

inefficiencies of meat production, as the animals consume five times more grains and water than the weight of meat produced.

10.4.1 The meal

Concepts of meals, as the main means of food consumption, have undergone rethinking on two fronts. Not only has it become apparent that affluent westerners set their own eating schedules to fit their work/life situations, but individuals are developing divergent tastes, so that the family meal may no longer meet their needs. Home cooking may be acceptable once in a while, but as households in the western world have reduced the amount of cooking, family dishes and recipes may disappear.

p. 243 The meal has been transplanted from western gastronomical practices into other parts of the world, but with local variations. One meal a day may be feasible, rather than the nutritionist's recommended three meals a day. In many communities like those in the Pacific, that transplant is recognizable in the terms for meals, food in the morning food at noon, food in the evening (Marshallese *manga in jibon*—'food in the morning' etc.). Previously they ate when food was available, such as when fish came ashore, and waited until the next cooked food appeared. Such irregularity was deemed 'uncivilized' by missionaries, who tried to teach local women 'how to cook' and the 'proper' way to serve food (Pollock 1986). Similarly, English missionaries advised that the meal should consist of meat, potato, and vegetables, with bread and wine added by French arrivals. These ideas were often neither feasible nor acceptable in relation to plenty of local foods. New ideas have been equally difficult when they come from nutritionists using a foreign language. Indigenous nutritionists and dietitians brought up in their local food traditions and undertaking nutrition training have elided the two, so that a food pyramid that contains both local foods alongside western foods has carried the message more successfully (Sio 1995).

Nutritionists have faced difficulties in trying to establish individual intakes when many people eat meals in family settings, where the individual has little choice in the contents of the meal. Elaborate methods of measuring individual portions by weighing them before they are consumed, and assessing any wastage, have proved intrusive, and the results are thus considered unreliable (Pelto, Pelto, and Messer 1989). Data can be collected in this way for only two or three days. Anthropological methods of gathering food data have focused on access to foods as they have been recorded over a year-long cycle. Necessarily, only a limited number of households can be included in such longitudinal approaches, but that is considered preferable to the very short survey method.

One advantage of a year-long study of food is that it reveals a wider gastronomic picture. It brings out reasoning behind particular food choices and tastes, as well as rejections of and adjustments to the acceptability of foods. Availability of fuelwood is a key concern that distinguishes cooked food from raw food. Foods such as taro may be inedible in their raw state because of acrid substances; thus ways of cooking in earth ovens have been devised that lessen the demands on fuelwood when this is scarce. Fermented foods may suit local palates whereas they are rejected by those unfamiliar with, for example, rotted corn, or fermented breadfruit or taro. Fermentation may provide additional flavors to bland foods, as well as provisions for seasons when food is short.

p. 244 The concept of food applies to only some resources, while others are rejected. Those rejections are based on cultural rather than biological concepts. Pork is rejected by many who believe it to be an unclean meat (Harris 1985), while many in Euro/American countries reject horse, dog, and whale for emotional rather than biological reasons. Nutritionists have added to these features by assigning negative \downarrow values to too much salt, or sugar, or alcohol, giving as their reasoning that they are associated with high risks to health (Coyne, Badcock, and Taylor 1984). But those negative values may be invisible, and thus rejected by those who enjoy their donuts, or their rum. Similarly reducing intake of calories has been a hard message for