Signal, character set and
sample telegram of the
Pollak/Virág telegraph.

Cacography or Communication?
Cultural Techniques in
German Media Studies

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1. Assessing the Situation

Since the appearance in Germany of a media historiography indebted to Michel Foucault, Ernst Cassirer's neo-Kantian formula, "The critique of reason becomes a critique of culture," has been confronted with an alternative formula: "The critique of reason becomes a critique of media." In the wake of Cassirer and Foucault and shaped by the ways in which universities have come to organize the humanities and social sciences since the 1990s, a covert war is now being waged. It is a war of succession, its prize nothing less than the throne of the transcendental that has remained vacant since the abdication of the "critique of reason." This war is waged in secret primarily because cultural history and media history have forged a pragmatic alliance that tends to exclude any discussion of the theoretical basis on which the parties involved conceptualize both culture and media.

Various observers have noted that the research institutions and networks involved in exploring the history of media and culture are engaged in "a rewriting of cultural history as a history of media,"[1] which makes it possible to articulate the history of culture—and indeed history as such—as a sequence of epochs. This approach, however, presupposes the dubious notion of historical *guiding media (Leitmedien).* Long-standing terms like *book culture, letter culture, computer culture,* or *digital culture* refer to a sequence of cultures that may allegedly be defined in terms of the social, economic, artistic, scientific (etc.) effects of an alpha medium (print, letter, computer). But didn't we have to wait for McLuhan's medially produced narcissism, which identifies a contingent culture with a specific, subsequently canonized guiding medium, to know what these guiding media were, or are? To observe media as factors of cultural differentiation already presupposes a historical canonization of media and the mythification of their founding heroes: Gutenberg, Edison, Turing.

Furthermore, to speak of a "rewriting" is to forget that media stories and histories have been around for as long as cultural history with all of its stories.

In Germany, *media history* is in fact an umbrella term that encompasses a motley crew of methods; as a result, there is a lot of confusion that is partly intended, partly condoned, and partly condemned. To begin with, there is the confusion of "media history" with what some prefer to call "media archeology." In fact, the very titles adorning the first volumes that in the early 1980s grew out of the "Literature and Media Analysis" project coordinated in Kassel (and that were instrumental in delineating a German historical "media science" outside the confines of sociologically oriented communication studies) already indicated that the volumes were not aiming for a history of media but for a history of the soul and of the senses.[2] The latter were to be removed from the domain of psychology and aesthetics and transferred to a "different site"—that of media. Paradoxically, the type of media history that is currently practiced in Berlin and in Weimar, among other places, and that goes by the name of historical media studies did not enter the fray with the pretense of producing media histories. Media histories weren't written; they were found. Nobody in the twentieth century needed to write a history of telegraphy. The studies by Karl Knies and Gustav Schöttle had already been around since the second half of the nineteenth century. George Prescott's history of the telephone and the phonograph was published in 1887, John Ambrose Fleming's history of the radio tube in 1919. A number of accounts dealing with the invention of telegraphy, telephony, gramophony, radio, the typewriter, cinematography, and the computer were in fact written by the inventors themselves, frequently in the context of legal squabbles over the priority of invention. The media archeology of the 1980s was, in Nietzsche's sense, a gay science: Rather than writing media history, it dug up sources that had remained out of bounds to the humanities without worrying about any underlying "concept of media" (an issue nowadays raised by every wiseacre). Confronted with insights into the medial conditions of literature, truth, education, human beings, and souls—insights that were beyond the reach of the hermeneutic study of texts—scholars of literature, philosophers, pedagogues, and psychologists were too offended by the sudden invasion of their nicely cultivated gardens to ask for an orderly theoretical justification for the onslaught.

Only in the course of the university-wide institutionalization of media studies in the shape of departments, faculties, graduate colleges, and specialized study programs did these historical sciences come into closer contact with that type of "media archeology" that focused on individual media histories. The latter include the history of photography and that of film; in other words, specialized areas of media-historical research that are the real heirs to nineteenth- and early twentieth-century media histories. Characteristically (with a few exceptions), the relationship between

specialized historians of film (e.g., practitioners of "Early Cinema Studies") and the historical media studies that emerged from media archeology fluctuates between complaisant distance and utter disinterest. Film studies may have appropriated the terms *archeology* and *media links,* but by turning *archeology* into the label of an alternative historiography of media, they have rehistoricized and belittled the term.

2. Cultural Techniques

It is probably no coincidence, therefore, that the term *cultural techniques* (re)emerged around the turn of the millennium and soon become ubiquitous in German media theory.[3] The notion of cultural techniques strategically subverts the problematic dualism of media and culture; it opens up media, culture, and technology to further discussion by highlighting the operations or operative sequences that historically and logically precede the media concepts generated by them:[4]

> Cultural techniques—such as writing, reading, painting, counting, making music—are always older than the concepts that are generated from them. People wrote long before they conceptualized writing or alphabets; millennia passed before pictures and statues gave rise to the concept of the image; and still today, people sing or make music without knowing anything about tones or musical notation systems. Counting, too, is older than the notion of numbers. To be sure, most cultures counted or performed certain mathematical operations, but they did not necessarily derive from this a concept of number.[5]

Once we reconstruct those operative sequences that configure or constitute media, the latter can be explained as cultural techniques. Cultural techniques, however, are not limited to symbolic practices based on images, writing systems, and numbers. They also include what Marcel Mauss termed "body techniques";[6] that is, the use cultures make of bodies, including rites, customs, and habitual acts[7] as well as training and disciplinary systems, dietetics, or hygienic practices. From this ethnological point of view, reading, writing, and counting are physical rather than mental techniques. They are the result of drilling docile bodies, which these days are forced to compete with interactive navigational instruments.

Since antiquity, the European understanding of culture has implied the notion that culture is technologically constituted. The very word *culture,* deriving from Latin *colere* and *cultura,* contains an eminently practical dimension by referring to the development and practical application of technologies for cultivating the soil and settling the land.[8] In Germany, this engineering aspect of agriculture has informed the notion of cultural

techniques since the late nineteenth century.[9] The corral that separates hunter and prey and that in the course of a coevolutionary domestication produces the anthropological difference between human beings and animals, the furrow drawn in the ground by the plow, and the (grain) silo are archaic technologies of hominization. The concept of cultural techniques, therefore, is vehemently opposed to any ontological usage of philosophical terms: *Man* does not exist independently of cultural techniques of hominization, *time* does not exist independently of cultural techniques for calculating and measuring time; *space* does not exist independently of cultural techniques for surveying and administering space; and so on.

The notion of cultural techniques, then, promises to align cultural history and media history by referring back to concrete practices and symbolic operations. These practices range from ritual acts and religious ceremonies to scientific methods of generating and referencing "objective" data, as analyzed in great detail by Bruno Latour.[10] They include pedagogical methodologies as well as political, administrative, anthropological, and biological "designs of the human." Whether or not the new study of cultural techniques will indeed bring about a media-anthropological turn *(Kehre)* in historical media studies depends on whether cultural techniques are seen as conceptual extensions of Mauss's body techniques or as operations that require, first and foremost, a technical artifact. Simply put, you can't cook without some kind of vessel. The art of cooking—which, according to Claude Lévi-Strauss, is the most elementary of all cultural techniques—cannot be derived from a body technique. A pot is not a McLuhanesque extension of man, for example, of the hollow hand: You cannot boil anything in a hollow hand without losing your hand in the process.

Every culture begins with the introduction of distinctions: inside/outside, sacred/profane, intelligible speech/barbarian gibberish, signal/noise. The fact that they are able to generate a world is the reason why we experience the culture in which we live as a reality and, more often than not, as the "natural" order of things. Yet these distinctions are processed by media in the broadest sense of the word. Doors, for instance, process the inside/outside distinction, yet they belong to neither side of the distinction and instead always assume the position of a third. *These media are eminent cultural techniques.* It is important to keep in mind, however, that the distinction between nature and culture is itself contingent and based on a distinction that is processed by cultural techniques. The latter predate the distinction between nature and culture: They give rise to acculturation processes; their misappropriation or transgressive use may introduce deculturation processes; and they contribute to the epistemological and aesthetic judgment of whether something is part of nature or culture. What

Lévi-Strauss wrote about the art of cooking can be applied to cultural techniques in general: "[T]he system demonstrates that the art of cooking . . . , being situated between nature and culture, has as its function to ensure their articulation one with the other."[11]

The examination of cultural techniques is not restricted to observing the roles media play in acculturation processes; it is also concerned with the tense relationship to processes of *de*culturation, for which media can act as vehicles. Media are not only culture techniques that suspend codes or disseminate, internalize, and institutionalize sign and symbol systems; they also serve to loosen cultural codes, erase signs, deterritorialize images and tones. Three basic consequences follow from this. First, media appear as code-generating interfaces between the real that cannot be symbolized and the cultural order. Second, research into cultural techniques cannot be conducted without an analytics of power. Third, cultural techniques have to be understood as heterogeneous arrangements in which technological, aesthetic, symbolic, and political concepts of one or more cultures of writing, image, number, line, and body interact.

3. The Study of Cultural Techniques as Parasitology

To define cultural techniques as media that process the observation, displacement, and differentiation of distinctions is to introduce a concept of media that may be linked to Michel Serres's understanding of the "parasite."[12] The model of the parasite, as developed by Serres, Derrida, and others, encompasses both the old (agrarian) and the new (medial and culturalist) meaning of cultural techniques.[13] Precluding all reductionist limitations of the concept to the exclusively technological domain, the model of the parasite allows us to combine the perspectives developed by cultural anthropology, cultural ethnography, economy, politics, and media theory.

The metaphors of agriculture and script, sowing and writing, reaping and reading are deeply embedded in European culture. They appear in the Greek as well as in the Judeo-Christian tradition. According to Plato's *Phaedrus,* living speech is the seed sown by the sensible farmer *(ho noun echon georgos)* in suitable soil. In contrast, to sow knowledge *(episteme)* by means of writing—that nonautonomous, fatherless, or, in Derrida's words, "parasitical" brother of *logos*—is tantamount to "writing in water" *(en hydati graphein).*[14] Logos and water are at odds. The ideal polis must keep its distance from the sea, for the latter is "a briny and bitter neighbour" to truth. The sea swamps the city with "wholesale traffic and retail huckstering," breeding "shifty and distrustful habits of the soul."[15] Derrida's concept of parasitic writing resonates with a historical figure of the parasite: the merchant. The merchant is neither producer nor consumer but instead

occupies an intermediary position. His element is the sea rather than the land. He belongs to those parasites that give birth to relationships by preying on them. After all, the Phoenicians, a nation of seafaring merchants, invented the phonetic alphabet, a writing system that precisely because it articulates *phoné* remains independent of any individual language and can therefore be used to transcribe any other language into one's own.[16] Indeed there are good reasons to further pursue Derrida's query "What is a parasite?" or at least to "reconsider our logic of the parasite."[17]

In his study *The Parasite*, the mathematician, philosopher, and historian of science Michel Serres evolved the concept of the parasite into a multi-faceted model that makes it possible to employ both communication theory and cultural theory to arrive at an understanding of cultural techniques.[18] This conceptualization of the parasite strikes me as particularly interesting because it combines three different aspects. First, an information- or media-theoretical aspect is linked to the French double meaning of *le parasite,* which 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 Serres's conceptualization of the parasite 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 what a symbol is. 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. 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."[19] The conditions for *recognizing the abstract form* and for *rendering communication successful* are one and the same.[20] 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 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 that inevitably conceived of these relationships in terms of exchange. Serres enlarged this structure
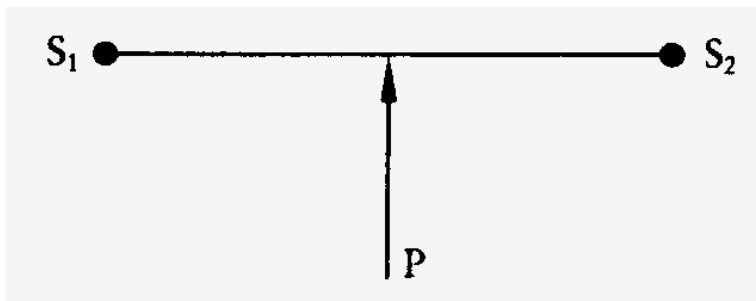

Diagram from Michel Serres, *The Parasite*, trans. Lawrence R. Schehr (Baltimore: Johns Hopkins University Press, 1982).

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. 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 a relation that is then disturbed or even interrupted; rather, "[t]he deviation is part of the thing itself, and perhaps it even produces the thing."[21] We do not start out with an unimpeded exchange (of thoughts or goods or bits); rather, from the point of view of cultural anthropology, economics, information theory, and the history of writing, the parasite came first. The origin lies with the pirate rather than with the merchant, with the highwaymen rather than with the highway.[22] Systems that by way of inclusion 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."[23]

In Serres's model of communication it is not the sender-receiver relationship that is fundamental but that between communication and noise. This corresponds to the definition of the culture-technical turn outlined above: From the point of view of this turn, media are code-generating interfaces between the real that cannot be symbolized and cultural orders. *"To hold a dialogue,"* Serres wrote in 1964, *"is to suppose a third man and to seek to exclude him."*[24] Thus Serres inverts the hierarchy of the six sign functions in Jakobson's famous model.[25] It is not the poetic or the referential function that (according to the type of speech) dominates all the others but the *phatic function,* the reference to the channel. 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."[26]

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 reveals the culture-technical dimension of the communication concept. It was first described in 1923 by Bronisław Malinowski, though he spoke of "phatic communion."[27] Using the communication employed during Melanesian fishing expeditions as an example, Malinowski—who in the wake of Ogden and Richards was working

CONTEXT
(referential)

MESSAGE
(poetic)

ADDRESSER _____ ADDRESSEE
(emotive)   (conative)

CONTACT
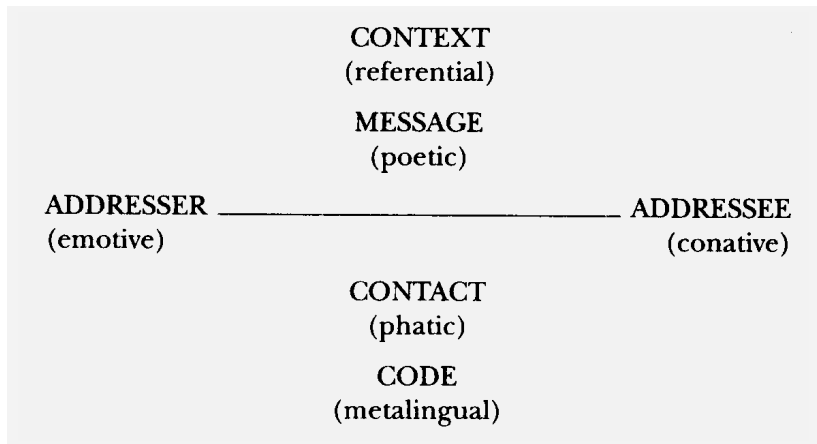(phatic)

CODE
(metalingual)

Diagram from Roman Jakobson, "Linguistics and Poetics," in *Style in Language*, ed. Thomas Sebeok (Cambridge: MIT Press, 1960).

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 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 a real connection does exist between phatic communication and situation, because in the case of this particular type of language the situation is one of an "atmosphere of sociability" involving the speakers but 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 social sentiment or other.[28]

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."

Malinowski's discussion of phatic communion bears a remarkable resemblance to Serres's theory of communication, according to which communication is not the transmission of meaning but the exclusion of a third. "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."[29]

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. 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. 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."[30]

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 means of communication into culture techniques. As stated above, every culture begins with the introduction of distinctions: inside/outside, sacred/profane, intelligible speech/barbarian gibberish, signal/noise. A theory of cultural techniques that, like Serres's, was to posit the phatic function as its point of departure would also be a history and theory of interruption, disturbance, deviation. Such a history of cultural techniques may serve to create an awareness for the plenitude of a world of as yet undistinguished things that, as an inexhaustible reservoir of possibilities, remain the basic point of reference for every type of culture.

I will illustrate this by using three examples that describe completely different constellations. The first example involves two elementary cultural techniques of the early modern age, the use 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. I have to emphasize, however, that these examples do *not* amount to any kind of historico-philosophical three-step.

Case I: Typography

On his way to the court of the Ottoman emperor in 1555, Ogier Ghiselin de Busbecq, an ambassador for the Austrian monarch Ferdinand I, discovered on the wall of a temple (to be precise, of a Sebasteion) in the precinct of the Haci Beiram Mosque in Angora (Ankara) a Latin inscription that he identified as a copy of the famous *Index rerum gestarum,* the account of the achievements of Augustus written by the emperor himself. Busbecq only needed to read the heading:

RERVM GESTARVM DIVI AVGVSTI QVIBVS ORBEM TERRARUM IMPERIO POPVLI ROMANI SVBIECIT ETINPENSARVM QVAS INREM PVBLICAM POPVLVMQVE ROMANVM FECIT INCISARVM INDVABVS AHENEIS PILIS QVAE SVNT ROMAE POSITAE EXEMPLAR SVBIECTVM.[31]

(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 the nineteenth-century historian Theodor Mommsen called the "queen of

inscriptions," was by no means accidental. Throughout his journey through 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)—corresponding to the Judeo-Christian tradition of *legere* 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 an 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."[32]

In less humble fashion, the first editor of the *Res gestae* speaks of the more than two hundred Greek inscriptions that Busbecq "harvested with his writing tube (*calamo exarata*)."[33] Difference and deviation have turned into a cultural technique that processes 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, because the channel linking him to antiquity is inhabited by another, more powerful parasite: the Turks. The Turks use coins as weights, or they melt them down to manufacture bronze vessels.[34] More seriously, the Turkish transmission of biblical times and ancient Greek appears to Busbecq 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.[35]

Busbecq learns in passing that history is a function of contingent cultural techniques. The Ottoman realm is just one of many possible worlds that were not realized in the Christian or European domain; in this quotation, the possible appears as the deranged, which is another name for the parasitical deviation. Thus we encounter a problem that concerns the history of cultural techniques on a basic level: namely, that history is itself an order produced by cultural techniques. Busbecq writes that the parasitical intrusions of the Turks are to blame for the illegible Greek and Roman inscriptions, such as the *Monumentum Ancyranum,* he keeps encountering:

> 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.[36]

The comments written by conquerors are truly shattering.

Busbecq's copy 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, 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 textual units.[37] *Desunt quaedam* doesn't point to gaps at all but to a sign that Schott in all likelihood had invented himself:

ANNOS. VNDEVIGINI. NATUS. EXERCITVM. PRIVATO. CONSILIO. ET. PRIVATA. IMPENSA. COMPARAVI. TERQVE. M . . . . . FACTIONIS. OPPRESSAM. IN. LIBERTATEM. VINDICAVI . . . . DECRETIS. HONORIFICIS. ORDINEM. SVVM . . . . *Desunt quaedam* . . . .[38]

Finally, only a few scattered words remain in an ocean of dots:

REGIS. PARTHORVM. . . . . A. ME GENTES . . . . . THORVM. ET. MEDORVM . . . .

. . . .
. . . .
. . . .
. . . . . IN CONSVLATV . . . .
. . . .
. . . . *Et haec quoque expunxerunt immanes Turcae.* . . . .[39]

Et haec quoque expunxerunt immanes Turcae—"and this, too, the cruel Turks destroyed." Or, in a more literal translation, *expunged.* Was Schott aware of his double entendre that in a bizarre way blurred the distinction between his activities and those of the barbarian commentators? It is as if the Turks, anticipating editorial interpolations, had already described the gaps as a series of dots.

In Busbecq's account there is left and right, up and down, and a center. The cultural technique of reading appears as a physical technique based on a spatial system of orientation that uses the body of the reader as its point of reference. With the edited text, however, the speaker can no longer be located. The space referred to by Schott's commentary is linked to the gaze of a bodiless subject. To respond to the statement "A lot is missing" with the question "Where?" makes no sense because the response "here" is already implicit in the comment. Any reference to a three- or two-dimensional monument no longer exists. The space the commentary refers to is exactly the same space that is taken up by the commentary on paper and that is marked by the dots: the space of the text, a topological, "digitized" space.

Schott's dots uncover 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. An obvious analogue is the Indo-Arabic place-value system, a cultural technique imported by thirteenth-century Italian merchants. In the Indo-Arabic 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 this 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 operationality of numerals. Digits are signs that can be absent from their place (as opposed to Roman numerals that 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 become

visible only 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.[40] 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*."[41] With this in mind, a second parallel between linear perspective and typographic textual order suggests itself. Just as Leon Battista Alberti's treatise *Della pintura* has the surface of the painting act as 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."[42] Gazing through the printed text, we behold the true, indestructible, and complete text of the *Res gestae* in much the same way as 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.[43] The third precedes the second: The typographic channel constitutes antiquity as a communication partner for humanist readers.

Case II: Analog Media

My second example concerns a further attempt, undertaken about 350 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.[44]

The dream represents a new version of the old invocation of the Muses.[45] It is no longer the mouth of the 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 that is also "the only real and reliable thing" transmitted by the phones in Kafka's *Castle*.[46] The message is 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, this song may be identified as the voice of the telephone introduced by Philipp Reis in 1863, a reading, incidentally, supported by the context of Kafka's letter.[47] But the importance of this technohistorical reminiscence becomes apparent only once the song emanating from the receivers is deciphered as an allusion to the Siren songs of the *Odyssey,* because the latter explains the alluring and seductive quality of the song that chains the dreamer to the telephone 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 human beings 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" are 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 (and being 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. The following depiction may illustrate this: It is an ad for the telegraph developed by Pollak and Virág that was able to transmit handwritten messages, but that was able to do so only because it defined handwriting as just another cursive script or cacography.[48]

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)
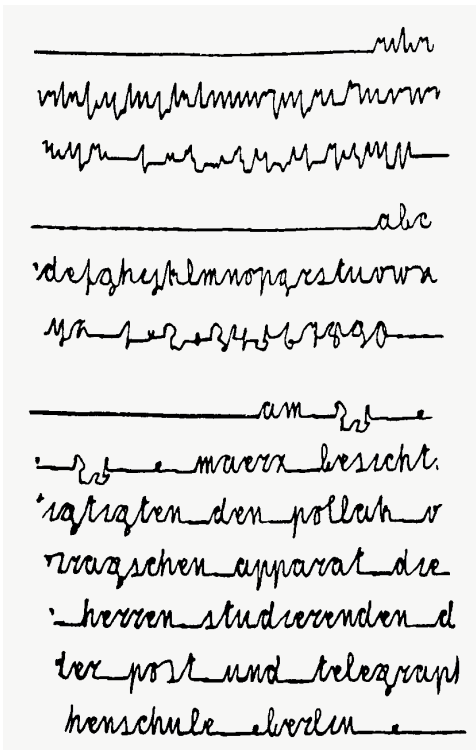
Signal, character set and sample telegram of the Pollak/Virág telegraph.

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 last example will clarify, the logic that it manages to illustrate becomes nothing less than systemic in the dominant cultural technique of our present: the order of digital signals.

Case III: 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 of a natural language.[49] Entitled *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. The play starts with a computer-generated text that in nine steps gradually approaches the girl's uninterrupted flow of speech. By staging the discourse of an unconscious person in such a way, the play demonstrates that in the age of signal processing meaning is nothing but "a sufficiently complex stochastic process."[50] Shannon had demonstrated in his "Mathematical Theory of Communication" 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.[51] *The Monologue of Terry Jo* starts out with a zero-order approximation; that is, all signs are independent of each other and equi-probable: "fyuiömge—sevvrhvkfds—züeä—sewdmnhf—mciöwzäikmbw." The play then proceeds via a first-order approximation (symbols still independent of each other but occurring 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: "zwisch—woll möchte mit sond / ich scheid solch üb end leb gross sein und solch selb / hab hoff schluss nicht geb"; and so on.[52] 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 equi-probable 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 described the inversion of the logocentric understanding of signs as a signature mark of twentieth-century media culture. 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"; however, Lewis Carroll was willing to maintain the "pre-existence of words—words understood as pure signals—prior to meaning."[53] 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.[54]

"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."[55] Accordingly, Bense (much like Serres, and prior to him) derives a critique of the concept of signals. 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."[56]

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 the goal of communication processes—be it breaking bread or breaking silence—is to establish social ties by means of transcending matter and turning it into a sign, then this sign first has 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.[57]

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 (e.g., as a receiver) or on a higher level, as an observer of the entire system. "What was once an obstacle (a parasite) for the message turns around and adds itself to the information."[58] 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.

Notes

1. For example, Sven Grampp, "Erben der Gutenberg-Galaxis: Kulturgeschichte als Mediengeschichte im medientheoretischen Diskurs," *Archiv für Mediengeschichte* 6 (2006): 73–86.

2. For example, Friedrich Kittler and Georg Christoph Tholen, eds*., Arsenale der Seele* [Arsenals of the Soul]*: Literatur- und Medienanalyse seit 1870* (Munich: Fink, 1989); and Jochen Hörisch and Michael Wetzel, *Armaturen der Sinne* [Armatures of the Sense]*: Literarische und technische Medien 1870 bis 1920* (Munich: Fink, 1990).

3. For example, see Erhard Schüttpelz, "Die medienanthropologische Kehre der Kulturtechniken," *Archiv für Mediengeschichte* 6 (2006): 87–110. [Translator's note: *Kulturtechniken* is translated either as "cultural *technologies*" or "cultural *techniques.*" While the former is more common, the latter is used here because it draws attention to the fact—which is of importance to Siegert's argument—that said tech*niques* are not to be viewed exclusively as (artifactual) techn*ologies.*]

4. See Schüttpelz, 90.

5. Thomas Macho, "Zeit und Zahl: Kalender- und Zeitrechnung als Kulturtechniken," in *Bild-Schrift-Zahl,* ed. Sybille Krämer and Horst Bredekamp (Munich: Wilhelm Fink Verlag, 2003), 179.

6. See Marcel Mauss, "Techniques of the Body," in *Incorporations,* ed. Jonathan Crary and Sanford Kwinter (New York: Zone Books, 1992), 454–477.

7. This, however, serves to establish a problematic proximity between cultural techniques and the increasingly popular notion of "rituals." See Gerhard Neumann and Sigrid Weigel, "Literaturwissenschaft und Kulturwissenschaft," in *Die Lesbarkeit der Kultur: Literaturwissenschaften zwischen Kulturtechnik und Ethnographie,* ed. Neumann and Weigel (Munich: Fink, 2000), 9–16.

8. See Hartmut Böhme, Peter Matussek, and Lother Müller, *Orientierung Kulturwissenschaft: Was sie kann, was sie will* (Reinbek, Germany: Rowohlt, 2002), 165.

9. A hundred years ago the academic investigation of cultural techniques would have been part of the agricultural and geological sciences. *Meyers Großes Konversationslexikon* of 1904 defines *Kulturtechnik* as "all agriculturally related technical activities that are rooted in the engineering sciences, in particular, in agricultural engineering." *Meyers Großes Konversationslexikon,* 6th ed., vol. 11 (Leipzig-Vienna, n.p., 1905), 793.

10. See Bruno Latour, "The 'Pédofil' of Boa Vista: A Photo-Philosophical Montage," *Common Knowledge* 4.1 (1995): 144–187.

11. Claude Lévi-Strauss*, The Origin of Table Manners: Introduction to a Science of Mythology,* vol. 3, trans. John Weightman and Doreen Weightman (London: Jonathan Cape, 1978), 489.

12. Schüttpelz also notes this. Schüttpelz, 89.

13. See Claudia Jost, *Die Logik des Parasitären: Literarische Texte, medizinische Diskurse, Schriffttheorien* (Stuttgart and Weimar: Verlag J. B. Metzler, 2000). Jost takes her cue from Derrida's essay on the theory of the parasite and hardly touches upon the work of Serres, which may be because she is pursuing an ethical rather than a media-theoretical agenda. See Jacques Derrida, "Subverting the Signature: A Theory of the Parasite," *Blast Unlimited* 2 (1990): 16–21.

14. Plato, *Phaedrus* 276b–c, in *The Collected Dialogues of Plato,* ed. Edith Hamilton and

Huntington Cairns (Princeton: Princeton University Press, 1982), 521.

15. Plato, *Laws* 704a–705a, in *The Collected Dialogues of Plato,* ed. Hamilton and Cairns, 1297.

16. The next great rupture in the history of cultural techniques occurred once again at a boundary between land and sea, in Genoa, Florence, and Pisa, the upper Italian centers of commerce. The use of Indo-Arabic numerals and double-entry bookkeeping represents a highly complex writing practice that uses the two-dimensionality of the writing surface to maximum effect.

17. Jacques Derrida, *Of Grammatology,* trans. Gayatri Chakravorty Spivak (Baltimore: Johns Hopkins University Press, 1997), 54. Though he never delivered on his promise to furnish a theory of the parasite, Derrida never completely forget it either. See Derrida, "Subverting the Signature," 16–21.

18. Michel Serres, *The Parasite,* trans. Lawrence R. Schehr (Baltimore: Johns Hopkins University Press, 1982), 53.

19. Michel Serres, "Platonic Dialogue," in Michel Serres, *Hermes: Literature, Science, Philosophy,* ed. Josué V. Harari and David F. Bell (Baltimore: Johns Hopkins University Press, 1992), 66.

20. Serres, "Platonic Dialogue," 69.

21. Serres, *The Parasite,* 13; translation altered.

22. For example, fourteenth-century French legal experts discovered that suppressing highway robbery would profit the king. Though roads were not royal property they were *hors du commerce,* which enabled the king to claim a protective function. Highway robbery became a means for extending the monarch's territorial power beyond his domain—roads acted as swaths into territories that were ruled over by the local nobility. See Paul Alliès, *L'invention du territoire* (Grenoble: Presses Universitaires de Grenoble, 1960), 157.

23. Serres, *The Parasite,* 63.

24. Serres, "Platonic Dialogue," 67; emphasis in original.

25. See Roman Jakobson, "Linguistics and Poetics," in *Style in Language,* ed. Thomas Sebeok (Cambridge: MIT Press, 1960), 130–144.

26. Bruce Clarke, "Constructing the Subjectivity of the Quasi-Object: Serres through Latour" (lecture presented at "Constructions of the Self: The Poetics of Subjectivity," University of South Carolina, 1999).

27. "There can be no doubt that we have here a new type of linguistic use—*phatic communion* I am tempted to call it, actuated by the demon of terminological invention—a type of speech in which ties of union are created by a mere exchange of words." Bronisław Malinowski, "The Problem of Meaning in Primitive Languages," in C.K. Ogden and I.A. Richards, *The Meaning of Meaning: A Study of the Influence of Language upon Thought and of the Science of Symbolism* (London: Routledge and Kegan Paul, 1949), 315.

28. Malinowski, 315.

29. Malinowski, 314.

30. Clarke.

31. Theodor Mommsen, ed., *Res gestae Divi Augusti* (Berlin: Apud Weidmannos, 1865), 4.

32. Jean Leclercq, "Saint Bernard et ses sécrétaries," *Révue bénédictine* 61 (1951): 208–229.

33. Andreas Schott, ed., "Ampliss: Viro Augerio Busbequio Exlegato Byzantino, & supremo Curiae Isabellae Praefecto" (Dedication), in Sextus Aurelius Victor, *De vita et*

moribus imperatorum romanorum (Antwerp: Ch. Plantin, 1579), 6.

34. *The Turkish Letters of Ogier Ghiselin de Busbecq,* trans. Edward Seymour Forster (Oxford, UK: Oxford University Press, 1968), 49.

35. *The Turkish Letters,* 55.

36. *The Turkish Letters,* 50.

37. Or Busbecq himself? In his edition of the *Exemplum Busbequinam* (which contains several copies of the copy), Mommsen reproduces only one anonymous insertion: *desiderantur quinque lineae.* Mommsen, xvi. This seems to suggest that the remaining interpolations are the work of Schott.

38. *Res gestae divi Augusti,* in Aurelius Victor, *De vita et moribus imperatorum romanorum,* 70.

39. *Res gestae divi Augusti,* 77.

40. Brian Rotman, *Signifying Nothing: The Semiotics of Zero* (Stanford: Stanford University Press, 1993), 14–22, 28–46.

41. Rotman, 32. Rotman is quoting Norman Bryson.

42. Michel Foucault, *The Archaeology of Knowledge,* trans. A.M. Sheridan Smith (New York: Pantheon, 1972), 138.

43. See Wolf Peter Klein and Marthe Grund, "Die Geschichte der Auslassungspunkte: Zu Entstehung, Form und Funktion der deutschen Interpunktion," *Zeitschrift für germanistische Linguisitk* 25, no. 1 (1997): 26.

44. Franz Kafka to Felice Bauer, 22–23 January 1913, in Franz Kafka, *Letters to Felice,* ed. Erich Heller and Jürgen Born, trans. James Stern and Elisabeth Duckworth (New York: Schocken, 1973), 166. [Translator's note: In German "telephone receiver" is *Hörmuschel,* literally "hearing shell."]

45. See Gerhard Neumann, "Nachrichten vom 'Pontus': Das Problem der Kunst im Werk Franz Kafkas," *Franz Kafka Symposion 1983,* ed. Wilhelm Emmrich and Bernd Goldmann (Mainz, Germany: Hase und Koehler, 1985), 194.

46. Franz Kafka, *The Castle,* trans. Willa and Edwin Muir (London: Secker and Warburg, 1957), 95.

47. See Kafka Kafka to Bauer, 17 January 1913, in Kafka, *Letters to Felice,* 158; and Rüdiger Campe, "Pronto! Telefonate und Telefonstimmen," *Diskursanalysen I: Medien,* ed. Friedrich A. Kittler et al. (Opladen, Germany: n.p., 1987), 86. [Translator's note: In a letter to Felice Bauer on 17 January 1913, Kafka mentions that he just read an old set of *Die Gartenlaube,* a family magazine, from 1863. That set included an essay by Philipp Reis on the first telephone experiments.]

48. Compare with A. Kraatz, *Maschinentelegraphen* (Braunschweig: Friedr. Vierweg u. Sohn, 1906).

49. In its original version, the text, which was published as part of the series *rot* under the title *vielleicht zunächst wirklich nur. der monolog der terry jo im mercey hospital* ("maybe at first really only. the monologue of terry jo in the mercey hospital") consisted only of the monologue. For the radio version Ludwig Harig enlarged the script by adding the voices of the people who participated in the murder.

50. Claude Elwood Shannon, "A Mathematical Theory of Communication" (1948), in Claude Elwood Shannon, *Collected Papers,* ed. N.J.A. Sloan and Aaron D. Wyner (Piscataway, NJ: IEEE Press, 1993), 15.

51. For more on this, see Shannon, 14–15.

52. Max Bense and Ludwig Haris, "Der Monolog der Tery Jo," in *Neues Hörspiel: Texte, Partituren,* ed. Klaus Schöning (Frankfurt: Suhrkamp, 1969), 59–61.

53. Max Bense, "Jabberwocky: Text und Theorie, Folgerungen zu einem Gedicht von Lewis Carroll," in Max Bense, *Radiotexte: Essays, Voträge, Hörspiele,* ed. Caroline Walter and Elisabeth Walter (Heidelberg: Winter, 2000), 71.

54. Bense, "Jabberwocky," 71.

55. Bense, *Einführung in die informationstheoretische Ästhetik: Grundlagen und Anwednungen in der Texttheorie* (Reinbek: Rowohlt, 1969), 20.

56. Bense, *Einführung,* 28.

57. Michel Serres, "The Origin of Language," in Serres, *Hermes,* 77.

58. Serres, "The Origin of Language," 266.