

## **The Signification of Food: Burnt Offerings according to Claude Shannon and Claude Lévi-Strauss**

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Food and communication seem to be mutually exclusive. On the most basic level, that's pretty obvious: you can't talk while eating and vice versa. Food as the primal object of the oral drive needs to be removed in order for the tongue to be freed, so that language can occur. However, on closer inspection the opposition is less clear-cut: food turns out to be always already involved in a process of communication. The prerequisite of eating is the offer of food, starting from the baby that is offered the breast; and that sure is an act of communication. Plus, if you can't both eat and speak, you can nonetheless talk about food and you can, as one says, eat your words, for example by stuttering. Generally, there is a lot of trafficking going on at the border between language and things; you constantly communicate quite a lot by way of objects, and the mouth is the place where objects and words happen to meet in the most intimate and most contradictory ways. The passage of food seems to demarcate the borderline between object and subject, for in eating, the borders between the self and the outside world become blurry; the outside is taken inside, but it also becomes palpable that the self is constituted from the outside, that it can't help blending into the surrounding world. However, that blending always is doomed to remain imperfect, too. One could say that, in eating, the tension between objective thing and the subject's speech is both overcome and eternalized.

However, a similar ambiguity applies to all forms of communication: communication always tries to establish some sort of consensus, be it even that of mutual incompatibility and enmity. However, if convergence is the goal of communication, it is also its precondition. A lot of shared prerequisites, for example a common language, are the basic condition for any communication to occur. So even if it doesn't directly touch its limits, communication is marked by a duality that is always already overcome, but never to be resolved.

In order to deal with these ambiguities, one might be inclined to refer oneself to a branch of knowledge called „communication theory“. What has this scientific domain to offer? Not that much, as it turns out: the only truly innovative scientist who considered himself a „communication theorist“ seems to have been the mathematician Claude Elwood Shannon. Most of his life, he worked as an engineer for Bell Telephone Laboratories as well as a teacher at MIT. „Communication theory“ was largely developed by engineers of his social circle who designed communication systems and the first computers in the Forties and Fifties. The theory was supposed to be an aid in designing and using electronic transmission equipment, phones for example, with maximum efficiency.<sup>i</sup> The most important text in the field is Shannon's article „The Mathematical Theory of Communication“, published in 1949.<sup>ii</sup> During the Second World War, Shannon had been engaged in cryptography, designing digital scrambling devices. The work of Shannon, like that of the other pioneers of computer technology, such as Turing, von Neumann and Wiener, owes a lot to military research funding; „communication theory“, just like the computer, is very much a product of the Cold War. Its concepts were supposed to be helpful in the process of encoding as well as decoding covert messages, that is to say, in

espionage and counter-espionage.

It was communication theory's stated goal to describe quantitatively the transmission of information by way of electronic circuits, as exactly as possible. The basic effect of this endeavour was the creation of a common language for the description of man's communication with man, man's communication with a machine, and a machine's communication with another machine; just as cybernetics found a common language for describing human and mechanic methods of goal attainment. In the process, Shannon defined the smallest unit of information, as the „binary digit“ shortened to „bit“, a unit we have all become somewhat familiar with by now. The epitome of communication in the style of communication theory is a process in which the message source creates a message for a specific goal, encodes that message so that it fits into a pre-given linguistic system and transmits it through a channel that is as free of distortion as possible. Some sort of device is to pick up the message and transmit it to a receiver who or which is then able to decode it and to execute it.<sup>iii</sup> If the goal outlined in the message is achieved, the receiver will provide the appropriate feedback. This whole process was admirably formalized in Shannon's paper. However, even though the applicability of his concepts is rather large, Shannon himself restricted himself to engineering, so he never had the grand ambition to found an all-encompassing science of communication.<sup>iv</sup> However, others tried this when „communication“ became fashionable a little while after the publication of Shannon's paper.

Indeed, „communication“ became one of the „god terms“ of the 1950s, that is, a term with which to explain everything and thereby make everything better.<sup>v</sup> The same function had been taken earlier by the term „education“, and later was appropriated for a while by the term „system“. Just as once „education“ would certainly save the world, an amelioration of „communication“ was supposed to solve all problems then, and afterwards a „systemic approach“ was needed for the attainment of universal goal-attainment. The reason for this impressive career of „communication“ seems to be double-headed: firstly, it was an inoffensive, yet flashy term with which many people liked to associate themselves in the dawning computer age, and secondly it was a good umbrella term for the many ways in which the West considered itself superior to the Eastern Bloc. In short, communication theory became an ideology in the Fifties. Accordingly, later theoreticians didn't break much new ground; instead, they produced endless minor modifications of Shannon's communication model, mostly in order to make it more applicable to human interaction. And irritatingly, every variant proudly called itself a „theory“ or „model“, no matter how commonsensical it was. In the wake of this development, we have an endless list of so-called communication theories which can be mostly reduced to truisms. For example, the „cognitive dissonance theory“, the „expectancy violations theory“, the „uncertainty reduction theory“, the „communication privacy management theory“, the „organizational information theory“, the „communication accommodation theory“ and so on.<sup>vi</sup> Generally, the propagators of „communication theory“ tended to mix psychology, economics, semiotics, anthropology, philosophy, ancient rhetoric, the natural sciences, and common sense into an unhealthy brew of descriptions and prescriptions. Sometimes, they produced nice aphorisms, such as Watzlawick's on the impossibility not to communicate, but little more.<sup>vii</sup> So, despite

their constant critiques and modifications, Shannon's model remained at the core of communications theory, since his critics had nothing to offer that really could replace it.

However, interesting heirs of Shannon can be found in other disciplines, such as philosophy and ethnology. In philosophy, Shannon's terminology fed into a general development that owes most to C. S. Peirce and the late Wittgenstein. It stressed that a sign is not so much defined by what it designates, but more by what it does, that is, by the effects it produces. This line of thought was for example developed in John Austin's „speech act theory“ which examined to what extent the boundaries between acts and words are flexible. Another aspect of Shannon's paper also had large repercussions: for, according to him, you didn't need to be conscious in order to communicate. The communication event carrying a signal from the source, over the transmitter and the channel to the receiver can unfold in electronic circuits in its entirety, without the intervention of any conscious subject whatsoever. This insight inspired countless thinkers, among them the French ethnologist Claude Lévi-Strauss who combined it with Freud's concept of the unconscious. And it's worth investigating his contribution a little, since it will lead us back to the question of food.

It has to be remarked that Lévi-Strauss trained as a philosopher, got tired with it and subsequently switched to ethnology. He did a little fieldwork in Brazil, but mainly he is an armchair anthropologist, synthesizing a quite astounding number of ethnographical studies into his work which always deals with the question of what defines human society. Lévi-Strauss insists that the whole of society can be interpreted „in terms of a theory of communication“<sup>viii</sup>, by which he means that human culture is the product of messages that are embodied in signifying practices and not subject to conscious decisions. The most basic of these are of course the ones regulating the most basic drives, that is sex and hunger. The two practices that constitute human society are on the one hand the exchange of women according to the incest taboo and, on the other hand, the practice of food preparation, which he calls „cuisine“. The first book of Lévi-Strauss, „The Elementary Structures of Kinship“, deals with sex and marriage rules.<sup>ix</sup> However, his most extensive work, „Mythologiques“, focuses on food: especially the first three volumes: „The Raw and the Cooked“<sup>x</sup>, „From Honey to Ashes“<sup>xi</sup> and „The Origin of Table Manners“<sup>xii</sup>.

Lévi-Strauss conceives of cuisine as the primary practice by which humanity marks its difference from the natural world, since no animal cooks its food, but all human societies do it. By cooking, man draws a distinction between nature and culture, which is the primal signifying act from which all others will derive. The practice of cuisine founds the cultural world within the continuum of nature. When food crosses the threshold from the raw to the cooked, mankind steps out of the chain of eaters being eaten and emerges in a field of signification that is distinct from the natural world. Cooking could be called the primary signifier, which is not done by Lévi-Strauss himself, but implicit in his argument. From this nucleus, the whole order of language is established, structuring both space and time. For example, food often structures social time: the first big meal of the day tends to be situated at daybreak, the second at nightfall. According to Lévi-Strauss, the symbolic order is mainly constituted out of those binary oppositions which allow man to orient

himself in the world. Examples of such oppositions besides night and day are man and woman, upriver and downriver, life and death, heat and cold.

The order relating all those oppositions first unfolds in the tales man tells in order to make sense of his surroundings, that is, in myths. All the oppositions that are relevant to man, e.g. that of nature and culture, are mediated by myth, but myths also let him preserve their respective boundaries. Often, myth is focused on a cultural hero who brings mankind culture in the form of hunting weapons and fire. The precondition of any cuisine is, of course, the control of fire, since fire is needed for frying and cooking. At the beginning of the myth, the fire is usually the exclusive property of the sun, or of a totem animal that represents the sun, such as the jaguar or another big, dangerous animal. Often the cultural hero or trickster becomes friends with the sun or the jaguar, then steals the fire and transmits it to mankind who subsequently develop cuisine; all the jaguar manages to preserve is the fire in his eyes. Often, this theft is also considered the reason for the change of night and day, the sun cautiously withdrawing for sleep and then reappearing. This theft of fire is justified by the results: the hearth fire used for cooking mediates between sun and earth, it is the tamed, domesticated fire. It is not only good for mankind, it is good for the whole natural order: with the untamed fire, one always runs the risk that it may reduce everything to ashes. This is affirmed by other myths according to which the sun was once closer to the world, so that meat could be roasted by just exposing it to the sun beams. But after a great conflagration, the sun removed farther off which triggered a time of cold and decay until the fire was stolen from heaven. According to this myth, fire destroys, but the absence of fire also destroys; the domesticated fire differentiates by creating a livable world.

This view of the world is complicated by the fact that some substances exist that don't have to be processed before one eats them; one prominent example is honey. These foodstuffs are often considered somewhat dangerous, magical substances. The myths often tell of people who got too fond of honey and subsequently were eaten by the totem animal or got lost in the wild; that is, they became unable to preserve the distinction between wilderness and civilization. The distinction of the raw and the cooked is further complicated by the fact that it repeats itself within cuisine. That is, there are diverse modes of food processing, such as cooking, roasting, frying and smoking which all relate food and fire differently. They can all be arranged on a scale ranging from immediate to very mediated, therefore more civilized contact; that is, from roasting, which presupposes nothing but the fire itself and a stick to hang the meat from, to genuine cooking for which at least a pot and water are also needed. The system of oppositions becomes ever more differentiated, seemingly all by itself, without anyone actually intending this result.

Now, since food is treated as a kind of speech, it obviously demands the absence of speech distortion, that is, the absence of noise. In this logical conclusion from basic mythical structures, Lévi-Strauss sees one of the origins of table manners, according to which you should largely remain silent while you prepare food and while you eat, or at least keep conversation during meals within very restricted boundaries of conventionality. The acts of cuisine demand the restriction of noise, whereas proximity of the sun is associated with wild noise and the absence of the sun with the unbreakable

silence of death. That is why some tribes try to fight eclipses with noise, by the way. Cuisine passes between the Scylla of information overload and the Charybdis of total communication loss. Its order emerges in the specific cries of each animal, and in the proper name of each individual<sup>xiii</sup>, since this whole nomenclature used in ordering the world seems to spring from the difference of the raw and the cooked. Consequently, Lévi-Strauss and his followers regard the widespread food taboos as a sort of feedback effect, since those taboos often prohibit the consumption of animals who don't fit neatly into the binary category system which society has built around natural phenomena. For example, amphibious creatures who subvert the distinction between land animals and water animals are often considered unclean and dangerous to eat.

According to Lévi-Strauss, the cuisine of a society is an unconscious language in which its own structure is figured. Food is a code whose message is the structure of a whole society and its relation to the outside world. If it is communicated, it is communicated to nobody in particular; it is considered sufficient that the information can be preserved in an unending circuit.

To finish this little talk, I would like sketch how we might have got from there to here, that is, to theorize about the major modifications that the relationship of communication and food seems to have undergone in the passage to modernity. First off, social hierarchies have been introduced which express themselves by food distribution. The meal itself tends to communicate social stratifications to all participants. For example, the person who is served first or who is allowed to eat first will usually have a dominant position in the group. It is also relevant who is allowed to sit where at the fire or at the table. Later on, different classes will tend to eat differently. Besides, food is always a product of labour and a product of consumption, it is both output and input, so to speak. And in this respect, it is also relevant who can be forced to produce food that will be eaten by others and so on. In this context, the growing importance of plates is an interesting development. Originally, everybody seems to have served himself out of the common pot. When the plate is introduced, however, it clearly delimits the share that is apportioned to each member of the company. From the outset, it designates to everybody what is due to him or her.<sup>xiv</sup> One might read this as a symptom of growing individualism, but also as an attempt to control everybody's intake. Overall, a general characteristic of food underlies those tensions: food separates, but it also unites. It is by definition egotistical: what I eat, another can't eat; and what another eats, I can't eat. But it is also communal: it is a habit shared by everybody, since everybody has to eat.<sup>xv</sup> One might call this the basic social ambiguity of food. In order to deal with this ambivalence, religions tend to develop a ritual which stresses the commonality of the eaters over their differences. That is, they tend to develop some form of holy, sacrificial meal, which allows the participants to commune with the godhead by way of ingestion, but which also fosters communion of the congregation members among themselves, regardless of social differences. The intercourse between gods and men in the temple tends to be centred on such a food sacrifice; and that is true of Ancient Mesopotamia, of Egypt, Greece, Rome, China, and so on. Christianity too can be described as a food religion trying to deal with the ambiguity of food. Its main rite is, of course, the eucharist, in which the son of God is eaten by the congregation. In the Middle Ages and in early modern times, a Christian was

required by law to receive communion at least once a year. There were other food commandments, for example to keep certain fast days and not to eat meat on Fridays in remembrance of the crucifixion. When a young man returned from the Crusades as a Muslim, his family accepted him back into their home first, and only kicked him out after he had insisted on eating meat on Friday.<sup>xvi</sup>

Since Saint Paul, the eucharist is supposed to unite its recipients as well as its constituents into one body which is the mystical body of Christ. Saint Augustine has subsequently pointed out that by eating the body of Christ and by drinking his blood, the congregation doesn't so much assimilate the saviour as it is absorbed into his divine, eternal body.<sup>xvii</sup> To put it bluntly, the believers who receive communion don't so much eat as they are eaten by the divine body embodied in bread and wine. They sacrifice themselves to Christ who has sacrificed himself for them. One might say that this doctrine admirably expresses the social ambiguity of food.

In early modern times, the forced mutual cannibalism of the eucharist lost its importance. The dogma of trans-substantiation was contested during the Reformation, and the reading of the Bible took the place of the eucharist as the central act of worship. To put it somewhat schematically, one might say that the Divine Body ceased to be food and became a text. But at the same time a return of the repressed ambivalence of food seemed to occur in the insistent Western phantasm of cannibalism. Cannibalism was an important topic in these days, always ascribed to others, particularly the Jews, the Indians, and the Africans. The growth of colonialism was justified by the necessity to eradicate such disgusting practices. Slavery was vindicated by the supposition that its victims used to be cannibals before they became useful contributors to the development of enlightened humanity. Of course, it's the colonizers who were really consuming people, so to speak. One of the most prominent consequences of this development were the huge plantations who produced sugar, tea, and coffee. All three items used to be luxury goods in the Middle Ages, but the plantations made them common fare, so that even the working classes could afford them. As „proletarian hunger-killers“ they contributed significantly to the further development of capitalism.<sup>xviii</sup> Connected with this colonial expansion and the exploitation of new food resources by way of new trade routes, was a development which might be labeled the industrialization of food, for example the improvement of preservation methods which made food a more timeless and spaceless commodity.

In the 20th century, this process has been largely perfected, while the military-industrial complex has gradually taken over both the food industry and the communication industry. In first world countries, industry and electronic communication enable the erosion of the temporal and spatial boundaries formerly defining food consumption. As becomes apparent in food advertisements, the way one eats nowadays signifies the way one consumes generally, it is a lifestyle choice, pressed on us by the market. Further investments have the capacity to gradually absorb the distinction between nature and culture, the unprocessed and the processed, within itself; genetically manipulated food may be ringing in the end of nature, since man has gained access to the structures of life itself and is able to modify them. When we eat nowadays, we therefore no longer commune with God or nature while affirming our distance from it. We commune with

capitalism, without being able to distance ourselves from it, since it appears on both sides of the equation. There's isn't much of a chance to stop this general development, so perhaps the best we can do at this point is to eat some of our words. Like this.

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<sup>i</sup> Ernest G. Bormann, *Communication Theory*, Holt, Rinehard and Winston: New York, 1980, p. 12.

<sup>ii</sup> Claude E. Shannon and Warren Weaver, *The Mathematical Theory of Communication*, Urbana/Chicago: University of Illinois Press, 1969.

<sup>iii</sup> Bormann, *Communication Theory*, p. 89.

<sup>iv</sup> Sue Curry Jansen, *Critical Communication Theory, Power, Media, Gender, and Technology*, Lanham: Rowman & Littlefield, 2002, p. 78.

<sup>v</sup> Bormann, *Communication Theory*, p. 3.

<sup>vi</sup> E. g.: Lynn H. Turner and Richard L. West, *Introducing Communication Theory: Analysis and Application*, Boston: McGraw-Hill, 2004.

<sup>vii</sup> Paul Watzlawick, Janet Helmick Beavin and Donald DeAvila Jackson, *Pragmatics of Human Communication, A Study of Interactional Patterns, Pathologies, and Paradoxes*, London: Faber & Faber, 1968.

<sup>viii</sup> Claude Lévi-Strauss, *Structural Anthropology*, New York; Basic Books, 1963, p. 83.

<sup>ix</sup> Claude Lévi-Strauss, *The Elementary Structures of Kinship*, Boston: Beacon Press, 1969.

<sup>x</sup> Claude Lévi-Strauss, *The Raw and the Cooked*, Chicago: University Of Chicago Press, 1983.

<sup>xi</sup> Claude Lévi-Strauss, *From Honey to Ashes*, Jonathan Cape: London, 1973.

<sup>xii</sup> Claude Lévi-Strauss, *The Origin of Table Manners*, Chicago: University Of Chicago Press, 1990.

<sup>xiii</sup> Lévi-Strauss, *From Honey to Ashes*, p. 326.

<sup>xiv</sup> Georg Simmel, *Soziologische Ästhetik*, Bodenheim: Philo, 1998, p. 186.

<sup>xv</sup> Simmel, *Soziologische Ästhetik*, p. 183.

<sup>xvi</sup> Caroline Walker Bynum, *Fast, Feast and Flesh, The Religious Significance of Food to Medieval Women*, in: Carole Counihan and Penny van Estrik (Ed.), *Food and Culture, A Reader*, New York/London: Routledge, 1997, p. 139.

<sup>xvii</sup> Aurelius Augustinus, *Der Gottesstaat, De Civitate Dei, Erster Band*, Paderborn: Schöningh, 1979, p. 627.

<sup>xviii</sup> Sidney W. Mintz, *Sweetness and Power, The Place of Sugar in Modern History*, New York: Viking, 1985.