

## DISCUSSION 1

### MATE CHOICE BASED ON PHYSICAL CHARACTERISTICS

#### MATE SELECTION AND FORCE-FEEDING CUSTOMS IN THE PREHISTORIC POLYNESIANS

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#### Mate Selection in Polynesians

I am not a specialist in this field, but based on my own study of Polynesians, I will just discuss whether there has been some preference for body shape and size among Polynesian people.

Darwin concluded that mating selection has played an important role in the variability among ethnic groups, and wrote that “of all the causes which have led to the differences in external appearance between the races of man...sexual selection has been the most efficient” (Darwin 1901: 925).

It is widely accepted that Polynesian peoples in the South Pacific are taller, more strongly-built, more muscular, more robust than expected in the conditions of dwelling on small islands with poor food resources, and at the same time, they tend to obesity. Seemingly they are good examples to prove the Darwinian theory of mating selection, and a biological anthropologist actually tried to explain these Polynesian physical characters, which are unexpected in their rather poor environments, in the light of the theory named “the Hansel and Gretel Syndrome” (van Dijk 1991).

I would like to direct my discussion to testing this dogmatic statement by referring to historical accounts from several European explorers, and to their paintings of Polynesians in the eighteenth and nineteenth centuries, citing the following examples.

#### <Example 1>

Danielsson (1956) notes about the ‘Polynesian ideal of beauty’ that “to be regarded as perfect, a Polynesian woman must be stout, and that the stouter the better.” He quotes Sir Basil Thompson’s description in Tonga in the late nineteenth century:

The perfect woman must be fat—that is most imperative; her neck must be short... She must have no waist, and if nature has cursed her with that defect she must disguise it with draperies... her bust and hips and thighs must be colossal. The woman

who possesses all these perfections will be esteemed chief like and elegant (Danielsson 1956).

<Example 2>

Teura Henry seems to have thought that the Tahitians believed stoutness to be a mark of beauty characteristic of royal personages, and thin persons were thought to be sick (Oliver 1974).

<Example 3>

Several authors describe a kind of procedure to deliberately fatten people in some island societies. In the Tahitian societies, as described by Oliver (1974), it was called *Ha Apori*, which means fattening. *Ha Apori* was usually performed on both males and females during their teens. Large numbers of youths were shut in one of the large sheds on the island where they were provided with as much food as they could eat. During the time, which was usually a period of several months, they did not get up except for the necessary bodily functions, and slept as much as they could in order to get as fat as possible. They were then displayed in parades for public appreciation (Oliver 1974).

On Mangareva, there is a description by Buck (1938). There the first born sons and daughters of the chief were brought up in *Are Akarau* (fattening house). A large size and fair complexion were considered the physical attributes of chiefly rank; therefore the first born sons of chiefs were secluded and fed on the best food. In spite of the hardships, they all wanted to be submitted to such a regime because, during the rest of their lives, they felt the benefit of the period of fattening. They were always stronger and stouter than the others and hence came the idea that to be a good looking man and a great chief, it was necessary to have a large stomach and big limbs.

Beaglehole and Beaglehole (1938) mentioned a similar procedure in Pukapuka. The sacred maid in Pukapuka was either the first child of a chief or another girl of the chief's lineage. She was deliberately fattened, and represented the cultural ideal of womanhood in the society although, because of her sacred status, she was barred from marriage. The other fattened youths, however, were expected to make good marriages.

Such fattening rituals seem to have been also carried out on Easter Island (Metrax 1971).

As in the examples I quoted here, it appears that there was sexual selection in both sexes for those with a larger-bodied phenotype. Over a relatively short period of time in small colonizing populations, directional selection for body size could have a significant impact on the average phenotype in the population.

At the same time, as Darwin himself argued, it is noticeable that the chiefs and the upper classes in general in Polynesian societies are larger and better favored than the other classes of the society. Ellis noted that "the difference between the rulers and their subjects was so striking that some have supposed they were a distinct race."

Even in the present-day Polynesians, large size seems to be also a sign of status. Baker et al. (1986) made some interesting observations through a study of perception of associations between body size and behavior in a contemporary Samoan group. When asked to identify high status from a group of pictures depicting fat and thin individuals, both men and women perceived the obese individuals to be of high status, and the lean of low status. When the group was asked to identify the most effective chief, 80 percent chose the most obese phenotype. The main reason they gave for their selection was that larger men commanded the most respect and appeared more regal.

Thus, the prestige associated with strength and obesity was, and to an extent still is, ingrained in the ideological structures of Polynesian societies. A large person is considered aesthetically pleasing and of high status.

Van Dijk (1991) jumps to her conclusion that this kind of ethnic attitude in Polynesian societies favors the Darwin concept of mating selection. According to her, a large-size and obese body type was consciously selected for when choosing a marriage partner, and thus those with this particular phenotype were more likely to donate a greater percentage of their genes to the next generation. Over time, as differential fecundity has more effect on natural selection than differential mortality, the phenotypic and genotypic nature of future generations would be altered.

Her speculation sounds as if it makes sense, but it seems to let escape the fact that there are very few historical accounts by European visitors which describe obese Polynesians, and that nearly no painting depicting such Polynesians exists from the eighteenth and nineteenth centuries. Anyway, evidence of a general obesity in the past Polynesians is lacking in the historical record (Houghton 1990, 1996). Obesity was largely confined to the upper levels of society, and a pervading obesity cannot be inferred from the contact record of Polynesia.

In conclusion: Ubiquitous customs of force-feeding and mating selection in prehistoric Polynesia seem an improbable explanation for the impressive physiques of the people there.

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