

CACOGRAPHY OR COMMUNICATION?

Cultural Techniques of Sign-Signal Distinction

SERRES AND SIGNS

During the eighteenth century the general concept of the *sign* acted as a point of departure for the subdivision of knowledge into aesthetics (with all its internal distinctions) on the one hand and philosophical and scientific disciplines such as economy and medicine on the other. In the course of the twentieth century, however, the sign fragmented into more or less sharply separated constituted components which, in turn, became the foundational basis for a number of autonomous objects and scientific disciplines. Among the discourses arising from the decomposition of the sign, three are particularly distinct: first, the discourse of mathematical or formal logic that speaks of symbols and formal systems or languages; second, the discourse of modern linguistics and semiotics that speaks of signs, of signifiers and signifieds, synchronic systems and diachronic change;¹ and third, the discourse of communications technology that deals with signals and the physical properties of transmission conduits. While these sign disciplines are modeled on the natural sciences, the aesthetic and rhetorical aspects of the eighteenth-century semiotic discourse ended up on the side of the arts as objects of literary studies. In the early 1950s, in the wake of the new mathematical theory of communication, elements of information theory entered linguistic discourse. Saussure's distinction between *langue* and *parole* was replaced by Roman Jakobson's distinction between *code* and *message*—a terminology informed by the mathematical theory of communication and cryptology, that is, by World War sciences. In the early 1960s, however, the mathematician, philosopher, and historian of science Michel Serres proposed a simple, trifunctional model of the sign that moved the physical materiality of

the channel—in other words, noise—into the center of philosophical and poetological reflection on the sign.

In his study *The Parasite* (*Le parasite*, 1980), Serres developed the concept of the parasite into a multifaceted model that makes it possible to employ both communication theory and cultural theory to arrive at an understanding of cultural techniques. This conceptualization of the parasite is particularly interesting because it combines three different aspects. First, there is an information- or media-theoretical aspect linked to the French double meaning of *le parasite*, which in addition to having the same meaning as the word in English can also refer to noise or disturbance. Second, by crossing the boundary between human and animal, the semantics of the parasite bring into play cultural anthropology. Third, the references to agriculture and economics inherent in the term introduce the domain of cultural technology. What strikes me as revealing from the point of view of the history of theory, however, is the fact that it was a reevaluation (carried out under the influence of Claude Shannon) of the Bühler-Jakobson model of communication that allowed Serres to sketch out a concept of cultural techniques capable of combining different methods and approaches.

Serres's concept of the parasite emerged in the early 1960s when logicians were once again discussing the properties of the symbol. His initial point of departure was to replace Alfred Tarski's categorical distinction between *symbol*, as defined by logicians, and *signal*, as defined by information theorists, with the very *problem of distinction*. That is, Serres inquired into the conditions that enable this distinction in the first place. According to Serres, the object of investigation for mathematics and logic, the symbol as *être abstrait*, is constituted by the cleansing of the "noise of all graphic form" or "cacography."² The conditions for *recognizing the abstract form* and for *rendering communication successful* are one and the same.³ Logic, then, appears to be grounded in a culture-technical fundament that is not reflected upon.

The concept of the parasite implies a critique of occidental philosophy, in particular, a critique of those theories of the linguistic sign and economic relationships that in principle never ventured beyond a bivalent logic (subject-object, sender-receiver, producer-consumer) and inevitably conceived of these relationships in terms of exchange. Basically, Serres enlarged this structure into a trivalent model. Let there be two stations and one channel connecting both. The parasite that attaches itself to this relation assumes the position of the third.⁴ However, unlike the linguistic tradition from Locke to Searle and Habermas, Serres does not view deviation—that is, the parasite—as accidental. We do not start out with some kind of relation that is subsequently disturbed or interrupted; rather, "[t]he deviation is part of the thing itself, and perhaps it even produces

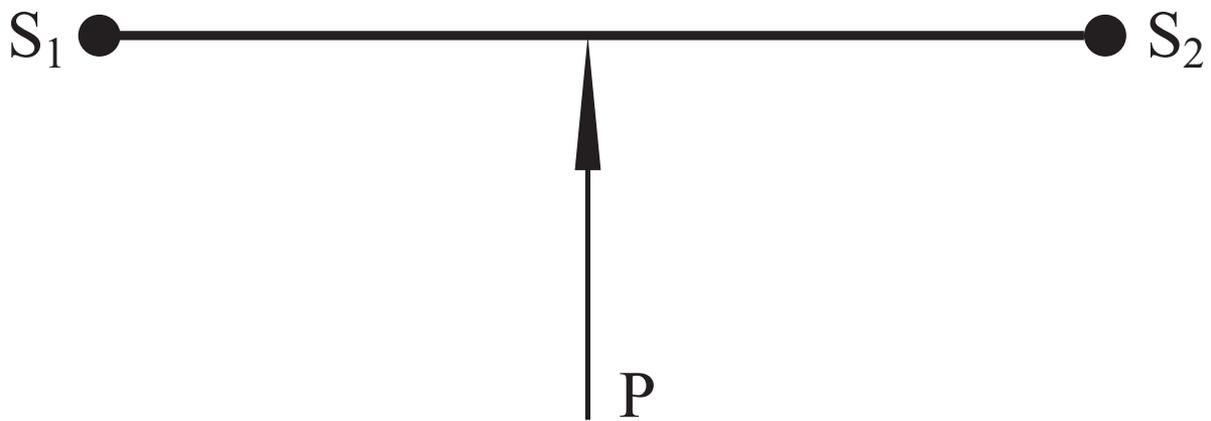


FIGURE 1-1. Michel Serres' trivalent model of communication. Reprinted from Serres, *The Parasite*, trans. Lawrence R. Scher, 53.

the thing.”⁵ In other words, we do not start out with an unimpeded exchange (of thoughts, goods, or bits); rather, from the point of view of cultural anthropology, economics, information theory, and the history of writing, it is the parasite that comes first. The origin lies with the pirate rather than with the merchant, with the highwayman rather than with the highway.⁶ Systems that exclude pirates, highwaymen, and idlers increase their degree of internal differentiation and are thus in a position to establish new relations. The third precedes the second: That is the beginning of media theory—of any media theory. “A third exists before the second. A third exists before the others. . . . There is always a mediate, a middle, an intermediary.”⁷

In Serres's model of communication the fundamental relationship is not between sender and receiver, but between communication and noise. This corresponds to the definition of the culture-technical turn outlined above: Media are now conceptualized as code-generating interfaces between the real that cannot be symbolized and cultural orders. “To hold a dialogue,” Serres already wrote in 1964, “is to suppose a third man and to seek to exclude him; a successful communication is the exclusion of the third man.”⁸ Thus Serres inverts the hierarchy of the six sign functions in Jakobson's famous model (Figure 1-2).⁹ It is not the poetic or the referential function that (according to the type of speech) dominates the others, but the *phatic function*, the reference to the channel. Hence in all communication each expression, appeal, and type of referencing is preceded by a reference to interruption, difference, deviation. “With this recognition the phatic function becomes the constitutive occasion for all communication, which can thus no longer be conceptualized in the absence of difference and delay, resistance, static, and noise.”¹⁰

The phatic function—that particular function of the sign that addresses the channel—was the last of the six functions introduced by Jakobson in 1956. Its archeology once again reveals the culture-technical dimension of the

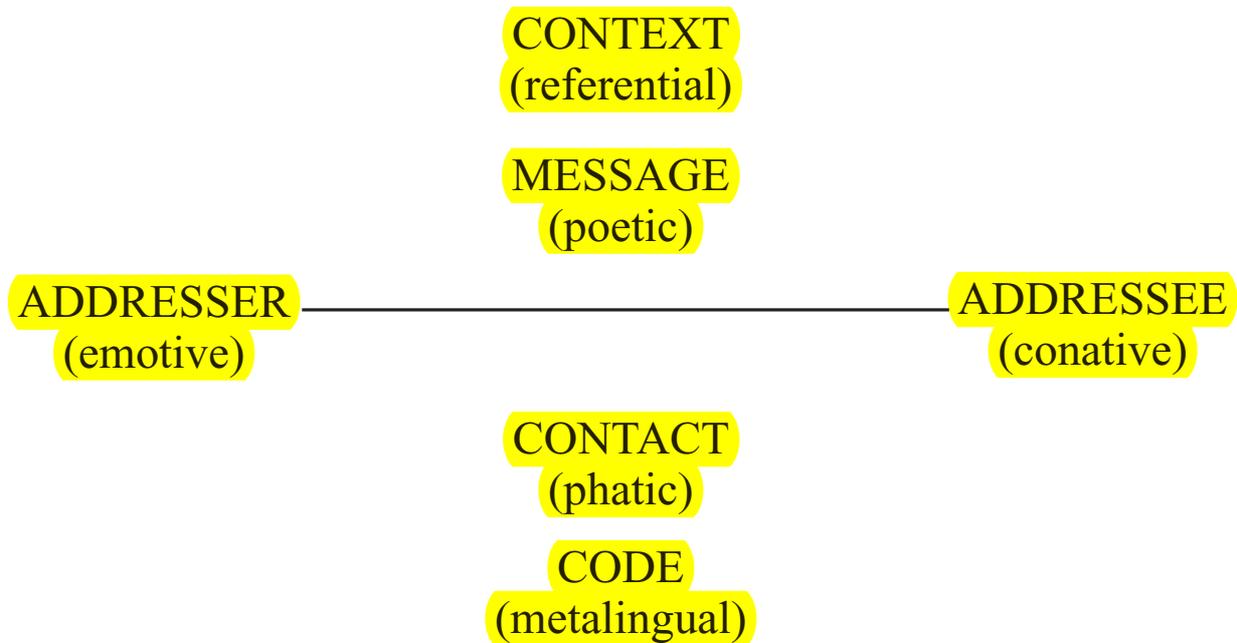


FIGURE I-2. Roman Jakobson's six basic functions of language. Reprinted from Jakobson, "Linguistics and Poetics," in *Style in Language*, ed. Thomas Sebeok, 353.

communication concept. It was first described in 1923 by Bronisław Malinowski, though he spoke of "phatic communion."¹¹ Using the communication employed during Melanesian fishing expeditions as an example, Malinowski—who in the wake of Ogden and Richards was working on a theory of meaning linked to situational contexts—developed a model of meaning that he called "speech-in-action." *Phatic communion*, however, denotes a linguistic function in the course of which words are not used to coordinate actions, and certainly not to express thoughts, but one in which a community is constituted by means of exchanging meaningless utterances. When it comes to sentences like "How do you do?" "Ah, here you are," or "Nice day today," language appears to be completely independent of the situational context. Yet there is in fact a real connection between phatic communication and situation, for in the case of this particular type of language the situation is one of an "atmosphere of sociability" involving the speakers which, however, is created by the utterances. "But this is in fact achieved by speech, and the situation in all such cases is created by the exchange of words. . . . The whole situation consists in what happens linguistically. Each utterance is an act serving the direct aim of binding hearer to speaker by a tie of some social sentiment or other."¹² The situation of phatic communion is therefore not extralinguistic, as in the case of a fishing expedition; it is the creation of the situation itself. It is a mode of language in which the situation as such appears, or in which language thematizes the "basis of relation."

There are remarkable resemblances between Malinowski's discussion of phatic communion and Serres's theory of communication, according to which communication is not the transmission of meaning by the exclusion of a third. Malinowski observes:

The breaking of silence, the communion of words is the first act to establish links of fellowship, which is consummated only by the breaking of bread and the communion of food.¹³

Malinowski's parallel between the communion of food and the communication of words establishes an intrinsic connection between eating and speaking that is also apparent in Serres's model of the parasite.¹⁴ For Malinowski as well as for Serres, to speak in the mode of "phatic communion" is at first merely an interruption—the interruption of silence in Malinowski's anthropological model and the interruption of background noise in Serres's information-theoretical model. Communication is the exclusion of a third, the oscillation of a system between order and chaos. Without a doubt, the link between Malinowski's phatic communion and Serres's "being of relation" (i.e., the parasite) is Jakobson's functional scheme that short-circuits the channel (in the sense of Shannon's information theory) with Malinowski's "ties of union": "The phatic function is in fact the point of contact between anthropological linguistics and the technosciences of information theory."¹⁵

For Serres, then, communication is not primarily information exchange, appeal, or expression, but an act that creates order by introducing distinctions; and this is precisely what turns the means of communication into cultural techniques. As stated above, every culture begins with the introduction of distinctions: inside/outside, sacred/profane, intelligible speech/barbarian gibberish or speechlessness, signal/noise. A theory of cultural techniques such as that proposed by Serres, which posits the phatic function as its point of departure, would also amount to a history and theory of interruption, disturbance, deviation. Such a history of cultural techniques may serve to create an awareness of the plenitude of a world of as-yet-undistinguished things that, as an inexhaustible reservoir of possibilities, remains the basic point of reference for every type of culture.

I will illustrate this using three examples from completely different media-historical constellations. The first example involves two elementary cultural techniques of the early modern age, the usage of zero and the typographic code; the second concerns the parasite as a message of analog channels; and the third focuses on the relationship between noise and message in digital media.

On his way to the court of the Ottoman emperor in 1555, Ogier Ghiselin de Busbecq, an ambassador in the service of Ferdinand I of Austria, came across a Latin inscription on the wall of a temple (to be precise, of a Sebasteion, a temple dedicated to a Roman emperor) in the precinct of the Haci Beiram Mosque in Angora (Ankara). Busbecq had no difficulties identifying it as copy of the famous *Index rerum gestarum*, the account of the achievements of Augustus written by the emperor himself. The heading gave away the author:

RERVM GESTARVM DIVI AVGVSTI QVIBVS ORBEM TERRARVM IMPERIO POPVLI ROMANI SVBIECIT ET INPENSARVM QVAS IN REM PVBLICAM POPVLVMQVE ROMANVM FECIT INCISARVM IN DVABVS AHENEIS PILIS QVAE SVNT ROMAE POSITAE EXEMPLAR SVBIECTVM.¹⁶

Below is a copy of the acts of the Deified Augustus by which he placed the whole world under the sovereignty of the Roman people, and of the amounts which he expended upon the state and the Roman people, as engraved upon two bronze columns which have been set up in Rome.

The discovery of this monument of occidental cultural history, which nineteenth-century classical scholar Theodor Mommsen called the “queen of inscriptions,” was by no means accidental. Throughout his journey across the Balkans and Asia Minor, Busbecq had been trying to communicate with classical antiquity. His media of communication were inscriptions and coins, his communication format was the *lectio*, in the double meaning of collecting and reading—a Judeo-Christian variant of the cultural technology that combines the cultivation of the land with the practice of reading. The biblical topos is the story of Ruth the Moabite, who plucked ears of corn left by the reapers on the field of Boaz and who was chosen to be an ancestor of King David (Ruth 2:4). Medieval monastic didactics turned Ruth the parasite into the ideal student who—to quote the prologue to the tenth-century sermons of the abbot of Morimond—by means of copying “collects the heavenly bread which is the word of God in order to satisfy the hunger of his soul.”¹⁷

In less humble fashion, the editor responsible for the first appearance of the *Res gestae* in print spoke of the more than two hundred Greek inscriptions that Busbecq “harvested with his writing tube [*calamo exarata*].”¹⁸ Difference and deviation have turned into cultural techniques that process residues and leftovers. Culture itself appears as a bricolage of spoils. Yet the communication with antiquity envisioned by Busbecq turns out to be a laborious venture, for the channel linking him to that antiquity is inhabited by another, more powerful

parasite: the Turks. To begin with, the Turks either used antique coins as weights or melted them down to manufacture bronze vessels.¹⁹ In addition, the Turkish transmission of biblical times and ancient Greek appeared to be, quite literally, deranged: “The Turks have no idea of chronology and dates, and make a wonderful mixture and confusion of all the epochs of history; if it occurs to them to do so, they will not scruple to declare that Job was a master of the ceremonies to King Solomon, and Alexander the Great his commander-in-chief, and they are guilty of even greater absurdities.”²⁰ Busbecq learns in passing that history is a function of contingent cultural techniques. The Ottoman realm is just one of many possible cultures that were not realized in the Christian or European domain; in this quotation, the possible appears as the deranged, which is another name for parasitical deviation. Thus we encounter a problem that concerns the history of cultural techniques on a very basic level: namely, that history is itself an order produced by cultural techniques. As Busbecq writes, parasitical intrusions by the Turks are to blame above all for the fact that he keeps running into illegible Greek and Roman inscriptions. Such was the case with the *Monumentum Ancyranum*:

I had it [the inscription] copied out by my people as far as it was legible. It is graven on the marble walls of a building, which was probably the ancient residence of the governor, now ruined and roofless. One half of it is upon the right as one enters, the other on the left. The upper paragraphs are almost intact; in the middle difficulties begin owing to gaps; the lower portion has been so mutilated by blows of clubs and axes as to be illegible. This is a serious loss to literature and much to be deplored by the learned.²¹

The comments written by conquerors are truly shattering.

Busbecq’s copy of the *Res gestae* appeared in print for the first time in an Aurelius Victor volume edited by Andreas Schott in 1579. Humanists like Schott, who commanded the new typographic storage technology, were charged with removing fragments from stone, or from the reach of barbarian writing utensils, and, by making use of the new print medium and the system of courtly libraries, with rendering them legible enough to facilitate a new communication with antiquity undisturbed by any barbarian influence. Under these conditions, however, the real location of the letters on the interior walls of a temple surrounding the reader cannot be addressed. “Media lacunis laborare incipient”—“in the middle difficulties begin owing to gaps,” Busbecq writes in his letter of 1555. “Desunt quaedam”—“a lot is missing,” comments the editor in charge of the typographic reproduction of 1579. Where Busbecq had used a locative adjective in order to speak of gaps, Schott refers to missing

same space that is taken up by the commentary on paper, the space that is marked by the dots: It is the space of the text, a topological, “digitized” space.

Schott’s dots uncover for all the world to see what in the case of undisturbed textual communication remains hidden: that by making use of a parasitical (supplementary) carrier, the text refers to a symbolic order based on a place-value system. There is an obvious analogy to another cultural technique, the Indo-Arabic place-value system imported by thirteenth-century Italian merchants. In our numeral system, tens, hundreds, and thousands are not explicitly written out; they are always already implicitly coded by the place that has been assigned to a digit. It is important to keep in mind that in the Indo-Arabic numeral system the spatial extension of the paper is an integral part of the numerical sign. This becomes evident in the case of zero, which marks the spatiality of the digit in the symbolic. Place-value systems are codes that take into account the media employed to store and transmit them. The channel, the parasite, is not *supplementary*, but *the ground* for the operability of numerals. Digits are signs that can be absent from their place (as opposed to Roman numerals, which cannot be absent from their place because they have no place value). In turn, the dots introduced by Schott as signs for missing textual units are invisibly present in every letter, and only become visible when the letter is missing. Just as the invention of zero allows us to write the absence of a digit, Schott’s dot is an invention that allows us to write the absence of a letter, thereby turning real gaps into a set of discrete, countable elements. The real is digitized; and the textual space is removed from barbarian cacography.

Brian Rotman has drawn attention to the close relationship between early modern algebra—as a symbolic order based on zero—and linear perspective.²⁵ The only position that the reading subject can assume vis-à-vis a printed text is the same that the viewing subject assumes vis-à-vis a perspectival picture. It is the position “of the Gaze, a transcendent position of vision that has discarded the body . . . and exists only as a disembodied *punctum*.”²⁶ With this in mind, a second parallel between linear perspective and typographic textual order suggests itself. Just as Leon Battista Alberti’s treatise *Della pittura* (*On Painting*) has the surface of the painting act as a window that allows us to see the objects located beyond by imposing an orthogonal grid, typographic digitization renders the monument—in Foucault’s words—transparent.²⁷ Gazing through the printed text, we behold the true, indestructible, and complete text of the *Res gestae* in much the same way that we catch sight of the true shape of things through Alberti’s window. Whereas the real still allowed for the possibility of a necessarily fragmented text, typographic coding gives rise to the notion of a necessarily complete text.²⁸ The third precedes the second: The

typographic channel constitutes antiquity as a communication partner for humanist readers.

ANALOG MEDIA

My second example concerns a further attempt, undertaken around three hundred fifty years later, to install a communication channel between the present and Roman antiquity, Franz Kafka's famous "Pontus dream":

Very late, dearest, and yet I shall go to bed without deserving it [Kafka writes to his fiancée Felice Bauer]. Well, I won't sleep anyway, only dream. As I did yesterday, for example, when in my dream I ran toward a bridge or some balustrading, seized two telephone receivers that happened to be lying on the parapet, put them to my ears, and kept asking for nothing but news from "Pontus"; but nothing whatever came out of the telephone except a sad, mighty, wordless song and the roar of the sea. Although well aware that it was impossible for human voices to penetrate these sounds, I didn't give in, and didn't go away.²⁹

The dream represents a new version of the old invocation of the Muses.³⁰ It is no longer the mouth of a Homeric Muse that speaks at the origin of language, but the background noise of the telephone channel, the signal-theoretical "ground of being," as Serres would have it. No sign penetrates this noise to reach the ears of the dreamer, just an uncoded signal. That wordless song is also "the only real and reliable thing" transmitted by the phones in Kafka's *Castle*.³¹ It is a message almost entirely reduced to its phatic function of referring to the channel as a nonrelating entity (i.e., as a parasite). From a technohistorical point of view, it is possible to identify this song as the voice of the telephone introduced by Philipp Reis in 1863; a reading, incidentally, supported by the context of Kafka's letter.³² But the importance of this technohistorical reminiscence only becomes apparent once the song emanating from the receivers is deciphered as an allusion to the Siren songs of the *Odyssey*, for the latter explains the alluring and seductive quality of the song that chains the dreamer to the receivers. It is the lure of death. Kafka moves the mythic origin of language (and of culture) from the anthropological domain to that of the nonhuman, where the distinctions between language and noise, animals and humans are abolished, and which threatens—or rather, seduces—Ulysses with his own demise. The origin of language has been relocated to the realm of nonhuman signaling technology, and it is there that the dreamer hopes to hear the classical voice of Roman antiquity. For the "news from Pontus" is in fact nothing but Ovid's *Tristia*, with which the exiled poet tried to retain his *latinitas* by putting into words his

despair over being exiled to the Black Sea. This experience of alienation as a distance from humanity, this barbarism in the classical sense, is no longer located in the non-Latin sounds emanating from barbarian mouths; it is now based on the noise of a technical channel that human voices cannot traverse. The conceptual frame that determines the Other as well as the humanity of one's own voice has been shifted: In the age of technological media, being barbarian (or human) is no longer defined by the geographical and confessional boundaries of Christian Europe but by the difference between signal and noise. This, however, is a difference that alters the relationship between cultural techniques and parasites. Figure 1-3 may illustrate this: It is an ad for the telegraph developed by Pollák and Virág that was able to transmit handwritten messages, but that was only able to do so because it defined handwriting as just another cursive script or cacography.³³

For the Pollak/Virág telegraph, handwriting is a signal much like the song of the sirens. Writing, that elementary cultural technique, emerges out of an operation that concerns the channel (the parasite) itself: It is the filtering out of signals from noise. This is, no doubt, an apocryphal example that cannot claim more than emblematic value. Yet, as my final example will clarify, the logic it illustrates becomes nothing less than systemic in the dominant cultural technique of our present: the order of digital signals.

DIGITAL MEDIA

In 1968, the Saarländische Rundfunk and Radio Bremen broadcast a radio play by Max Bense and Wolfgang Harig that presented Claude Shannon's mathematical theory of communication as an approximation to a natural language.³⁴ Entitled *Der Monolog der Terry Jo* (The Monologue of Terry Jo), the play referred to a girl who had been found in a boat adrift off the coast of Florida in November 1961. Though unconscious, she spoke incessantly; and the play starts out with a computer-generated text that in nine steps gradually approaches her uninterrupted flow of speech. By staging the discourse of an unconscious in such a way, the play demonstrates that in the age of signal processing, meaning is nothing but "a sufficiently complex stochastic process."³⁵ Shannon had demonstrated in his "Mathematical Theory of Communication" (1949) how, regardless of any grammatical deep structure or system of meaning, a natural language may be synthesized using a series of approximations, whereby the selection of a given letter depends on the probability with which it follows the preceding letter (digram structure), the two preceding letters (trigram structure), and so on.³⁶ *The Monologue of Terry Jo* starts out with a zero-order approximation, that is, all signs are independent of one another and equiprobable:

“fyuiömge—sevrhvkfds—züä-sewdmnhf—mciöwzäikmbw . . .” It then proceeds via a first-order approximation (symbols are still independent of one another but occur with the frequencies of German text) to a second-order approximation (German digram structure): “enie—sgere—dascharza—vehan—st—n—wenmen . . .”; and from there to a third-order approximation that already contains combinations of letters that look suspiciously German:

zwischen—woll möchte mit sond
ich scheid solch üb end leb gross sein und solch selb
hab hoff schluss nicht geb . . .

and so on.³⁷ The radio turns into a technological Muse’s mouth that gives birth to language—random selections from a repertory of events with differing frequencies, from a noise whose statistical definition as an equiprobable distribution of independent signs makes it possible to interpret the channel itself as a source of information. *It speaks.*

The step leading from an analog, infinite set of signals to a finite and limitable set of selectable signals leads to the exchangeability of channel and source that is typical for the information-theoretical model of communication. Human voices may not be able to penetrate this flurry of particles, but it does allow for the synthesizing of a vocoder voice.

In a 1958 radio essay on Lewis Carroll’s “Jabberwocky,” Max Bense had described the inversion of the logocentric understanding of signs as a signature mark of twentieth-century media culture. While the claim of traditional metaphysical theory that “the word is the carrier of meaning” is based on the assumption that “meaning exists prior to words,” Lewis Carroll was willing to maintain the “pre-existence of words—words understood as pure signals—prior to meaning.”³⁸ As signals, words come before their meaning. Like physics, aesthetics is a science whose primary object is signals, the physical materiality of signs.

Thus a completely new understanding of the world permeating physics, logic, linguistics and aesthetics is emerging—an understanding which, briefly put, replaces

beings with frequencies

qualities with quantities

things with signs

attributes with functions

causality with statistic.³⁹

“Each and every communicative relation in this world,” Bense wrote in *Einführung in die informationstheoretische Ästhetik* (Introduction to information-theoretical aesthetics), “is determined as a signaling process. The world is the

sum total of all signals, that is, of all signaling operations.”⁴⁰ Accordingly, Bense (much like Serres, and prior to him) derives a critique of the logocentric concept of the sign. For Bense, Peirce has to be grounded in Shannon; semiotics has to be grounded in information theory. “With this signal-theoretical conception,” he notes, “the sign remains a material construct.”⁴¹

This opens up the possibility of a culture-technical approach to communication theory: The basic operation of those cultural techniques responsible for processing the distinction between nature and culture, or barbarism and civilization, is a filtering operation. If it is the goal of a communication process—be it breaking bread or breaking silence—to establish social ties by means of transcending matter and turning it into a sign, then this sign first had to be produced in the technical real. If the culture-technical operation of filtering that generates this sign from noise is in the position of a third that precedes the second and first, then Serres’s work enables us to comprehend the range and impact of the current turn of cultural techniques. “We are,” Serres writes in “The Origin of Language,” “submerged to our neck, to our eyes, to our hair, in a furiously raging ocean. We are the voice of this hurricane, this thermal howl, and we do not even know it. It exists but it goes unperceived. The attempt to understand this blindness, this deafness, or, as is often said, this unconsciousness thus seems of value to me.”⁴² It is not a matter of man disappearing, but of having to define, in the wake of the epistemic ruptures brought about by first- and second-order cybernetics, noise and message relative to the unstable position of an observer. Whether something is noise or message depends on whether the observer is located on the same level as the communication system (for instance, as a receiver), or on a higher level, as an observer of the entire system. “What was once an obstacle to all messages is reversed and added to the information.”⁴³ If exclusion and inclusion, parasite and host, are no more than states of an oscillating system or a cybernetic feedback loop, then it becomes necessary once more to inquire into those cultural techniques that, as media, process distinctions.