

Maasai Diet as Cultural Code:

The Contribution of Participatory Anthropology to the Understanding of Infant Feeding and Postnatal Mother-to-Child HIV Transmission among the Maasai

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Introduction

During recent years biomedical scientists, epidemiologists and other public health specialists have come to recognise the importance of an anthropological perspective within public health. As a result medical anthropologists have increasingly been employed within multi-disciplinary teams on health projects across the globe, raising their colleagues' awareness of the importance of cultural determinants of health and ill-health, and providing crucial insights into the ways in which people in different cultures and social groups explain the causes of ill-health, the types of treatment they believe in, and the types of people to whom they turn if they do get ill (Helman, 1999). Anthropologists have also made a significant contribution to their colleagues' understanding of macro-level determinants of health and ill-health (Myntti, 1991:229). Drawing from a wide body of theory produced by linguists, sociologists, political philosophers and economists, they have been able to elucidate the wider social roots of disease, highlighting areas such as violence, social stratification, marginalisation and poverty in the multifactoral aetiology of many diseases (Hegganhougen, 2000:1171).

While multidisciplinary approaches have recently become a key feature of many health projects and interventions, this integrative, holistic approach to understanding has always been an important element of anthropological study. Indeed, what distinguishes anthropology most clearly from all other disciplines, and what makes it such a crucial tool, is the method of participant observation it employs. In no other discipline do the researchers integrate themselves so thoroughly into the society under study. By taking the time to immerse themselves in local life – speaking with informants in the informants' own language, eating with, and living alongside community members – anthropologists alone are able to explain in detail the true context of people's lives.

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In order to fully understand the health of a population one needs to understand the motivations behind, and the influences on, people's actions. Participatory anthropology provides information on these complex interrelationships that quantitative studies are unable to explain. In this essay I will illustrate the potential contribution of this research method by focusing on one narrow example from East Africa. Drawing heavily from the work of anthropologist Kaj Arhem, I will discuss the motivation behind the Maasai preference for pastoral foods along with the significance of their distinctive infant feeding patterns, and how this in turn may influence postnatal transmission of HIV from mother to child.

Mother-to-Child HIV Transmission: The Biomedical Perspective

Mother-to-child HIV transmission has been the subject of much epidemiological study. The first meta-analysis of the risk of HIV transmission through breastfeeding was carried out by Dunn et al in 1992. Looking at six studies (including one from Africa) the authors concluded that the additional risk of breastfeeding, over and above transmission *in utero* or during delivery, was 14% (95% CI 7-22%). Despite this finding, it is widely accepted that breastfeeding has many beneficial effects on child health. In less developed countries safe artificial feeding is not a realistic option for many mothers, and where the use of breast milk substitutes is unsafe the risks of infant morbidity and mortality from diarrhoeal and other infectious diseases are increased. A recent World Health Organization meta-analysis of the effect of breastfeeding on infant and child mortality found that non-breastfed infants had a 6-fold greater risk of dying from infectious disease during their first two months of life than their breastfed counterparts (WHO, 2000). The United Nations Children's Fund have estimated that during the last 20 years some 1.7 million children may have contracted HIV through breastfeeding (UNICEF, 2000). During the same period 30 million may have died because they were not breastfed (Baby Milk Action Coalition, personal communication).

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Two recent papers published by Coutsooudis et al argue that previous studies on the risk of HIV transmission via breast milk are fundamentally flawed because they fail to account for the effects of different kinds of breastfeeding practices – exclusive or mixed, i.e. with or without water or other fluids or foods. In their own prospective study, carried out in two hospitals in Durban, South Africa, Coutsooudis et al compared three groups: 157 formula-fed (never breastfed); 118 exclusively breastfed for 3 months or more; and 276 mixed breastfed. The three groups did not differ in any risk factors for transmission, and the probability of detecting HIV at birth was similar. The results of their study showed that while the cumulative probabilities of HIV detection remained similar among the never and exclusively breastfed groups the probability among mixed breastfeeders soon surpassed both groups.

Table 1. Cumulative Probability of Detecting HIV Infection Over Time among 157 Children Who Were Never Breastfed, 118 Exclusive Breastfeeders and 276 Mixed Breastfeeders.

| | Birth | 6 Weeks | 3 Months | 6 Months | 12 Months | 15 Months |
|--|------------------|------------------|------------------|------------------|------------------|------------------|
| NEVER BREASTFED | | | | | | |
| Cumulative probability of HIV detection by age | 0.076 | 0.180 | 0.187 | 0.194 | | |
| 95% Confidence Interval | 0.042 – 0.125 | 0.124 – 0.245 | 0.130 – 0.252 | 0.136 – 0.260 | | |
| EXCLUSIVELY BREASTFED | | | | | | |
| Cumulative probability of HIV detection by age | 0.068 | 0.150 | 0.160 | 0.194 | 0.221 | 0.247 |
| 95% Confidence Interval | 0.032 – 0.123 | 0.091 – 0.222 | 0.099 – 0.233 | 0.125 – 0.274 | 0.145 – 0.307 | 0.160 – 0.344 |
| MIXED BREASTFED | | | | | | |
| Cumulative probability of HIV detection by age | 0.069 | 0.219 | 0.244 | 0.261 | 0.333 | 0.359 |
| 95% Confidence Interval | 0.043 – 0.103 | 0.172 – 0.271 | 0.193 – 0.299 | 0.205 – 0.319 | 0.253 – 0.415 | 0.267 – 0.451 |

(Coutsooudis et al. 2001:384)

The mechanisms through which exclusive breastfeeding may be safer than mixed breastfeeding are not totally clear. However, Coutsooudis et al suggest that contaminated fluids and foods introduced to mixed fed babies may damage the bowel and facilitate entry of HIV from breast milk into the tissues. The authors cite a study of non-HIV-infected children in Guatemala, which showed that gut damage was greatest with mixed breastfeeding and least

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with exclusive breastfeeding (2001:386). While further studies are obviously needed, the contribution of this finding to present baby-feeding policy and to the direction of future research is substantial.

HIV Prevalence and Breastfeeding Patterns in Maasailand

Only two studies have been published on the prevalence of HIV in Maasai populations. The first, from 1990, took blood samples from 80 Maasai aged from one month to 70 years, 31 were below age 15. No HIV was detected (Lopez-Corral et al. 1992:237). The second looked at antenatal blood samples from 2082 Maasai women living near a high HIV transmission area in Kajiado District, Kenya, between 1989 and 1992. The total HIV prevalence was found to be 1.32% (Valadez et al. 1999). Maasai patterns of sexual networking, combined with high prevalence of other sexually transmitted diseases, would seem to place the Maasai at 'high risk' in relation to the sexual transmission of HIV (Woodburn, 2000:49).

The higher the prevalence of HIV among mothers, the greater the number of mother-to-child infections. While the best way to prevent infant infection is to prevent infection of women, the promotion of optimal baby-feeding practices is of great importance. This is particularly so in populations such as the Maasai where antiretroviral therapies and other expensive interventions are not available. Maasai pastoralists are aware of the benefits of colostrum (*isikitok*) and infants are breastfed from birth. Breastfeeding continues for one or two years (Mawani, 1997:59). However, exclusive breastfeeding is not practised. Infants are given cows' milk in addition to their mother's milk (Spencer, 1988:41), along with butter or fat, mixed with charcoal or ashes (Arhem, 1989b:17-18; 1990:204, 221; Galaty, 1979:807, 811; Ole Parkipuny, 1975:32, 36). Safe artificial feeding is neither practicable nor appropriate.

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Having briefly reviewed the epidemiological perspective on breastfeeding and mother-to-child HIV transmission along with the HIV and breastfeeding situation in Maasailand, I will now discuss in detail the findings of participatory anthropology among the Maasai which are relevant for understanding these subjects and which should influence the planning and functioning of a health intervention in this area.

Findings of Participatory Anthropology: Maasai Diet as Cultural Code

‘The Maasai are unique among East African pastoralists in their cultural choice to live exclusively on pastoral foods. In a natural environment which abounds in wildlife and which in parts is excellently suited for intensive agriculture, the pastoral Maasai attempt to subsist on a diet consisting solely on the milk, meat and blood of their domestic stock.’

(Arhem, 1990:201)

Cattle – both physically and symbolically – are at the very centre of Maasai culture. In their creation myth cattle appear as a gift from God (*Enkai*) to Man, descending from heaven to earth along a strip of bark. Cattle, therefore, embody the divine qualities of God on earth. Cattle are so central to the cultural life of the Maasai that the normative values of Maasai behaviour appear to be modelled on the characteristic behavioural qualities of their cattle. Indeed, the term *inkishu*, which means cattle, is also used to refer to the Maasai as a people, and close kin address one another in terms of cattle names. The identity between Maasai and cattle emphasises the distinction between people and the archetypal wild animals (*ilowuarak*) – the predators that embody all the qualities of nature and the wild. Predators are seen as everything that the Maasai are not: fierce, gluttonous, competitive and selfish. In contrast, the

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Maasai live by cooperation, sharing, congeniality and generosity. And, like their cattle, they live in peaceful communities and do not hunt for food. Through their exclusively pastoral dietary ideal the Maasai culturally construct themselves as a distinctive people – people as opposed to wild animals, pastoralists as opposed to hunter-gathers and agriculturalists, and truly Maasai, therefore truly human (Arhem, 1990:213).

Ideal food is pastoral food (*endaa enkiteng*): meat, milk and blood. All other foods are considered unworthy, or even polluting (Arhem, 1989a:77). Milk, eaten fresh (*kule nairowa*), sour (*kule naauto*) or boiled (*nailana*), is the traditional staple and is symbolically associated with women, procreative power and the maintenance of life in an organic sense. While milk is seen as ‘ordinary’ daily food, meat (*inkiri*) is seen as ‘extraordinary’ occasional food, symbolically associated with men, spiritual powers, death and social rebirth. Unlike milk, which comes from live animals and presupposes life, meat presupposes death. Handling meat is handling death, and the consumption of meat is therefore restrained¹. However, when an animal is ritually slaughtered its meat is roasted over a fire. The mediation of fire, according to Arhem, bridges the difference between life and death, or rather between death and rebirth (1990:218).

Fire, in Maasai thought, symbolizes creative and transformative power given to Man by God. The creation myth explains that in the beginning God created women from the soil of the earth and men from clouds in the sky. Pain, disease and death were also given to Man as necessary counterparts to the reproductive and spiritual powers given to women and men respectively. While women were given reproductive power through the capacity to give birth,

¹ In line with the Maasai concept of humanity outlined above, cattle are slaughtered only on ritual occasions and never for meat alone. Only young men, during their liminal warrior years, are exempt from this rule. See Arhem 1990 and Llewelyn-Davies 1981 for further details.

men were given spiritual power through the capacity to make fire (Galaty, 1977:475). The act of firemaking, which entails spinning a hardwood stick (male) against a flat piece of softwood (female), is explicitly described as an act of male procreation – men generate fire, but women keep fire alive (Arhem, 1990:218). The gift of fire not only gives men spiritual power, but it also emphasises, once again, the distinction between humans and wild beasts. While humans are separated from God by disease and death, they are separated from animals by their control over fire (Arhem, 1989b:80).

Figure 1. The Separation of God, Man and Animals



Fire transforms raw meat – associated with death, nature and the wild – into sacred food. By roasting meat the spiritual and creative power of men transcends death and turns nature into culture. Roasted meat, therefore, is symbolically associated with rebirth in Maasai thought, and because of this transformative power it is of great symbolic importance in all Maasai transition rituals.

Every Maasai male is recruited, at circumcision, into a named corporate age-set (*olaji*). Throughout life he and his peers are progressively promoted through a series of age-grade

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phases – each with its own distinctive status and roles – from boyhood to ancient elderhood. At circumcision, which takes place at around 15 years of age, boys are socially reborn as warriors (*ilmuran*) and the fire-stick (*olpiron*) bond is created, linking alternate age-sets and binding the whole age-structure together. Immediately after the boys are cut their fire-stick patrons kindle a ceremonial fire to bring the new age-set to life. The initiates, with their hands behind their backs, are then fed pieces of roasted meat, straight into their mouths, by their fire-stick patrons. It is through this ceremony that the fire-stick elders symbolically and socially give birth to the new generation of warriors and become their social ‘fathers’ (Arhem, 1990:218; Spencer, 1988:66).

Table 2. Age-sets and Age-grades

| Age-set | ‘Fire-stick’ Relationship | Dates as Warriors | Age-grade | Approximate Age |
|--|---------------------------|-------------------|----------------|-----------------|
| Ilteritoi | | 1926-1948 | Ancient Elders | 75+ |
| linyankusi | | 1942-1959 | Retired Elders | 60-75 |
| lseuri | | 1957-1975 | Senior Elders | 45-60 |
| llkitoip | | 1973-1985 | Junior Elders | 30-45 |
| lling'onde | | 1983-1996 | Warriors | 15-30 |
| Circumcision (initiation into age-grade system) | | | | |
| Uninitiated Boys | | | | -15 |

(Adapted from Woodburn, 2000:31)

As one whole generation is promoted to the next stage in the lifecycle its members symbolically die and are reborn into a new age-grade with new roles, responsibilities, and status. This transition from death to life, implicit in all major life rituals, is both expressed and accomplished through the ritual consumption of roasted meat. The Maasai diet creates and continually recreates the Maasai as human beings, and it is in this light that we begin to

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understand the significance of feeding cows' milk, butter, fat, charcoal and ashes to Maasai infants.

In developing countries neonatal deaths¹ account for some 50-60% of all infant deaths², and it is perhaps for this reason that a Maasai newborn is thought of as a foetus (*olkibiroto*) until a month has passed. Deaths during this time are regarded as miscarriages (Spencer, 1988:41). These newborn children are, in Maasai thought, creatures of nature, not yet brought into the realm of culture, the society of human beings. Just as the lifecycle rituals described above are concerned with creation and transformation, death and rebirth, so the newborn must be transformed from nature to culture and brought from death to life. The analogy between feeding roasted meat to initiates at major life rituals and the feeding of charcoal (or ashes) mixed with butter (or fat) to infants is explicitly recognized by the Maasai. Charcoal, like roasted meat, is nature transformed by fire into culture. Through the feeding of charcoal infants are symbolically brought from death to life, from nature to culture.

While roasted meat creates life in a spiritual sense milk, like women, sustains life in an organic sense. Only people who drink milk and partake of God through the ritual consumption of sacred meat are truly human beings, Maasai – “people of cattle” (Arhem, 1990:227). Milk then, becomes a crucial addition to the infant's diet. Butter (*eng'orno*) is seen as ‘refined’ milk and is symbolically associated with life and sustenance. Similarly, fat is regarded as ‘refined’ meat and associated with spiritual life. Both are considered to be powerful agents of blessing, are used as anointments in all lifecycle rituals, and are given to infants to ensure growth and good health. The pastoral diet encodes the entire Maasai cultural

¹ Deaths occurring from the time of birth up to 28 days.

² Deaths occurring during the first year of life.

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order. Milk sustains life in an organic sense and meat creates in a spiritual sense. Newborn infants start life as creatures of nature and only become truly Maasai, and therefore truly human, through the culturalizing effects of the pastoral diet.

Conclusion

In 1989 a low prevalence of HIV was detected among the Maasai (Valadez, 1999). While no recent data are available, it is clear that the virus has had a platform from which to spread for over a decade. As more Maasai mothers become infected with the virus, more babies will be at risk of infection via breast milk. In the light of recent biomedical research, which suggests that mixed feeding may increase the risk of postnatal mother-to-child HIV transmission, the promotion of exclusive breastfeeding could be expected to reduce the number of children infected. However, an understanding of the Maasai food system, and the significance of their mixed feeding patterns, illuminates the complexity of the situation. In Maasai thought, the risks of exclusive breastfeeding may well outweigh the risks of HIV transmission via breast milk.

The symbols and systems that we humans employ to understand the world around us, and to give meaning and significance to our lives, are both elaborate and diverse. Arhem's study of Maasai cosmology illustrates well the richness and complexity of their perspectives on pastoralism and the perpetuation of meaningful life, and elucidates the crucial role of participatory anthropology in bringing other people's perspectives, motivations and behaviours to the attention of public health planners. Our goal as health researchers and public health planners is to prevent illness and promote good health, not just in our own communities, but across the globe. If we fail to take into account the significance of local knowledge and experience much of the richness and diversity of human behaviour will be

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missed, and our ability to provide health care and interventions that really do address the target populations' specific needs and circumstances will be greatly reduced. By incorporating the findings of participatory anthropology into the design of health studies and interventions, and by actively seeking community participation in health programmes, the services that public health specialists aim to provide can, and will, be greatly enhanced.

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Works Consulted

- Arhem, K. 1982. *A Pastoral Food System in Transition: The Ngorongoro Maasai*. Service Paper 82/3, Bureau of Resource Assessment and Land Use Planning, University of Dar es Salaam.
- Arhem, K. 1985. *Pastoral Man in the Garden of Eden: The Maasai of the Ngorongoro Conservation Area, Tanzania*. Uppsala Research Reports in Cultural Anthropology.
- Arhem, K. 1989a. 'Why Trees are Medicine. Aspects of Maasai Cosmology' in Jacobson-Widding, A. and Westerlund, D. (eds.) *Culture, Experience and Pluralism: Essays on African Ideas of Illness and Healing*. Uppsala Studies in Cultural Anthropology, 13.
- Arhem, K. 1989b. 'Maasai Food Symbolism: the Cultural Connotations of Milk, Meat and Blood in the Pastoral Maasai Diet' *Anthropos*, 84:1-23.
- Arhem, K. 1990. 'A Folk Model of Pastoral Subsistence: The Meaning of Milk, Meat and Blood in Maasai Diet' in Jacobson-Widding, A. and Van Beek, W. (eds.) *The Creative Communion: African Models of Fertility and Regeneration of Life*. Uppsala Studies in Cultural Anthropology, 15.
- Bernard, H.R. 1988. *Research Methods in Cultural Anthropology*. Sage Publications. London.
- Coutsoudis, A. et al. 1999. 'Influence of Infant-feeding Patterns on Early Mother-to-Child Transmission of HIV-1 in Durban, South Africa: A Prospective Cohort Study' *Lancet* August 7th 1999, 354:471-476.
- Coutsoudis et al. 2001. 'Method of Feeding and Transmission of HIV-1 from Mothers to Children by 15 Months of Age: Prospective Cohort Study from Durban, South Africa' *AIDS*; 15:379-387.
- Dunn, D.T. et al. 1992. 'Risk of Immunodeficiency Virus Type 1 Transmission through Breastfeeding' *Lancet* September 5th 1992. 340:585-588.
- Galaty, 1975. *In the Pastoral Image: The Dialectic of Maasai Identity*. Unpublished Ph.D Thesis, University of Chicago.
- Galaty, J.G. 1979. 'Pollution and Pastoral Antipraxis: The Issue of Maasai Inequality' *American Anthropologist* 6:803-816.
- Hegganhougen, H.K. 2000. 'More than just "Interesting"! Anthropology, Health and Human Rights' *Social Science and Medicine*, 50:1171-1175
- Helman, C. 1999. *Culture, Health and Illness*. Heinemann-Butterworth.
- IBFAN Africa. 1999. *IBFAN Africa Statement on HIV and Infant Feeding*. The IBFAN Africa Regional Workshop on Policy Guidelines for Infant Feeding and HIV, 23-27 August 1999, Pretoria, South Africa.

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- Khun, L. 1997. 'Infant Survival, HIV Infection and Feeding Alternatives in Less Developed Countries' *American Journal of Public Health* 87:926-931.
- Llewelyn-Davies, M. 1981. 'Women, Warriors, and Patriarchs' in Ortner, S.B. and Whitehead, H. (eds.). *Sexual Meanings: The Cultural Construction of Gender and Sexuality*. Cambridge University Press.
- Lopez-Corral et al. 1992. 'The Absence of Infection with the Human Immunodeficiency Virus Type 1 and 2 in an Africa Masai Population' [Ausencia de Infeccion por Virus de la Inmunodeficiencia Humana de Tipos 1 y 2 en una Poblacion Masai Africana] *Medicina Clinica [de Barcelona]* 98(6):237. 15th February 1992.
- Lyall, E.G. 1998. 'Review of Current Research on Breastmilk and Mother-to-Infant Transmission of HIV' *Reproductive Health Matters*, 6(12):127-133.
- Mawani, F. 1997. *Cultural Determinants of Maternal Morbidity among the Maasai*. Unpublished MSc thesis. Queen's University, Kingston, Ontario.
- Myntti, C. 1991. 'The Anthropologist as Storyteller' in Cleland, J. and Jill, A. (eds.), *The Health Transition: Methods and Resources*. Canberra, Australian National University.
- Ole Parkipuny, M.L. 1975. *Maasai Predicament Beyond Pastoralism: A Case Study in the Socio-economic Transformation of Pastoralism*. Unpublished MA thesis. University of Dar es Salaam, Tanzania.
- Ole Sankan, S.S. 1971. *The Maasai*. Kenya Literature Bureau, Nairobi.
- Spencer, P. 1988. *The Maasai of Matapato*. Manchester University Press.
- Talle, A. 1988. *Women at a Loss: Changes in Maasai Pastoralism and their Effect on Gender Relations*. Stockholm Studies in Social Anthropology.
- UNAIDS. 1999. *AIDS Epidemic Update: December 1999*. www.unaids.org Accessed 02.02.00.
- UNICEF. 2000. *Preventing the Spread of HIV through Breastfeeding*. www.unicef.org/newsline/00breastfeeding.html
- Valadez, J. et al. 1999. 'HIV and Syphilis Serostatus of Antenatals in Traditional Maasai Pastoralist Communities in Kajiado District, Kenya: 1989-1992' *Tropical Doctor*, April 1999.
- WHO Collaborative Study Team on the Role of Breastfeeding on the Prevention of Infant Mortality. 2000. 'Effect of Breastfeeding on Infant and Child Mortality Due to Infectious Diseases in Less Developed Countries: A Pooled Analysis' *Lancet* 355:451-455.
- Woodburn, F.M. 2000. *Social, Cultural and Demographic Factors of HIV Transmission Dynamics among the Maasai of Loliondo Game Controlled Area, Northern Tanzania*. Unpublished Undergraduate Dissertation. School of Oriental and African Studies, University of London.