

---

## **Manipulations of the Corpus in the Context of Life Cycle Rites among the Datoga Cattle Breeders of Northern Tanzania\***

---

**Marina L. Butovskaya**

*Institute of Ethnology and Anthropology,  
Russian Academy of Sciences, Moscow*

**Valentina N. Burkova**

*Institute of Ethnology and Anthropology,  
Russian Academy of Science, Moscow*

**Audax Mabulla**

*Dar-es-Salam University*

### **ABSTRACT**

*The study of contemporary traditional pastoralist societies of Eastern Africa provide perfect examples of norms enforcement by third parties, and the life cycle ceremonies is a good example. The Datoga are characterized by exceptionally well-preserved traditional childbirth and postpartum rites, as well as by multistage system of integration of an infant into the tribe, clan, and family. The ceremonies represent a complex process of social interactions between a newborn, his or her relatives, and neighbors. During the ceremonies, an interrelation between an infant and others is established through a complex exchange of responsibilities, favors, and presents, as prescribed by the cultural scenario. In this paper we present the description of postpartum ceremonies and caloripuncture ceremony of an infant, conducted by contemporary Datoga. This particular example demonstrates the importance of cultural group selection in small-scale societies and one of the possible mechanisms to achieve human ultrasociality, rooted in self-identification with others on the basis of culturally installed similarity cues.*

Social Evolution & History, Vol. 14 No. 1, March 2015 87–104

© 2015 'Uchitel' Publishing House

Today most of humans live in complex large-scale societies. Humans are predisposed to dominance and cooperation by their origin and both trends are visible in small-scale as well as in large-scale societies, much of political history has been structured basing on this opposition (Gintis and Schaik 2013). While the dominance present in both types of societies was out of question, the ability to cooperate was considered as a gradually evolving pattern, the one undergoing certain transformations from small-scale to large-scale societies. In particular, the ability to cooperate and function in large groups of genetically unrelated individuals was interpreted as a sign of ultrasociality (Turchin 2013). Neither the 'selfish genes' (Dawkins 1976), nor the rational choice theory (Becker 1980) are efficient enough to explain the origin of this unique ability. Dunbar and Shultz (2007) revealed the quantitative relationship existing between social group size and relative neocortex size, limiting possibilities of personal recognition and development of social networks. With the extension of the group size over 200 individuals, the personification of interactions within social networks becomes more and more complicated and reciprocal cooperation based on face-to-face regular interaction is not functional anymore. But, from the very beginning, the human evolution within the small-scale societies proceeded according to the laws of gene-cultural coevolution (Richerson and Boyd 2005). Although humans may be smarter than other non-human primates, any individual human is unable to acquire all the information necessary for an optimal survival in a particular habitat. Learning from others is the key point of human success in evolution (Boyd *et al.* 2011). This capacity is basic for cultural group selection. It was formed when humans lived in small-scale societies, but it became even more important in the large-scale societies enabling to complete the unique level of norms enforcement (Mathew *et al.* 2013).

But the cooperation practices in small and large-scale societies share much in common, and this questions the initial ideas of the principal distinctions between these two types of societies. Norms and sanctions against norms-violating individuals emerged to support the cooperation in small-scale societies, and thus the effects of cultural group selection are highly effective in small-scale societies as well (Mathew *et al.* 2013).

The life cycle ceremonies constitute the basis of any traditional culture and represent the core feature of any small-scale society. The group identity and membership are claimed on the basis of body marks as well as the involvement in these ceremonies both as subjects and active participants. Under the influence of modernization processes, these ceremonies are gradually vanishing: some elements of such rituals are being lost while the ideas about the aim, sacral and profane aspects of each specific action become vague. In this article, we describe several life cycle ceremonies connected with the childbirth and introduction of an infant to the tribe, in general, and to the clan, in particular, among the Datoga, the cattle breeders of Tanzania who continue living a traditional way of life. The description of rites is based on our own field data obtained in the process of participant observation and in-depth interviews with respondents. Field trips to the areas<sup>1</sup> of Mang'ola, Endesh, and Gidomilanda, and Northern Tanzania were organized in 2009–2013. In total, we visited over 80 households (one household includes from 1 to 12 houses) and interviewed 400 adult Datoga men and women.

The Datoga (Tatoga, Mangati, Barabaig) speak Datoga language, Nilotic branch of Kir-Abbaian division, Eastern Sudanic languages of Nilo-Saharan language family (Kalinovskaya 1995). The majority of Datoga continue to follow traditional beliefs despite persistent attempts of missionaries of different confessions. The Datoga's main activity is cattle breeding. They keep cattle, zebu, as well as sheep, goats, and donkeys. The colonial authorities as well as the post-colonial independent government treated all cattle breeders with distrust and considered them aggressive and hardly controlled people resisting integration into the modern society (Rekdal and Blystad 1999). In the eyes of authorities, the mobile way of life, frequent abaction raids on the neighbors, and adherence to 'traditional' cults have made the Datoga a real threat to development of several regions of Northern Tanzania. As a consequence, at the present moment the Datoga are a marginal and stigmatized group suffering from social and political discrimination.

The Datoga people are characterized by pronounced seasonality of child-bearing: 44 per cent of all child-bearings fall on April-June. Two other minor peaks are registered in October-January. It means that the maximum of conceptions falls on July-October, and

the minimum – on November and February. The fertility rate of the Datoga women amounts 6.6 children on the average, reaching the maximum of 17 child-bearings. According to M. Borgerhoff Mulder, three per cent of women, who have reached the menopause, are sterile. The medium interval between births constitutes  $33.68 \pm 20.95$  months. In the case when an infant under a year dies, this interval shortens to 30.9 months on the average. Survival probability of girls is slightly higher than that of boys: it constitutes 0.8 vs. 0.79 at the age of one year, 0.74 vs. 0.70 at the age of four, reaching 0.7 and 0.65 respectively at the age of 15. Firstborns die during their first year of life more frequently than other children (Borgerhoff Mulder 1992).

At present, a high infant mortality rate in traditional Datoga society, alongside with a surviving belief in magic powers and the world of ancestors, apparently, still exercises a considerable influence on the preservation of complex delivery rites and the ceremonies of integration of an infant into the Datoga society.

#### **THE POST-PARTUM ISOLATION OF A MOTHER WITH CHILD AND THE MANIPULATIONS WITH UMBILICAL CORD AND PLACENTA**

A birth of a child is an important family event among the Datoga. According to the Datoga beliefs reflected in interviews with men and women, infants often may cry because either they are bedeviled or otherworldly forces have a negative influence on them (Butovskaya and Burkova 2009a). Therefore, special efforts are taken to protect an infant from the evil. The sorcerers make special amulets of several pieces of wood (keeping a secret about wood species used) and tie them under a knee of a newborn mother's leg. As several of our female respondents told us, such charms are quite effective. As soon as a sorcerer gave them these amulets, their infants stopped crying and became quite.

Our interviews have shown that birth usually takes place in the room of a prospective mother. Her husband should not stay nearby during this process. A parturient woman can be assisted by mother-in-law or her own mother, other women, sisters, grandmothers or female neighbors. The overwhelming majority of the Datoga women nowadays deliver at home. As a rule, they apply for professional medical assistance in extreme cases, when a labour is prolonged or

abnormal. Thus, only four of 96 interviewed women aged 17–80 and having children told us that they had delivered one or several of their children in a hospital. Moreover, they applied for medical assistance only because they could not deliver themselves.

When an infant comes into the world the umbilical cord is cut either with a knife or a razor blade, preliminary kilned in the fire, or with a pointed stick. This is usually done rather by a midwife than by a birthing woman herself. However, in exceptional cases, the cord can be cut by a newly minted mother. The ceremonial cut of the umbilical cord represents the most important rite of the separation of child from mother, which is widely spread among many peoples of the world (Van Gennep 2004; Molotova 2007: 106; Soboleva 1992: 125; Ottenberg 1989: 5). Among the Datoga, however, there is no any gender-based differentiation in the use of instruments for cutting the umbilical cord: the same instrument is used both for boys and girls. Later, the umbilical cord and the afterbirth represent objects of special care. In addition, manipulations with them vary to some extent depending on the clan affiliation of a newborn's mother. While some clans have the custom of burying the afterbirth and the umbilical cord or just putting them in the corner or under the bed in the room of a recently confined woman, other clans take them out and bury them in a stable. Some female respondents told that they sewed up their children's dried cords in a rag, attached it to the hem of the traditional leather skirt and wore this object until it dropped off. A few other women told that they preserved this dry piece of their child's cord sewn up in leather or a rag until their child grew up, and then gave it to him or her when a child was leaving home. The manipulations with the cord and the afterbirth are most likely to be seen as a rite of 'establishing kinship ties', formation of strong relationships of a newborn with his relatives, primarily, with mother, and integration of a child into a nuclear and extended family (Van Gennep 2004; Soboleva 1992: 125; Ottenberg 1989: 5–6).

The Datoga rituals including the manipulations with the afterbirth and the cord appear to be connected with sympathetic magic. Similarly to many other traditional cultures, the connection of an infant to these objects can predetermine his or her entire afterlife. Only the preservation of the placenta and the cord may lead a child to a favorable outcome. The exceptional care about security of

these objects registered among the Datoga people these days is quite reasonable considering a rather high infant mortality level in this group: on the average, less than 70 per cent of children arrive at the age of 15 (Borgerhoff Mulder 1992). Our observations show that newborns, primarily, boys are subjects of undivided attention and care on behalf of mother and other relatives. It is just for their sake that the greatest ceremonies of leaving the house, accompanied by gifting ritual attributes of the male status (a spear, an arrow, and a bow) are organized. Such special attention to firstborn boys can also be interpreted from the perspective of sympathetic magic because it is this group of infants who die most frequently during their first year of life.

A most important component of postpartum taboos among the Datoga women is a strict isolation of mother with child in her room for 40–60 days. During this period a woman may leave the house only to do the need. Moreover, she must do it in such a way that would help to avoid her facing other family members or guests of the household *geda*. Only female relatives, living in the present household, as well as the narrow circle of visitors may contact a recently confined woman. In our case, we were members of one and, therefore, could observe an isolated life of a recently confined woman, her communication with others and attention paid to the woman and the infant by *geda* inhabitants. There was a hearth in the woman's room and several girls at the age of 5–12 were keeping on fire. They gathered wood, threw branches into the fire, and took care of cooking meal.

The isolation of a recently confined woman with child or a restricted access to her, as in the case of the Datoga, plays a significant role in newborns' survival. The tradition of temporary isolation of a recently confined woman from fellow tribesmen can be found almost in all traditional societies. It is a major component of social adaptation playing a dramatic role in preventing the spread of infections in the room where a confined woman with child stays. Among the Australian aboriginals, for instance, during the pregnancy and the postpartum period, a woman should follow different taboos and perform certain rites in order to magically maintain the infant's health (Artemova 1992: 22).

A chain of different rituals aimed at the separation of a newborn from the world of ancestors and the natural environment, as

well as his or her acquaintance with the world of living people, and integration into the tribesmen's society are taking place during the isolation of woman with child. Among the Datoga, the rites of passage connected with the introduction of an infant into his early period of life are performed during 60 days following the birthday. In exceptional cases, when an unmarried woman delivers, this period may be extended for many months, sometimes up to one year.

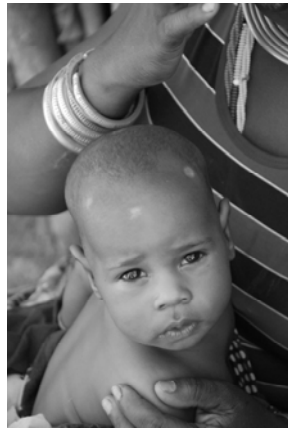
### **CALORIPUNCTURE**

Caloripuncture of certain points on the corpus, as a manipulation on the head and the body of an infant are an important rite of separation of an infant from the natural environment. All infants invariably participate in this ceremony called *besta* or *best*. It is performed between the 7<sup>th</sup> and the 40<sup>th</sup> days following the birthday depending on infant's physical condition (see more details about this ceremony in Butovskaya and Burkova 2009a). Later, this mark on the forehead will serve as an identification sign of the Datoga during one's lifetime. This mark will help tribesmen to easily and unmistakably recognize each other. Thus, the ceremony of caloripuncture is a means of identification of a child with a tribe which, in a literal sense, leaves a life-long brand of a certain society on his or her body. During the ceremony of caloripuncture, the child's head is washed and shaved and, thus, he is once again separated from the natural environment.

According to widely spread concepts of sympathetic magic, there is interference between 'a human and parts of his body, hair, and nails' (Frazer 1975). In the Datoga culture, there is an obvious connection between the hair, the cord and the afterbirth, on the one hand, and infant's well-being, on the other. First hair shaved off the infant's head is buried in a stable, hidden, or buried in the ground. The purpose of all manipulations is to prevent the hair from going into the wrong hands, which can inflict harm on the infant.

Smoldering goat's droppings impaled on an acacia's thorn are used to cauterize several points on the infant's head and body (Photos 1, 2). As mentioned earlier, a number of points of caloripuncture nowadays may differ depending on parents' clan affiliation and commitment to traditional cultural values. If the rules are strictly followed, the marks are left on the forehead, the fontanel, the temples, the back of the head; several marks are also left on the back

along the spine – near the shoulder-blades, the low back, the sacrum, as well as at the front of the body – in the hypochondrium where the solar plexus is considered to be the most important point. Upon finishing caloripuncture process, a female performer of the ceremony takes a smoldering firebrand from the pot and smokes the infant's head moving the hand holding char clockwise. According to the Datoga beliefs, caloripuncture plays an important therapeutic role: it helps to build up infant's health and stimulates his vitality. Failure to perform this ceremony can have a dramatic impact on a newborn: the fontanel will not close and the head itself will become cone-shaped (in the Datoga language, it 'will resemble the top of Kilimanjaro'). Some respondents even told that 'the head may fall into pieces as a broken pot'.



**Photo 1**



**Photo 2**

Caloripuncture is performed rather by an older female relative than by the infant's mother who stays with her child during the ceremony. The ceremonies that we attended were performed by the infant's grandmother on father's line and the mother's sister.

Although caloripuncture leaves life-long marks in the form of small pits on the skin, the process itself turned out to be less painful than we expected. Sparring treatment of a child, skilful switching of his attention to pleasant feelings, stroking, massaging, and breastfeeding interrupted by instant painful procedures minimize traumatic impact left on the infant's psyche. Burns resulting from caloripuncture are shallow, with the diameter of 5 mm. Wounds



heal quite quickly and an infant does not feel any discomfort already in few days. In some cases caloripuncture may be performed without using fire. In such case, the 'powder' made of dried and grinded roots of *lebudjanda* plant are rubbed into cruciform incisions on the skin (Photo 3).



**Photo 3**

Caloripuncture of an infant is an inevitable procedure, which the Datoga perceive impossible to escape. Infant's negative emotions are minimized also by habitual domestic atmosphere itself, by the familiar faces of mother and close relatives, pleasant twilight, evening cool, and positive emotions shared by all visitors. Such points on the face and the corpus serve as important identification marks of a clan. The scar on the forehead of a Datoga is used to unmistakably recognize tribesmen and to distinguish Datoga from anthropologically related Maasai. This circumstance is crucially important since, for many centuries, the Datoga and Maasai have been fighting against each other (including wars, raids, and mutual abaction banditry).

During caloripuncture ceremony, the Datoga people pay special attention to the infant's head and there is a good reason for it. As Frazer notes, many peoples consider the head an especially sacral

part of the body. In some cases it is explained by the belief that the soul, which is quite sensitive to offences and disrespect, lives in the head. The Yoruba believe that every person has three spiritual entities and the first one lives in the head. This spirit is offered a sacrifice of poultry; its blood mixed with palm oil is rubbed in the person's forehead (Frazer 1975).

Caloripuncture of the infant's head and body among the Datoga for the purpose of identification marks is quite reasonable. As Maria B. Mednikova remarks: 'Tattoos play an important role in indentifying a person's status; in this case, they are necessary components of "the rites of passage"' (Mednikova 2007: 118). Special attention should be paid to allocation of the points of caloripuncture among the Datoga. The female performers of the ritual were unable to give a clear explanation of the reasons why certain points are chosen. But they told safely that they do it to ensure infant's good health and emphasized that caloripuncture of the forehead and the fontanel would protect the infant against headaches. These Datoga beliefs could be considered an echo of early beliefs, which were widely spread in ancient times. Similarly, 'on the Bismarck Islands, the forehead was deeply scarified for medical purposes. Aboriginals believed that deep parallel scars running through the forehead of a child at the age from two to five protect him against headache and epilepsy' (Mednikova 2007: 132). The author also points that 'the imprint of this operation is left on a sinciput. Archeologists have found a few skulls with similar imprints, which confirms the prevalence of this custom in ancient times' (*Ibidem*).

Having juxtaposed the points of caloripuncture with the Hindu concept of localization of chakras on the human body, we found striking similarities which can hardly be explained by a mere coincidence. For instance, the Datoga locate the first and the major point on the forehead, approximately where, according to Hindu, the sixth chakra (*adjnia*) is located. Remarkably, the sixth chakra, considered to be the major one, is connected with the mental sphere. According to Hindu beliefs, an eyespot or 'an eye of wisdom' is located here.

It is important to note that Iraqw, people who have been neighboring the Datoga for several centuries, also started practicing caloripuncture of the forehead and temples. Some parents perform caloripuncture on some of their children. Most often they perform it when

a weak, sickly, and crying infant is born. Caloripuncture is done rather by the Datoga neighbors than by Iraqw themselves. Thus, Iraqw neighbours see the sacral aspect of the ceremony of caloripuncture – the survival and further well-being of an infant and recognize efficacy of the Datoga magic rituals.

### SCARIFICATION OF UPPER EYE LIDS

In addition to scars left from caloripuncture, we have noticed scarification on the upper eye lids among some Datoga. From interviews with some respondents, we have found out that scars on the upper eye lids are a specific identification mark used by several Datoga clans, namely, by the clans of *Badjuta* and *Vashan*. Scarification is made on the lids of infants of both genders younger than one month. Thus, along with the introduction to the tribe through the ceremony of caloripuncture, some Datoga clans also practice the ceremony of the introduction to the clan. Although the Datoga say that scarification is required in order to improve the infant's eyesight and to protect him against various eye diseases, in our opinion, the ceremony has an obvious sacral aspect. The name of the ceremony *syrdait kkhan'iang* is translated from the Datoga language as 'incised eyes'.

The respondents' standard reply to the question 'why do you need scarification on the eye lids?' was 'to protect eyes from illness'. They gave different examples when 'rather modern' parents refused from scarification of the infant's upper lids and later the child suffered eye diseases. As a result, a scarification ceremony turned out to be still impossible to avoid and healing of eye lids at an older age took longer time while the process itself turned out to be more painful. Practical concerns about healthy eyes, however, cannot explain the selectivity of the practice of scarification of eye lids by clan affiliation only. In fact, the manipulations on eye lids take place only in those clans which in the Datoga society have a reputation of the clans of magicians (sorcerers) specializing in oneiromancy. Scars serve as a means to 'develop internal eyesight'. According to our respondents, 'opening eyes' of an infant is crucially important for all Datoga in order to enable children 'see in a dream' when they grow up. A person born into *Badjuta* and *Vashan* clans is likely to become a magician and help people in future. Since magicians from these clans give their advice relying on the information 'learned in a

dream', the significance of this ceremony becomes obvious. Both men and women may act as dream-readers. Thus, despite the fact that women join husband's clan after the marriage, magical abilities are passed on. Although, women choosing to practice magic should either refrain from a marriage or postpone this practice until they reach post-reproductive age. They can even scarify the eye lids of those children whose mother belongs to a clan of magicians. Thus, when you meet a person with a similar mark, ask him 'To which clan do you belong?' and get quite diverse replies, do not be confused. You should instead ask him: 'To which clan does your mother belong?' In this case, the clans of *Badjuta* and *Vashan* will invariably be mentioned.

We were lucky to attend this ceremony and, thus, provide its detailed description below. So, early in the morning, at sunrise, we entered the house of our old acquaintance Malata, a woman from *Badjuta* clan and mother of a newborn boy called Gidokhuta (the name is literally translated as 'a thing was lost'. In this case, when the infant was born, Malata's family lost (a sheep). In addition to mother with child, there was a male magician, Malata's relative (her uncle) also belonging to *Badjuta* clan, present in the house. He had brought a special instrument used for scarification – an arrow *shevud* with a short shaft made of wood of *undoshihi* species (*Cordia sinensis*) (Photo 4). The arrow is attached to the shaft with a special leather string made of the skin of a sheep slaughtered earlier at a ritual ceremony of commemoration of ancestors. The magician pulled infant's eye lids back and quickly made two small incisions (Photo 5). The infant started crying when blood ran from the wounds. At that moment, the magician took a special potion resembling white powder (the magician called it *khevarid*) from a small leather bag and thickly dusted the wounds with it. The blood stopped seeping almost instantly. Thus, the ceremony was over. The man was neither given presents, nor treated for his work. As he himself explained, this ceremony is performed by a relative and a relative is not supposed to be paid. On the same day, at sunset, Malata carefully washed coagulated blood off the infant's lids and greased drying wounds with cow's butter. Next day edema went down of Gidokhuta's lids and he looked healthy and calm.

A series of complicated multi-stage ceremonies of infant's integration into the society also includes naming ceremonies; the

ceremony of the infant's carrying out of the house and indicting of the infant's personal song (Butovskaya and Burkova 2009b).



**Photo 4**



**Photo 5**

### **SCARS ON CHEEKS**

In some cases, small cruciform scars on cheeks can be seen among Datoga. When asked about the meaning of such kind of modifications of the corpus, all our respondents gave the following answer: 'Such marks are left on those individuals who cried and behaved uneasily in infancy'. Scars on cheeks have an exceptionally pragmatic purpose: an infant cries and his salty tears, dropping on the wounds on cheeks, cause soreness. Thus, traditional Datoga culture supports practices of negative reinforcement of a child. As a result, an infant cries less, which makes him calmer and steadier.

### SCARIFICATION DURING ADOLESCENCE

During the lifetime of a Datoga person, his corpus repeatedly plays a role of a diary, where indelible data reflecting a next life period of its owner, are recorded. In adolescence the procedure of knocking out of lower incisor teeth is carried out (Photo 6).

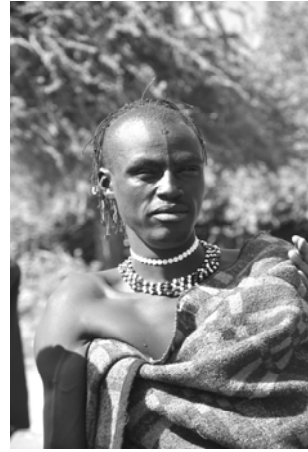


**Photo 6**

At the same time, special wooden bushings and fabric discs are used to model holes in the earlobes, which is typical for the Datoga (Photo 7). At later stages, youths and girls take their own initiative to leave special scars in the form of glasses and/or a vertical line crossing the center of the forehead from the hair down to the point of the nose (Photo 8 and 9). Approximately, at the same time youths and girls at the age of 14–16 are initiated and circumcised.



**Photo 7**

**Photo 8****Photo 9**

In some cases, along with culturally marked information, the corpus as a text may also convey personal messages and individual ‘tastes’ of the owner: ornamental scars left on the sternum made by girls fall under this category. According to girls, such ‘drawing’ is attractive for men and contains a message that a girl is resistant to pain, cares about her appearance, and, thus, has a potential for looking good after marriage. The adopted scarification patterns on cheeks spread among the young Datoga men and resembling popular Maasai scarification patterns should, certainly, be paid special attention. The reasons of adoption of cheek scarification patterns from Datoga's deep enemies Maasai are a subject for intensive discussions. Nowadays we may be witnessing a trend of lessening mutual hostility between these two tribal groups. In some cases, Datoga respondents neighboring Maasai told us that they had friends among Maasai. The efforts taken by the government to reconcile these ethnic groups living on the territory of Tanzania and still leading traditional way of life should also be considered an important factor facilitating relations between the Datoga and Maasai.

### **CONCLUSION**

The study of contemporary traditional pastoralists societies of Eastern Africa provide perfect examples of various cases of norms enforcement by third parties, and various life cycle ceremonies

may serve a good illustration. The Datoga are characterized by exceptionally well-preserved traditional childbirth and postpartum rites, as well as by multistage system of integration of an infant into the tribe, the clan, and the family. The ceremonies represent a complex process of social interactions between a newborn, his or her relatives, and neighbors. During the ceremonies, an interrelation between an infant and others is established through a complex exchange of responsibilities, favors, and presents, as prescribed by the cultural scenario. In the context of growing modernization, perfect integrity of such kind of early life cycle rites in the contemporary Datoga society indicates their high relevance for an efficient functioning of this society in the neighborhood of other traditional cultures. The fact that since the first days of one's life, the body plays a role of a certain kind of diary, in which new pages of texts are written during the life course, is remarkable. This diary conveys the vitally important message revealing the person's tribal and clan affiliation, predisposition to magic abilities, adherence to Datoga cultural traditions, and age-specific transformations. This particular example demonstrates the importance of cultural group selection in small-scale societies and one of the possible mechanisms to achieve human ultrasociality, rooted in self-identification with others on the basis of culturally installed similarity cues.

#### NOTES

\* The study was supported by Russian Foundation for Humanities (grant No. 12-01-00032a) and approved by COSTECH (2009–2014).

<sup>1</sup> Agglomerations of households.

#### REFERENCES

- Artemova, O. Yu. 1992. Children in the Society of the Australian Aborigines. In Kon, I. S. (ed.), *The Ethnography of Childhood. Traditional Upbringing Patterns among the Peoples of Australia, Oceania and Indonesia* (pp. 17–55). Moscow: Nauka. In Russian (Артемова О. Ю. Дети в обществе аборигенов Австралии / *Этнография детства. Традиционные методы воспитания детей у народов Австралии, Океании и Индонезии* // Под ред. И. С. Кона, с. 17–55. М.: Наука).
- Becker R. 1980. On the Long-Run Steady State in a Simple Dynamic Model of Equilibrium with Heterogeneous Households. *The Quarterly Journal of Economics* 95: 375–382.



- Borgerhoff Mulder, M. 1992. Demography of Pastoralists: Preliminary Data on the Datoga of Tanzania. *Human Ecology* 20: 383–405.
- Boyd, R., Richerson, P., and Henrich, J. 2011. The Cultural Niche: Why Social Learning is Essential for Human Adaptation. *PNAS* 108: 1–8.
- Butovskaya, M. L., and Burkova, V. N. 2009a. The Ceremony of Introduction and Separation of an Infant as Rites of Passage among the Datoga of Northern Tanzania. *Etnograficheskoe obozrenie* 2: 51–67. *In Russian* (Бутовская М. Л., Буркова В. Н. Церемонии включения и отделения ребенка как обряды перехода у датого Северной Танзании / *Этнографическое обозрение* 2: 51–67).
- Butovskaya, M. L., and Burkova, V. N. 2009b. The Rites of Early Life Cycle among the Datoga, Semi-Sedentary Cattle Breeders of Northern Tanzania. In Vydrin, V. F. (ed.), *The African Collected Volume* (pp. 9–23). Saint-Petersburg: MAE RAN. *In Russian* (Бутовская М. Л., Буркова В. Н. Обряды раннего жизненного цикла у датого / Африканский сборник. 2009 / Отв. ред. В. Ф. Выдрин, с. 9–23. СПб.: МАЭ РАН).
- Dawkins, R. 1976. *The Selfish Gene*. New York: Oxford University Press.
- Dunbar, R., and Shultz, S. 2007. Evolution in the Social Brain. *Science* 317: 1344–1347.
- Frazer, J. G. 1975. *The Golden Bough: A Study in Magic and Religion*. Volume 5. New York: Macmillan.
- Gennep, A. Van. 2004. *The Rites of Passage: Systematic Study of Rites*. London: Routledge.
- Gintis, H., and Schaik, C. van 2013. Zoon Politicon: The Evolutionary Roots of Human Sociopolitical Systems. In Richerson, P. J., and Christiansen, M. H. (eds.), *Cultural Evolution, Society, Technology, Language and Religion* (pp. 26–44). Cambridge, MA: MIT Press.
- Kalinovskaya, K. P. 1995. *The Essays on Ethnology of Eastern Africa*. Moscow: IEA RAN. *In Russian* (Калиновская, К. П. *Очерки этнографии Восточной Африки*. М.: ИЭА РАН).
- Mathew, S., Boyd, R., and Van Veelen, M. 2013. Human Cooperation and Kin and Close Associates may Require Enforcement of Norms by Third Parties. In Richerson, P. J., and Christiansen, M. H. (eds.), *Cultural Evolution, Society, Technology, Language and Religion* (pp. 45–60). Cambridge MA: MIT Press.
- Mednikova, M. B. 2007. *Indelible Marks*. Moscow: Yazyki slavyanskoï kulturi. *In Russian* (Медникова М. Б. *Неизгладимые знаки: татуировка как исторический источник*. М.: Языки славянской культуры).
- Molotova, T. L. 2007. Interethnic Contacts of Mari in Bashkiriya. In Korostelev, A. D. (ed.), *We are Similar to the Udmurts and the Chu-*

- vashes: The Mutual Social and Cultural Adaptation in Ethnically Heterogeneous Settlements* (pp. 93–111). Moscow: RUDN. In Russian (Молотова, Т. Л. Межэтнические контакты марийцев в Башкирии / Мы и как удмурты, и как чувашии: Взаимная социально-культурная адаптация в этнически смешанных селениях // Отв. ред. А. Д. Коростелев, с. 93–111. М.: РУДН).
- Ottenberg, S. 1989. *Boyhood Rituals in an African Society: An Interpretation*. Washington: University of Washington Press.
- Richerson, P., and Boyd, R. 2005. *Not by Genes Alone: How Culture Transformed Human Evolution*. Chicago: University of Chicago Press.
- Redkal, O. B., and Blystad, A. 1999. We are as Sheep and Goats: Iraqw and Datoga Discourses on Fortune, Failure and the Future. In Anderson, D., and Broch-Due, V. (eds.), *The Poor are not Us: Poverty and Pastoralism in Eastern Africa* (pp. 125–146). Oxford: James Currey.
- Soboleva, E. S. 1992. Socialization of Children on Timor Island. In Kon, I. S. (ed.), *The Ethnography of Childhood. Traditional Upbringing Patterns among the Peoples of Australia, Oceania and Indonesia* (pp. 120–153). Moscow. In Russian (Соболева, Е. С. Социализация детей на острове Тимор / Этнография детства. Традиционные методы воспитания детей у народов Австралии, Океании и Индонезии // Под ред. И. С. Кона, с. 120–153. М.: Наука).
- Turchin P. 2013. *The Puzzle of Human Ultrasociality: How did Large-Scale Complex Societies Evolve?* In Richerson, P. J., and Christiansen, M. H. (eds.), *Cultural Evolution, Society, Technology, Language and Religion* (pp. 61–74). Cambridge MA: MIT Press.