences our interlocutors had alerted us to. Mothers' responses exhibited the persistence of many beliefs and practices of *aluk to dolo*, even in such urban areas as Rantepao. Stanislaus Sandarupa identified a group of common sense practices that we all receive from the culture that surrounds us. One such example is the use of first breast milk, yellowish and fatty called colostrum. All *bidans* and virtually all *to ma' pakianak* had absorbed the idea that this valuable milk should not be spurned or thrown away, even though some still threw a minuscule symbolic amount away. Rather than absorption of the old ways by the new, our data point towards an interaction between biomedical discourse, common sense practices, and strictly *aluk to dolo* proscriptions such as keeping babies away from the window.

Beliefs in spirits continue to play a role in the wellbeing of mothers and babies. The spirits that are most feared by Toraja mothers are *batitong* – an earth spirit that can be a normal individual who at night time brings harm – *po'pok* (a flying *batitong*), and *rondongan* – spirits that have the form of centipedes such as eels and crocodile found in rivers, wells, and water in rice fields. *Rondongan* threaten pregnant women; they enter their bodies and leave again at the time of delivery; they are infrequently observed, but they can do harm to the foetus. The tutelary spirit of the earth (*ampu padang*) is powerful and is consulted in the building of a *tongkanon*; he should be treated cautiously. He doesn't intend to harm but does in fact place the foetus at risk, according to Tato' Dena'. Spirits can be attached to a variety of objects including the betelnut pouch. Satan or *sanbara* can also appear as a threat. It is not always obvious which spirit constitutes serious threats at all times, only occasionally, or whether it can shift its influence toward a benign direction. A few mothers explicitly declared they did not believe in spirits, but they felt the need to pray to God to keep evil influences at bay.

Food suggestions to enhance breast milk flow seemed fairly uniform. The concepts of hot and cold food and the need to balance them were still present albeit not always explicitly articulated. This concept is also found in the idea of hot hands for the *to ma' pakianak* and cold hands for the *bidan*. Treatment strategies for illnesses during pregnancy, labour, and delivery were less uniform. The two *to ma' pakianak* in Simbuang did not use herbs and potions.

People in these hamlets could consult the healer, Pine, who had such skills as steering a pregnancy toward a boy or a girl and treating barrenness using a mixture of leaves and herbs. Her ministrations consisted of magic incantations that she was unwilling to reveal. The same was true for *to ma' pakianak* Tada'. Three *to ma' pakianak*, two in Pongbembe and *Ne' Tallo* in Sangalla considered themselves adherents of *aluk to dolo*. However, every *to ma' pakianak* prided herself on her ability to learn a great deal about the foetus, mother, and baby through massage using her "hot" hands.

Toraja is situated on the equator, and light and darkness are uniform across all seasons. Mothers reported how babies are often awake between 1:00 and 5:00 AM. In the US and in Europe, infants who died from SIDS are often found in the morning when mothers wake up. In Toraja, mothers are close enough to notice that their babies play with the placenta, and they themselves awaken around 5:00 AM to begin their working day. In Toraja, mothers' close proximity to their babies at night and the implied sensory connectedness with their babies in terms of wakefulness, sleep, and breastfeeding stand out. It is mothers' fear of *mata tinggi*, however, that struck us as most relevant for the aetiology of SIDS.

SIDS became an official diagnosis in 1972 in response to two developments: (1) At the time, the sudden death of infants between one week and one year seemed present in all developed countries that kept track of diagnoses and deaths. (2) Parents of such babies were not infrequently accused of infanticide and some could find themselves in jail the day after the baby was found dead. They were instrumental in lobbying for the SIDS diagnosis. The incidence of SIDS has declined from 2-4 per one thousand live births to 0.64 per one thousand live births, mostly as a result of the implementation of the back-to-sleep campaign and people's awareness of modifiable SIDS risk factors. Today, approximately 3500 infants die annually in the United States.⁵³ After 45 years of study, today experts acknowledge distinctions between sleep-related infant deaths, including SIDS, ill-defined deaths, and accidental suffocation and strangulation in bed. Whether SIDS is present in Toraja remains a question. It has been shown to be less prevalent in Asian populations in Japan and elsewhere.⁵⁴ Infant rearing in Toraja involves co-sleeping at night and multiple caregivers during the day. Until birth and death rates are reliably recorded, something that might be achieved with modern communications such as cell phones, it will remain uncertain whether the seeming absence of SIDS is real and/or whether it can be attributed to genetic or environmental influences, when critical information is lacking.

⁵³ Rachel L. Moon 2016: 51-57.

⁵⁴ Tony Nelson et al. 2005; Toshika Sawaguchi et al. 2003.

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