In the whole Polynesia, abundance of food during community feasts had taken on a particular importance. This fact was noticed from the first contacts with European sailors at the end of the 18th century, and the "appetite" of ancient Tahitians was often brought to the fore by the Journals of the first Europeans which abound in descriptions of lavish feasts, where abundance of dishes and the volume ingested by the companions “at table”.

These moments of food excess were reserved for ceremonial feasts, opportunities of gigantic deployments of food which constituted important element in all rites of the ancient Polynesians. They even represented the central element (Goldman 1970), considering the importance of food as medium and as all the important members of the community participated in the feast, the living, the dead and the gods: according to the principle of incorporation expressed by Claude Fischler (1990), in Polynesia, shared food is the sign of membership in the same community. The irregularity of supply, between “thin” periods and “fat” periods, was the constant food habits of ancient Polynesians.

The importance of physical aspect was also found among all islanders of the Pacific ocean. Strong corpulences constituted a physical feature highly valued by the ancient Polynesians. Indeed, characterized overweight, permanent obesity, was a physical feature attributed to the chiefs in the Polynesian societies according to Nancy Pollock (1992). Corpulence was the sign of their place in the social structure sociale, the symbol of well-being of the whole community.

Appropriate and plentiful food, obvious physical inactivity, and "cures" of fattening, constituted ingredients to make chiefs obese people for Europeans eyes, and symbol of the fertility of their lands, the generosity of the gods towards them and the prestige of their community for Tahitians eyes. The Tahitian practice of ha'apori (fattening) was found in a part of East Pacific islands (Puka Puka, Mangaia, Mangareva, Rurutu, Rapa Nui…). The persons subjected to the ha'apori were locked in the shade into special houses, and fed abundantly with a preparation made of mixture of fruits and 'uru, fruit of the breadfruit tree. It was mostly a practice for young people and some women. Once got fat they were presented in public to their chief so that he would appreciate the curve of their bodies.

Those rites of fattening practised in Polynesia would have been associated with physical beauty and with fertility, and must be analyzed in a social optics, to maintain the cohesion of the community, as well as biological, to increase the chances of feminine fertility and to ensure community reproduction. The same practice of systematic and institutionalized fattening was found in social groups where reign a kind of food anxiety because of serious seasonal shortages: it is the case of Annang in Nigeria, Moorish Saharan women and Tuareg,
or Massa people of Cameroon, who substitute in such a way a prosperity symbolically created
by man in a situation of natural and regular scarcity.

Food abundance was thus limited to groups of which one of the functions is exactly to
symbolize and to guarantee the natural abundance. Effectively, more than a simple society of
“natural” abundance, pre-western Tahitian society is a society of socially limited relative
abundance, by the crossed game of temporary and permanent prohibitions and periods of
overconsumption.

Food has been one of the first targets of British Protestant missionaries. The puritanism and
the asceticism shown by the North European Protestant cultures consider the culinary
pleasures coarse as the overflowing of the flesh, and the feasts, opposed to a certain idea of
the restraint, are perceived closer to wasting than to some social and cultural meaning. The
irregularity of the "meals", between daily and festive, is fought by the missionaries, in
opposition to the Tahitians food habits: more than the respect for a regular schedule, the
"meals" were previously guided by food availability and time of food preparation.
The missionaries have introduced only few new foodstuffs really consumed by Tahitians
during the first half of the nineteenth century. On the other hand, they have modified in a
systematic way the relationship to food, rites and behavior attached to their production,
preparation or consumption, separating the material aspect of food from the representations
which were attached to it. The Tahitian example enables to verify that food indeed is to be
considered as a place of social normalization.

The circuits of the exchanges between Tahiti and the Pacific nations evolved appreciably
during the second third of the nineteenth century. In spite of some new food (flour, sugar,
dried vegetables, canned food) available in convenience stores since the end of the nineteenth
century which are added to the local food rather than replacing them, the socioeconomic way
of life had not really varied, based essentially on autoconsumption : autoproduction makes
almost the whole population live until 1940. The volume ingested by the Polynesians during a
single meal is always evaluated as superior to that of the Westerners during the first third of
the twentieth century, and the emphasis put on the strong irregularity of these meals during
the day. The first figures available on the calorie content of the food to the Tahitians daily life
consider the daily intake average in 3000 calories in 1934 and in 1947. But between these two
dates, the daily part of calories brought by imported products passes on average of 40 % of
the daily calorie content in 1934, in 58 % of the total calories: the daily food is modified by
the integration with a growing frequency of imported foodstuffs.
Opened to all experiments, largely salaried employees since the beginning of the century, the
Tahitians were henceforth ready to face the experiment of the modern overconsumption,
abandoning more and more the production for the benefit of the only consumption.

The absence of religious tapu on food with the christianization of the society, the massive
financial transfers from metropolitan France during the last forty years which benefited more
the consumption than the investment, and the food availability in networks of modern food distribution, freed the Tahitians of the former constraints. Today, the only limits are of monetary order, but the policy of subsidy of “essential foodstuffs” (produits de première nécessité or P.P.N.) implemented in the 1980s allows a supply in volume of mass factory feedstuffs.

For many Tahitians met during my three years of fieldwork in Tahiti and Moorea, eat, it is to eat as long that there is something to eat. This way of proceeding reminds the Samoan expression *Le polo e naea mea mata*, eats as long as you see the food: it is the food availability which drives the eater, even eating what was prepared for two meals. This philosophy of the satisfaction of the immediate pleasure evokes the remarks of French sociologist Pierre Bourdieu (1979) about hedonism of lower classes “which carries to take from day to day the rare satisfactions (‘the good moments’) of the immediate present (…) only conceivable philosophy for those who, as we say, have no future and who have in any case few things to be expected from the future”. And it turns out that the most socially and economically discriminated group in Tahiti is overrepresented among the *ma’ohi* people.

During a quantitative survey organized in 2001 with more than five hundred households living in Tahiti (Serra Mallol 2007), we showed that the households which declared that “to eat well” was “to eat a lot” declared themselves rather *Ma’ohi*. The volume of the consummate food thus always constitutes a very important factor, joining there the traditional Polynesian representations. Tahitians do not have to count during the meal, and especially during festive meals, the quantities served are not estimated according to the dinner guests, but according to the necessary leftovers and dinner guests' sudden arrivals. They have to plan “more”. The excess is not excess to Tahitians, it is precaution. It is also freedom, absence of controls, constraints and limitations in food, in a life considered more and more binding and factor of particular economic exclusion.

In Tahiti, in food subject, well eating means eating a lot and reciprocally: it is the ingested volume, to feel the sensation of repletion, *pa'iia* in Tahitian, the physical impression of pleasure one gets from the satisfaction of a well filled stomach, which guides the mode of feeding. The valuation of the intestinal load and the feeling of plenitude engendered during the digestion are a constant of most of traditional societies (Garine 1996). We showed that the very strong corpulences were signs of social status in French Polynesia, least until the end of the nineteenth century. Nowadays, the Polynesian culture still values strong corpulences, in spite of the strong influence through television media of the model of the physical thinness. To be big, to have a prominent stomach, *faere* or *'opu fetete*, is not considered as negative in Tahiti, but as “imposing”, in the order of the superlative degree.

Works led in 1995 by the local Direction of the Health (Direction de la Santé 1998) established the daily average ration in 3753 calories for the whole French Polynesia. This rate, reached 3350 calories for women and 4400 calories for men, is almost double to French metropolitan mean value. In a survey we realized the fieldwork in 2002 (Direction de la Santé et Université de Toulouse II 2002), the average rate of obesity was respectively 45 % for women and 42 % for men who define themselves as *Ma’ohi*. In comparison, the rate of
obesity in 2003 is 11.3 % for French adults and 30 % in the United States where obesity is seen as a major problem of public health and a very high social cost.

In this last survey, the average B.M.I. (Body Mass Index) of our sample (1023 persons) was 29.1 kg / m². The study showed clearly the characteristic of the profile of the overweight person in the Society Islands: the B.M.I. increases with the age and with the estrangement of the conglomeration of Papeete, and is connected in a conversely proportional way at the level of studies, to the social and professional status, and with the monthly income of the household. But the criterion which entails the strongest disparity between the subgroups is the ethnic criterion (sentiment d’appartenance communautaire): the B.M.I. so varies for its extremes of 23 (“Asiatic”) to 30 (“Ma’ohi”) by way of 25 for the “Europeans” and 27 for “Half-breed” (“Demis”). According to the definition of degrees of corpulence defined by World Health Organization (W.H.O.), obesity in Tahiti concerns 43 % of the “Ma’ohi” people, 29 % of “Demis” people, 17 % of the “Europeans” and 0 % of the “Asiatics”. The link between obesity and ethnic criterion is so confirmed.

Another important factor which facilitates the development of obesity, and which comes to strengthen the previously evoked factors, is the energy expense. In the Society Islands, the decline of the agriculture, activity which demands an important physical effort, for the benefit of the tertiary activities, is certainly not insignificant on the evolution of the obesity, in particular with low social categories. The cover of the energy needs (the ratio between energy contribution and average energy need defined by W.H.O.) calculated is widely excessive: 62 % of the population cover more than 120 % of their energy needs, and 39 % more than 150 %, while the energy expense is weak.

The processes of biological regulation which allow the reserve of energy in the form of useful fat during the periods of scarcity or shortage continue to work, including when the needs of the body are widely covered in period of “modern” abundance, where the food is more regularly and easily available, and the requirements of the individual and cultural psychology take the step on biological requirements. The Polynesians hyper calorical daily food ration partially explains the very high rate of obesity, with greater risks of metabolic or cardiovascular diseases. The rates of diabetes in the Pacific islands are very important, among the highest in the world on certain islands (Nauru). French Polynesia is situated in the leading nations group.

To eat a lot in a compulsive and irregular way stays a constant of the food habits of the Tahitians. The obesity results from multiple factors where nutritional aspects, cultural habits and socioeconomic determinations get involved. We were able to verify that food consumption patterns and physical representations stemming from pre-European period were able to play a role in the development of this disease. The important rates of obesity and diabetes found in Polynesia are not to put on the only account of a punctual overeating due to a positive perception of strong corpulences. Other factors such as the irregularity of the food intakes, the transformation of food habits and the composition of the daily rations, or even the absence of regular physical activities can influence.
By replacing the obesity in French Polynesia in its “eco-systemic” context, we avoid the stumbling block of a strictly “culturalist” vision which would make overeating and obesity a Polynesian pattern, and for the worst would reject the responsibility on the individuals by risking the stigmatization of a social given group (Ma’ohi people, or the poorest households), without questioning the socio-economic disparities nor asking the question of the relevance of public health interventions (Cognet, 2007). The socio-anthropological dimension of food is essential to understand in what these factors can be associated with the development of obesity. Therefore, the consideration of the socio-cultural and environmental factors in the broad sense, that is integrating political factors (the varied and often convergent interests of the various actors, the modes of organization of food production and distribution) and economical factors (decisions taken locally concerning the taxation of foodstuffs, economical status of the various social groups), and their respective historical evolution, prove to be essential.

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