SESSION 2: MILK, MAN, CULTURE AND SOCIETY

QUESTIONS RESPONSES

with Catherine Baroin

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1. From Africa to Central Asia, from the Aubrac plateau to Mexico, how can you sum up the social and cultural dimension of dairy farming and milk for humankind?

Milk is a complete foodstuff that, in its various forms and the products derived from it (fresh milk, curdled milk, whey, butter, cheese), occupies a very important place in the human diet and first of all among populations that practice dairy farming. These people are highly sensitive to the taste qualities of milk, as are for instance the Peuls discussed by Jean Boutrais. But livestock is also a form of economic capital that is traded, given, taken, and in this regard occupies a central place in the relations people form with each other. Closer to home in France, Michel Bras aptly expresses the affective and identitarian dimension of milk, etched on his homeland, and that accompanied his childhood and all his travels since when he means "to be Aubrac."

2. You are an expert on the Toubou, pastoral nomads of the Sahara and the Sahel. What dairy model have they developed to survive in these areas where the climate is unpredictable?

In the vast desert or semi-desert expanses these pastoralists occupy, rainfall is too unpredictable and insufficient to farm the land. They can only subsist on extensive livestock breeding. It is done with two aims: to increase herd size and produce milk. That is why the herds are primarily made up of milk-producing females. In such arid environments, mobility is essential. It is made possible by the small size of breeding units, which also facilitates the fluidity of movement. Each nuclear family manages its own herd and organizes its moves independently. They must take into consideration their livestock's needs, which vary depending on the species. Cows, which need to be watered daily, cannot stray far from the wells, whereas camels, which can go for long periods without water, are led by the men into the desert where in winter they find pastureland rich in mineral salts. During that season, they live solely on camel's milk.
The combination of these two livestock species with their staggered annual physiological cycles and breeder mobility in search of pasture are essential survival strategies. They enable the families to have milk nearly all year round. Furthermore, many Toubou also raise goats, less for their milk but more as a form of cash flow and a supply of meat on the hoof eaten on special occasions. With the succession of droughts, they have taken on greater strategic importance because these hardy animals require little food and reproduce more quickly than cows and camels.

3. What techniques do the Toubou use to optimize and control dairy production?

Simple techniques are used to stop lactation and not jeopardize a new gestation in the camel or the cow. Other, more elaborate techniques are used when the cow or camel has lost its calf at birth or at a very young age, to get it to adopt another calf and thus continue lactating.

4. For the Toubou as well as other pastoralists in Africa, a dairy herd is a form of capital and a guaranteed daily supply of milk for nourishment. But isn't it much more than that?

The herd has an essential food-producing function, but its social function is no less important. Gifts and payments in livestock are at the heart of social relations. Animals are what enable a young man to marry and establish his own herd, thereby ensuring his economic independence. A large herd also enables a man to be more generous with his family, and through his generosity expand the circle of those indebted to him. Thus herd size is a source of influence and prestige; it allows one to become an *aô bo*, literally "a big man," someone important.

5. Jean Boutrais talks about the practice of lending cows and giving milk among the Peuls. How does this economy of solidarity function?

The loan of a cow and the gift of milk are indeed very ancient and valued practices that benefit those whom the Peuls consider to be truly poor, people who don't have enough milk to feed their family. Jean Boutrais describes two systems. The *birnaaye* cow remains with the herd but it is milked for a neighbor or family in need. The *diilaaye* cow is pulled out of its herd and placed with its calf with the beneficiary for the duration of lactation. This practice has a moral and even religious aspect; it enters into the Peul code of conduct, *pulaaku*, and is mandatory for Muslims in times of food shortage. It is a system of gift and counter-gift that can be found in many other African pastoral societies.

6. It is unthinkable to be Peul and be deprived of milk... To the point of falling ill, Jean Boutrais explains...

For a Peul, living on milk is what makes a person truly a Peul. It is part of one's self-perception, one's body and soul... Jean Boutrais mentions the Peuls from Tera, who believe that a lack of milk is likely to cause certain illnesses: stomachache, cold, cough, eye irritation. Conversely, they borrow a term from their neighbors to express an irrepressible desire – *heppere kosam* – a desire which for the Peuls can only pertain to milk. The appeal of milk is so strong for the Peuls that very religious people fear it because it might for instance make someone forget to say his prayers...

7. The Peuls are able to make extremely subtle distinctions among various qualities of milk and have no lack of words to express them. What differences do they see?

The Peuls readily make fun of villagers for whom all milk is the same and "looks good" (*lobbam*). According to Jean Boutrais, for most Peuls, good milk is thick and dense (*modduDam*), heavy (*tedduDam*), sweet (*lamsuDam*) even sugared (*sikiri*). On the contrary, a "light" and liquid milk (*selbuDam*) is distasteful. Good milk has a high fat content (nebbam). With the cream that rises to the top, good milk that is left to "rest" loses its initial white color and yellows (*oolDam*). Peuls even say it takes on a reddish hue (*wojjam*). They also rank plants very precisely according to their lactiferous qualities. For instance they consider that "when a cow eats Andropon (bluestem), its milk is yellow, it looks like gold!"

8. Butter is particularly valued among African pastoralists. Why is that?

First, because it is a fairly rare foodstuff, as making butter requires an abundant supply of milk. That's why having butter in reserve is an undeniable sign of wealth. Second, because it is valued both in cooking, to flavor sauces, but also as a medicine (it supposedly helps to treat coughs), and even more so in cosmetics. Toubou women have their secrets to scent melted butter with crushed plants. They spread it on their hair, and it is also used in personal hygiene in a fumigation process called "sitting on the fire." This practice is reserved for married women because it supposedly narrows a woman's vagina and thus has strong sexual connotations.

9. The Peuls sell some dairy products and keep others for themselves. Which ones?

Peul men do the milking and give the milk to the women who then become solely responsible for it. Fresh milk is not sold because it can be processed into a variety of by-products – "it is blessed," the Peuls say – reserved for family consumption; but it is readily offered to visitors as a sign of welcome. Whey is not supposed to leave the house either: "we don't sell it and we don't give it away." It is what the women like best and they keep it for themselves! Women have always sold curdled milk and butter to villagers and at markets. The small income they draw from it enables them to purchase cereal and other basic commodities for the family. Or they try to trade their dairy products for cereals, which isn't easy: in fact, it's mainly during the rainy season that there is a milk surplus, whereas for farmers this is the lean season when the granaries are empty. Milk has always enabled Peuls women to feed their family and enjoy a certain degree of independence.

Peul women selling curdled in Burkina Faso. Photo J. Boutrais

10. The dairy independence enjoyed by peul women seems to being coming on hard times, according to Jean Boutrais. Why is that?

Among the Mbororo Peuls in Cameroon, Jean Boutrais has noted several evolutions. First, barter or sale of dairy is becoming so difficult that the women can no longer supply the family with food or can only do so with money given to them by their husbands. In other cases, the sale of dairy products has been abandoned for other reasons: either a consequence of sedentarization, or for reasons of male prestige – proof that the husband is rich and the wife doesn't have to work –, or again for religious reasons. Female mobility is in fact more problematic in very religious environments where there is greater concern with controlling women.

11. The demand for milk from big cities gives rise to dairy innovations, as Jean Boutrais shows with regard to Niamey. What role do women play here?

Since the big drought in the 1980s, women have invested a new trade of "dairy product collectors and sellers." Women who have gone into this dairy trade are not herdsmen's wives but villagers. They can be Peul, but also Haussa and Zerma, who live along main transportation routes. They buy the usual dairy products – curdled milk and butter – from herdsmen's wives, then package them for transport (curdled milk transferred to big plastic containers, butter heated, melted and bottled). Once they arrive in Niamey by collective taxi, they set up at a market bordering the capital until they have sold all their wares. These women earn money that they can manage totally independently.

12. There are other innovations created by the demand for milk in large cities that affect the dairies in Niamey. What are these innovations?

One is the sale of fresh milk to collectors that ship it in big containers loaded onto a bicycle or moped and sold again to the two dairies in Niamey. This transportation method limits the collection area to about 20 km. Jean Boutrais reports that the sale of fresh milk displeases many peul women who claim to make more money with curdled milk. Especially, once milk collection has been set up – and this is true in many societies as soon as a previously traditional economic activity is systematized – the men take control of the sales and the income from it. The morning milking is done by men who sell the fresh milk to the collector called *velo* or *bute buteejo*, cutting out the role of the women, who do the evening milking, which often yields less.
Another innovation Jean Boutrais describes pertains to periurban breeders who are encouraged to supplement the cows' fodder with bran (*doobu*) during the dry season so as to ensure a regular supply to the local dairies all year long. The Peuls don't care for the milk from cows fed on bran. They say it doesn't curdle and remains white. They feel bran is a "cold" food that might make the cows sick, whereas the grass in the bush on the contrary is qualified as "warm." The cow milk-drinking Peuls distinguish between milk from cows that eat bran and milk from cows that eat grass, without for all that going as far as separating the milk that goes to the dairy from the milk to be consumed in the home. In certain families, home consumption is not longer a priority with respect to sales. Milk partakes of an opening up of family economies to the market, an opening the Jean Boutrais considers to be a constant in Peul pastoralism.

13. Central Asia, which Gaukhar Konuspayeva discusses, is another region of the world with an age-old pastoral culture. But these regions underwent forced collectivization during the Soviet era and then rampant urbanization since independence. What remains of this traditional dairy culture?

According to Gaukhar Konuspayeva, the nomadic culture remains very strong in Central Asia. The people are very attached to a diet of animal protein, from both meat and milk. In Kazakhstan, average milk consumption went from 141 kg/pc/year in 1994 to 217 kg in 2003. They also identify strongly with the dairy species that are best adapted to the very harsh ecosystem of the steppe: mares and camels. Milk from these species being low in casein, it cannot be processed into cheese. Therefore, milk in Central Asia is mainly consumed in fermented form, even cow's milk, which can be used to make cheese. These fermented milk types are called *airan* when made from cow's milk, *koumis* for mare's milk, *shubat* or *chal* or *khoormog* for camel's milk in Kazakhstan, Turkmenistan and Mongolia respectively. These fermented milks are perceived as "local" products. They are closely associated with a local cultural identity, all the more since still today they continue to be prepared mostly on a small, artisanal or farm scale. Despite massive urbanization, the Kazakhs have preserved the fundamentals of their culture in their culinary traditions and leisure activities (eagle hunting, the yurt, horseback riding, etc.).

Artisanal shubat preparation in Kazakhstan. Photo G. Konuspayeva

14. If dairy products in Central Asia are valued as "white foods" on a daily basis, are they even more so in the event of certain rites and big celebrations?

In the everyday language of the steppe, white is the color associated with happiness and abundance. And dairy products are an important element in the Nawroz – New Year – festivities celebrating the renewal of vegetation and life when one wishes others "much white" in their lives, i.e. a lot of milk and hence health and happiness.

15. The fermented milks of Central Asia have always had an image of healthy food. What benefits are they said to have?

In Central Asia, all fermented milks are supposed to have therapeutic benefits and are widely used in medical practice. Shubat and koumis, in particular, are supposed to have antibacterial proprieties and a number of prophylactic effects.

Gaukhar Konuspayeva tells us they are especially used in the treatment of tuberculosis, gastroenteritis, gastric ulcers and to feed newborns. Anti-diabetic properties have also been claimed, as well as the ability to balance intestinal flora, treat digestive illnesses and more generally to strengthen the immune system. These bioactive properties are currently being researched.

16. Cheese may be largely absent from the pastoral traditions in Africa and Central Asia, but it is a significant element in the Mexican food culture. Yet dairy farming there is a more recent tradition dating from the introduction of cattle by the Spaniards. How did cheese production develop in Mexico?

The cheese tradition in Mexico is fairly recent but it nevertheless dates back 400 years. As Angelica Espinoza-Ortega explains, Mexico is a very mountainous country. Dairy farming turned out to be an activity well suited to the relief and climate conditions, because making cheese out of milk to preserve it was the best solution in isolated, remote areas and for seasonal production. Difficult accessibility also fostered the invention of ripened cheeses that keep a long time, up to two years for Zacatecas cheese. These cheeses were long transported by *arrieros*, muleteers who from the time of the Spanish to the early 20th century, rode through the country taking "royal paths" with 40- to 50-mule caravans. From the late 19th century specialized dairy production developed near urban centers on large haciendas as well as family small-holders to supply the cities with milk. After the Revolution, in the 1930s, the agrarian reform encouraged artisanal cheese production, especially of fresh cheese.

17. How did cheese become an integral part of the Mexican culinary identity?

Mexican cuisine was highly diverse before the Spanish arrived, which thus fostered the discovery and adoption of new foods and techniques. Cheese, moreover, was adapted to local tastes, incorporating local herbs and spices, particularly chili peppers. There are many recipes that have cheese as the main ingredient and they vary according to region. *Quesadillas*, typical stuffed corn tortillas, are hard to imagine without cheese when you know that cheese is *queso* in Spanish. But Angelica Espinoza Ortega gives us many other examples, from typical street foods of the capital to the Yucatan specialty, *queso relleno*, made with Edam cheese.

18. Traditional cheeses in Mexico today are perceived as a cultural heritage but also as a possible direction for sustainable development in rural areas. How does this translate?

In Mexico there does seem to be an increased awareness of the advantage of artisanal cheese as a source of employment and income in rural areas. Angelica Espinoza Ortega mentions a few recent "success stories": in 2005, the designation, for the first time in Mexico, of a cheese – Cotija de la Sierra de JalMich – as a collective brand name; another cheese, Queso Bola de Ocosingo, received it in 2009; and in 2008 the publication of an academic study inventorying over thirty traditional Mexican cheeses. This direction for development meets with approval among the actors involved - producers, development institutions and public authorities – who are working together to promote and encourage employment in regions that are sometimes very remote from the major cities.

Mexico: cheese on the market in Oaxaca. Photo A.-E. Ortega