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Translated by Eric Rauth
The Medium’s Two Bodies

Tedious quarrels over semantics can often be avoided, and time gained, by securing argument to a few working definitions at the outset. I differentiate the material act of transmitting from communication, the latter term having by now lost some concreteness as the sanctified hallmark of language theoreticians and university programs or departments. To the degree that units of relatively stable meaning can be made fast from words of such voluminous carrying capacity and guaranteed currency, the semantics of communication do appear, in every detail, to be set squarely against the material objects and forces intelligible to mediological inquiry. Instead, transmission can serve as a regulatory and classificatory term in view of its tripartite signification: material, diachronic, and political.

THE MATERIAL DIMENSION

Commonly understood, “communicating” is simply making familiar, making known. Its bias of meaning links us immediately with the immaterial, with conventions and codes, with the more narrowly linguistic. One speaks, on the other hand, of “transmitting” physical property as well as ideas. Commercial bills, assets and real estate, a child’s balloon can all be transmitted in the sense of handed over or down, as can orders and instructions or papal power. What is said of forms is also said of forces: in mechanics, the term transmission is applied to power and movement that are carried across—transmitted—by mechanical means, dynamically converted to different forms of motion.

This alloy of material agencies and human actors is well suited to the vast and bustling agitation of infinite motive forces that, in a succession of historical instances, characterizes what used to be called “an idea that stirs the
masses." Idea connotes that convocation, mobilization, jumble of engines and persons, passwords and icons, vehicles, sacred rites and sites. To this day, for example, the gospel's message makes its appeal to followers via canticles and holydays, the church's swell of organ notes and glimmer of gold, the colors of its stained glass and altarpieces, the perfumes of its incense, the soaring spires of its cathedral and shrines, the wafer's placement on the tongue and the foot's tread on the road to Calvary. These materializations and exertions, rather than individual or group exegesis of sacred texts, bodily transmit the holy Word. The same holds for civil religion. The idea of the nation is perpetuated by flags and solemn commemorations of the dead, by the entombment of soldiers and monuments to the fallen on the village square, by lists of their names on walls and plaques and pediments, by the domes of pantheons, and not merely by reading textbook summations or preambles of constitutions. Memory's reinforcements cannot be reduced to sayings and writings. The adventure of lived ideas is hurly-burly and kaleidoscopic.

No tradition has come about without being an invention or recirculation of expressive marks and gestures. No movement of ideas has occurred that did not imply the corresponding movement of human bodies, whether pilgrims, merchants, settlers, soldiers, or ambassadors. And no new dimension of subjectivity has formed without using new material objects (books or scrolls, hymns and emblems, insignia and monuments). The sites where associations are generated weld together the heavens and earth of faiths and doctrines by plotting the dizzying vertical of their sacred allusions along the horizontal axis of collective consolidations. As Christian or Jew or Arab, I affirm my ties to the community of fellow celebrants by traversing the space separating me from Santiago de Compostela, Jerusalem, or Mecca. A Marxist in the 1960s, I further my ideological adhesion with pilgrimages to Havana or Hanoi, just as, more prosaically, I might attend the Festival of Humanity sponsored by the French Communist daily newspaper. A committed neoliberal, I'm off to communion at Westminster or Wall Street because reading articles by Milton Friedman or works by Karl Popper hardly suffices. The chain of effects that transform mentalities mingles together elements both symbolic and economic, immaterial and concrete, such that a mediologist's interest will be repaid as much by the minutiae of foreign missionaries as by theologies, the Wall of Jerusalem as by the Kabbalah, humble modes of transport as by sublime myths of origin, the highways department as by schools of philosophical thought; by networks of transmission as much as by doctrines, and the material bases of inscriptions as much as by the etymologies of words. In short, the trivial, peripheral, or basely material incidentals of how any given message, doctrine, or idea is put across mean as much to the mediologist as (Plutarchian) "exemplary lives" or "great books." Far from inviting disciplinary confusion, this muddle of mediating agencies calls for theoretical clarification that must first demolish some arbitrary walls between established fields.

THE DIACHRONIC DIMENSION

If communication transports essentially through space, transmission essentially transports through time. Communication prompts an instantaneous response between parties, by synchronizing and connecting them like a thread: a communicative network runs its course between contemporaries (sender and receiver present to one another simultaneously at either end of the line). Transmission takes its course through time (diachronically), developing and changing as it goes. A thread plus a drama, it links the living to the dead, most often when the senders are physically absent. Whether configuring the present to a luminous past or to a salvific future, mythical or not, a transmission arranges the effective force of the actual with reference to the virtual. As far as communications are concerned, time is external to them in the sense of its being only their parameter (even though by overcoming distances, telecommunications do have an effect necessarily on the amount of time by which delays and speeds are determined). But with transmission, time is appreciable internally. Communication excels by cutting short: transmission by prolonging, even if it must condense its ample forms of expression into the emblematic currencies of the motto, the logo, the apologue, the parable, and so on. Religion, art, ideology: these variegated categories of transmission all aim to thwart the ephemeral by the play of drawing out, particularly in the Western context, with its grand undertakings of constructions built to last.¹

The two terms thus require a shift in scale and units of time; for the operation of communication, a calculation of days, minutes, and seconds; for transmission, decades if not centuries and millennia. We transmit meanings so that the things we live, believe, and think do not perish with us (as opposed to me). To accomplish this, we have license (depending on the historical period) to invent the means of oral epic poetry, with its rhythms and stornellus conducive to memorization; or the arts of drawing or writing; or
me through visual, tactile, olfactory, and other senses. Even more can I say that animals give off or send out messages: the science of zoological semiotics makes them an object of study. But I cannot speak of animals, nor of my physical surroundings, as transmitting per se. Everything is a message, if you will—from natural to social stimuli or from signals to signs—but these messages do not necessarily constitute an inheritance. Legacies are never the effect of pure chance. Similarly, there are communication machines but not transmission machines. At most, one can define an act of transmitting as a telecommunication in time, where the machine is a necessary but not sufficient interface and in which the network will always mean two things. For the pathway or channel linking senders and receivers can be reduced to neither a physical mechanism (sound waves or electric circuit) nor an industrial operating system (radio, television, computer) as it can be in the case of diffused mass information. The act of transmitting adds the series of steps in a kind of organizational flowchart to the mere materiality of the tool or system. The technical device is matched by a corporate agent. If raw life is perpetuated by instinct, the transmitted heritage cannot be effective without a project, a projection whose essence is not biological. Transmission is duty, mission, obligation: in a word, culture.

Communication and transmission must both contend with the problem of noise. Yet here, on top of the physical universe acting as backdrop, must be overlaid the social universe in all its adversity. A cost is borne by every communication because no message-producing condition or device can wrest the meaning of a signal from its ambient background noise without an expenditure of energy to neutralize the natural and accidental static that afflicts all signals. But putting across a symbolic, transmissive meaning must also deal, beyond the loudspeaker’s metallic coughs and reverb, with his splutters and crackle of one’s adversaries and competitors. More than an incidental flawing of the system or unintended disorder, this latter form of noise arises from human conflict at the heart of the mediasphere’s acoustic space of deliberation. As in the Darwinian biosphere, place is not available to all. This is what makes each transmission work itself out polemically, and it requires a strategic competency bent on striking up alliances, filtering out and excluding the extraneous, hierarchizing and co-opting, drawing boundaries, and so on. The process can be apprehended as a struggle for survival in the midst of a system of rival forces either canceling one another out by disqualification or swallowing each other up.

In the social arena, other things being equal, the act of communicating anything and everything is natural. Transmitting durable meanings, howev-
er, belongs to the political arena, as do all functions serving to transmute an undifferentiated mass into an organized whole. Through transmission, a collective organization is immunized against disorder and aggression. A protector of the coherence of an us, it ensures the group's survival by appropriating what individuals hold in common. What survives moreover does not fall under the class of the most basic biological group programming, such as the automatic processes of eating and reproducing, but rather under all things having to do with the collective personality granted the group by its own history. If communication takes place between persons, transmission uses collegial methods and collective settings, frameworks, and management. It is one of the stakes of civilization. It brings about unification into corporate entities such as professional guilds, mystical corporations, or the teaching corps of sorcerers, bards, elders, Greek epic singers, clerics, pilots, instructors, catechists, and so on. By this means the corpus of knowledge, values, and know-how is brought out of yesterday into the present, stabilizing group identity via multiple two-way journeys (made by each member of a confraternity, an academy, a church, a craft guild, a school, a party, a nation, etc.). They are the group's master thread, the safeguard at the ramparts and parapet, the guardrail.

The indispensability of this symbolic function is matched by the discreetly grave aura that hovers over the word transmission. Esences are made and remade through transmission; the torch thrown to each new generation, which must hold it high, says the common wisdom. One can communicate with the first passerby, but such things as the sacred flame, capital (and the sinfulness of human nature), the spirit of one's homeland (down to the very taste of its baked bread), all these are transmissible. Transmissible, too, are great secret stories or practiceless family secrets, state secrets, secrets of the heart; arcana of the Book, of calculating longitude and making metals; professional secrets, party secrets, secrets of the gods and nature. Preserving all these gives a community its reasons for being and hoping. One has no right to forget or keep them to oneself, and to squander them would be to forfeit what must be held dearest. They are not something hastily communicated sub rosa but rather more as mysteries into which one is by degrees initiated, heart and soul. Journalists communicate; professors transmit. (The difference is that between news and knowledge.) Notaries arrange for inheritances, a priest enshrines a tradition (laws versus rites). Communication needs only interest and curiosity. Proper transmission necessitates transformation if not conversion. When fear and trembling ensue, the result is the only criterion. Thus is the process of education, for example, inconceivable without its regulations, examinations, or competitions for prizes.

THE MECHANICS OF TRANSMISSION

The prefix trans- it comes down most decisively to this particle that encapsulates the marching past, burden, and adventure of so many mediations. And yet what the term alludes to could not be more prosaic. Le Petit Robert gives the following definition for transmission:

trans-mis-sion n. [L. transmission-, transmitto, fr. transmittus, pp. of transmittere to transmit fr. trans- across, over +mittere to send] [1765, used to speak of electronic signals. 1869, telegraphic signals.]

Transference of a physical phenomenon or of its effects when this transference implies one or several intermediate factors capable of affecting the phenomenon.

There can be no transmission of movement, in the mechanical sense, without machine parts that produce it (camshaft, universal joint, drive wheel, drive belt). And in medical parlance, no transmission of disease, epidemiologically speaking, can occur without a site for the pathogen and an infectious agent.

Communications can be of an immediate, direct, and joyously transitive nature. Transmission, on the other hand, imposes itself on us by its character as process or mediation, something that dispels all illusion of immediacy. Mediology is devoted to medium and median bodies, to everything that acts as milieu or middle ground in the black box of meaning's production, between an input and an output. A milieu: it is indeed because there is refracton that there is degradation. The transmission coefficient (or ratio between the intensity of influential radiance after its passage through a given milieu and its initial intensity) also affects the emission of immaterial abstractions.

To sum up, if it is true that one cannot separate completely, in vivo, the range of phenomena encompassed by communication and transmission, one must guard against mixing them together. In vitro, we can do this by subordinating the first, more modern notion to the older one, which seems to me at once more holistic and more rigorous. A process of transmission necessarily includes acts of communication. The converse of this may not occur; here, the whole will have primacy over the part. To reflect on the nature of transmission illuminates communication, but the reverse does not hold.
true. It is highly unlikely that a communications major or the holder of an advanced degree in communications arts will have studied the origins and formation of the West's most popular religion. But anyone curious enough to adopt a mediological approach and follow the propagation of the "true faith" across its first few centuries will have also gleaned in passing some insight into information societies in the year 2000.2 (Turning one's back on a problem is often the best way to pose it the most aptly.)

Not a single historical reconstruction (however partial) of communitarian crystallizations—be they far back in time or closer to us, perennial or fleeting, revealed religions or rational utopias, or two movements that most interest me: primitive Christianity and proletarian socialism—can properly fit under the purview of communication studies/computer science. Faith in the living Jesus was no more propagated by the newspaper than was Marxism over the telegraph wires. Access to these hotbeds of meaning was not a simple matter of communicative instantaneousness or spontaneity. Their complex means of constituting themselves slowly and symbolically exceed in every detail and import what we today call means of communication. Mediation does not reduce to media. Shelving a more philosophically informed mediology in the media studies section would be as sagacious as considering the study of the unconscious a part of the sciences of the occult. It has been known to happen. And this blunder proves unfortunate.

CIRCUMSCRIBING A DISCIPLINE

Transmission: it shall be. But of what, exactly? Once we set apart a new field of study, it remains to explore fully the object. How to avoid the pitfalls of seeing things everywhere transmitted, from the AIDS virus to property holdings to titles of nobility to a privilege to bad character? The human sciences already label reproduction the past's continuance into the present.3 It should be said I have in mind neither (1) the properly biological reproduction of a group nor (2) a group's social reproduction in a global sense, even if the latter can be likened to transmitting a cultural or symbolic capital. The separation of fields, necessary to scientific progress, always has something arbitrary about it. Codes' transmission has no autonomous and pure existence, which is also why the semioticians' insistence on the arbitrary nature of the sign hardly suffices as a basis on which to analyze the workings of society or technology. Even if the influence one exerts can never be reduced to a power one imposes, and even if symbolic violence is by definition differentiated from physical coercion—the first presumably beginning where the second ends—the action of one will or mind on another is indistinguishable from the institutional or informal positions of power held by them. Leader and foot soldier, guru and follower, witch doctor and patient, father and son, president and citizen, boss and employee, general and private: these positions are realities, not arbitrarily binary. Study of transmission can obviously not exclude all that occurs among members of a family or at school, in the neighborhood or village (a father, for instance, transmits certain norms and values to his children without even saying a word, as does membership in a union). But at this early stage I would rather concentrate on how explicit symbolic systems are perpetuated: on religions, ideologies, doctrines, and artistic productions. I do not ask how the social world reproduces its constitutive structures such as the state, the family, property, social classes, and the like, nor how the sociocultural predispositions of agents in that world (wage earners, teachers, supervisors, spouses, bureaucrats, etc.) are reproduced from generation to generation, but rather, how is it that, two thousand years after Jesus, there still subsists something like Christianity in the Western world; or, more than a century after Marx and Darwin, something like Marxism and Darwinism; or, more than fifteen years following Lacan's death, Lacanian analysis; and so on. What are the pathways followed by the relay race of human thought (a subject overflowing the mere transactions of language)? Where are the sites at which, somewhere between myths and figuration, a new or different meaning is added to something that had possessed none, or another, before?

This said, I do not intend to dwell in that innocent empire of popular zeitgeist phantoms, that undifferentiated haunt of the gods and spectral collective representations. This is because these productions of consciousness—religions, doctrines, ideologies, disciplines—impinge decisively on the course of material things. They had direct influence on organized bodies and human bodies, modifying how they functioned politically, economically, and militarily, rather than working only in peoples' dreams and minds. The administration of signs and images has effects and stakes that are tangible, constraining, and at times violent. Neutral things mobilize energies, inert things act on us, and the word gives life. No doctor remains unaware of the placebo effect, which pharmaceutical labs now isolate and measure. A host of today's historians have, I dare say, fully caught up with the pharmacists. Their fertile researches encourage a certain formal leap toward a discipline whose object is the relations between the superior social functions of art, religion,
and ideology and the sociotechnical structures of transmission, in other words, ipso facto, the ways and means of cultural symbols' efficacy. Such a methodical undertaking would not lack import for those present sciences of the collective that, when they turn to the still mysterious effects of peoples' beliefs, resort more often than not to metaphor over explanatory analysis.

ORGANIZED MATTER AND MATERIALIZED ORGANIZATION

Consider from the outset an intelligible, deliberately schoolish model (only by pressing the limit cases, however reductive, do we release an explanatory force that makes it easier to grasp yesterday's and today's confusion of certain issues). The development of tool-using hominids from evolutionary lines leading back to common ancestors of man and apes, on the grand scale of paleontology, was driven by countless functional collaborations between inert matter and biological living matter. So too does the acclimatization of a distinct group, on the historical scale, couple communication with community. It is the wedding of the technological factor to the institutional factor, by and within the process of social incorporation, that sheds light on the paradoxical currentness of the past. It also helps explain the enigma of human history as a succession without exteriority.

What poet does not expect his utterance to survive its initial inspiration? Where is the striker of meaning's sparks who does not wish to set fire to the plain? Indeed in order to bring off transmission across time, to perpetuate meaning, in any capacity as emitting Everyman I must both render messages material and convince others to form into a group. Only working on dual fronts to create what will be memorable by shaping those devoted to it can elaborate the milieu for transmission. The memorable can be put across by transforming what has perished into monuments (because physical matter preserves the traces of what is absent). Those who do the remembering, the mémorants, or rememberers, constitute collective official channels of recreation (because only the living can stir the embers of meaning that slumber in traces of the past). Together, matter and members make up Bergson's so-called two sources of morality and religion, the cold and the hot: a mortal, or objective, memory and a living, or innovative, memory. They bind together indissolubly, in the manner of a passive cultura culturata and an active cultura culturatis or, to use the terms of medieval scholasticism, material cause and efficient cause. Communication is the message's sine qua non, while the community of messengers is that by which the choice of an inheritance is possible. The message that does not find an institutional housing will go up in smoke or be drained off as so much background noise by the ambient environment of cultural life. Perpetuating meaning assigns an institution the dual mission of archival and pedagogical conservation. No prophetic or charismatic improvisations can substitute for it, and it exceeds all individual capacities. The institution acts as a kind of registry or patent office, but rather than passively conserving its charges, it is never done siting, revising, censoring, interpreting, and peddling them. It also authorizes others in turn to pass on its achievements or even to deflect and divert them. The church through its preaching, the university through its teaching, the Freemason through its psychoanalyzing are all forms for conferring pertinent qualifications in their respective competencies. Their task takes on a dynamism when it is oriented outward, yet it implies a certain inertia on the inside.

We can rough-hew a further elaboration. The agencies of cultural expression belong to one of two orders: inorganic and organic. Medieval cosmologists divided up extant beings, on the one hand, into organized beings (the object of the sciences of life) and, on the other, inanimate things (objects of the physical sciences). The operation of culture invents and mobilizes a third and fourth category of existents of which our knowledge, in contrast to the preceding antitheticals, is still quite imperfect and will no doubt occupy the centuries to come: the categories of organized matter and materialized organization.

Man-locomotive contrasts with the errant animal in his aptitude for making movement coagulate into a solid structure (Georg Simmel). Even so, the organized inorganic is not to be attributed solely to the human species. Animals do after all produce works of art (or industriousness?) even if they do not labor from a plan. Swallows construct their nests, bees their hives, beavers their dams, and moles their burrows. The same holds for materialized organizations inasmuch as, broadly speaking, we can speak of societies of termites, the organized activity of ants, and the like. Peculiar to humanity is its particular combinations for materializing organization and organizing matter.

A labor of transmission can be broken into its two corporatist components: its constituent body of members or service staff (a corps in the sense of diplomatic corps or teaching corps) and its material embodiment (its body in the sense of "failing bodies" in physics). We see the complexity of a process that summons the mythological talents of the artisan and the legislator, the machine maker and the lawgiver, Daedalus and Lycurgus. At the material level, to transmit is to inform the inorganic by manufacturing con-
suitable stores of externalized memory through available technologies for inscribing, conserving, inventorying, and distributing the recorded traces of cultural expression. At the institutional level, transmission means structuring the social locus in the guise of collective organized units, devices for filtering out mere noise, and totalities that endure and transcend their members of the moment and reproduce themselves over time under certain conditions, all at high costs (such as those nonbiological “living” beings: a school of thought, a religious order, a church, a party, or an institution of learning). What would happen without such materialized organization, this pocket of antientropy, this enclave of ordered activity hewn out of the larger amorphous disorder? Such a micromilieu is constituted only at considerable effort, as it is a quasi-substantial form set off from a more or less amorphous environment. Simply translating organized matter across homogeneous space and time directly and uncomplicatedly—say, in the way one translates a triangle in mathematics or, in physics, the way a translated moving body has all its points in motion at any instant going at the same velocity and direction, as opposed to those of a rotating body—would merely transfer or displace it. It would not address all those conditions and changing contexts whose resistance both impedes and allows organized matter to be put across. Just translating organized matter would subject it maximally to those very conditions and contexts—to static, loss of signal, fossilization, repetition, and extinction—for forging a chain of meaning to impede its dissolution obliges one to remake its living links incessantly, like living stones in the edifice of the Gospels. All in all, just as there can be no cultural transmission without technological means, so is there no purely technological transmission.

Among the varieties of organized materials required to materialize organizations must be included a proper orchestration of all the instruments of communication. One can distinguish between (a) the semiotic mode (the type of sign used, be it textual, imagistic, or audible); (b) the form of its distribution, broadcasting, or channeling (linear, radial, interconnected, or networked); (c) its material base (stone, wood, papyrus, paper, or waves); and (d) the means of transportation (of people and messages, via roads, vehicles, infrastructures, and larger systems and industries). Rendering the message material, let us not forget, means not only drawing (or keying) signs but also opening ways for them to reach others. Among organized matter’s artifacts you will find, according to the given mediaphere, ink and copper plates as well as communications satellites; parchment, calamus reeds, and styluses for writing, as well as pcs and typewriters; and horses’ saddles, along with automobiles and telegraphs.

Under materialized organization, or institutions, you can lay out communitarian arrangements, that is, all those diverse forms of group cohesion that bring together the human agents of a given transmission or, more exactly, those forms imposed on such agents by the material nature of whatever coded signs and devices they are using (a function of the reignant stage of semiotic development). Your list will include chains of command, personnel, and bureaucracies; priests, rabbis, mullahs, and professors; salons and plebeian tribunes; steering committees and ancient Roman and Catholic curias and consistories; institutes, academies, and colleges; chief curators and revolutionary chieftains. Take for example the tradition and institution of cinematic image making. Cinema is the sum of film clubs and celluloid. Especially in the French context, it groups together organizational methods that originated from the confluence of activist Catholicism and political progressivism—the review, the club, the festival, and journalistic criticism—together with evolving representational technologies, such as projectors, cameras and shooting angles, soundtracks, screening procedures, and so on.

In sum, the art of transmission, or making culture, consists of adding a strategy to a logistics, a praxis to a techné, or establishing an institutional home and engineering a lexicon of signs and symbols. What persists over time is the art of composition; the proportion of elements varies.

As a general rule, the stronger the innovatory force of a given symbolic message (i.e., the greater its nonconformity with the norms of its milieu), the sturdier must be its transmission's organizational armature, because it will become all the more arduous to clear ways through hostile surroundings. For its part, the transmissive relay will see to it that a certain necessary level of redundancy is sustained for the sake of a proper hearing. Because an excess of originality affects reception adversely, one must know how to use signs that are dispensable—or already familiar to the ambient milieu—to be understood. In the science of perfumes, a nondiluted fragrance can become toxic or noxious (the Mallarmean enigma); the mediologist's art avoids this pitfall, pouring the balm into the original, as water stretches wine.

Historians contend there could have been no Roman Empire (materialized organization) in the absence of roads (organized matter); geographers, no roads in the absence of empire. What was the ultimate causal operative in these historical efforts to domesticate space and time? Doubtless it was the collectively authorized individual authority that accumulated capital and commanded construction (the project manager-state, in the case of the road system). The who as subject of the predicate of transmission is a motive force
vis-à-vis its *what*. In the Marxist schema of determinations, organized matter is considered *instrumental* in producing both (1) a projected meaning, i.e., organized matter's mode of production, the macrosystem of transmission currently in force (itself the hybrid of different superimposed technological periods); and (2) the productive force of that projected meaning, i.e., the collectivity that variously takes in, takes down, and puts out cultural meanings. In these orderings of the world, material organizations put things in motion; in the example, the Roman Empire clears land to lay roads allowing its legions to go forth and return more easily, its food supplies to be absorbed, its hegemony to be carried on. All of which supposes, among other things, the organized and appropriative network of routes for sending communiqués, receiving reports, and transporting troops that subsequently spread Christianity through the channels already put in place under the old empire, lending the new culture the old's imprimatur.

A necessary but not sufficient causality, then, the concept of instrumenta tion can propose but not dispose. Precisely for this reason, no single cultural form is pregiven in the material technical system that makes it possible. *Verbi gratia*—thanks to the Word—the system of alphabetic writing did indeed enable the ancient Greek city to become a meeting ground for those who could read to be exposed to public decision making and debate. But, by the same token, this publicness required the institutional machinery of politics in order to promote graphic reason to its new standing. Meditation is a zigzag.

Likewise, the institution or tradition of painting would not have come about as art without the art gallery, the site of its appreciation and sale, with all the attendant regulated capitalization of daubed canvases this implies. Yet there could never have been a modern museum without first a politically motivated creation of the national patrimony, a matter of institutional authority. Likewise, no literature without a library; in France, no *royal* library without a Charles V to promote it or *national* one without the Revolution's Jacobin phase. No edification without the struggle to build the edifice. In other words, no historical record of memory records itself. Downstream, its trace has the virtue, or vice, of effacing the collective trace upperstream. Roman roads outline the empire, as do copies of Plato's *Phaedo* the Academy, and octavo editions of Marx the Communist movement (only by this process can the writings be gathered together, the opus canonized, the words put back into circulation). Because we fetishize memory in its material forms, its facticity causes us to overlook the very materializing organization it was called on to extend in the first place. The doctrine's influence and success wipe clean the memory of indoctrination's painful gestation; opus eclipses operation. *Optimal transmission is transmission forgotten.* Hence the imperative of reminders that go against what is natural in these matters. The fact that the fruit melts so spontaneously into palate's pleasure calls for a more rigorous understanding of the grower's art.

**NETWORKS AND TERRITORIES**

Transmitting means organizing; it thus stakes out territory. It consolidates a whole, draws borderlines, defends itself, and exiles others ("Unity's nature is exclusion," Bossuet cautioned). The problem with territory is that it is always already there. From its preexistence arises the political effort necessary to dissolve the territorial ties of subjects who have come from elsewhere or from yesterday, before being reterritorialized differently, that is, given a new supraterritorial allegiance. The kind of organization stipulated by Christianity calls for a personalization of belief unprecedented in the antique world (for a Greek or Roman an individual credo has neither meaning nor place). Its effect was to separate the converted from their sociopolitical membership within the *civitas*'s topography of traditions only to enroll them in those created by a new, ecclesiastical territory. There, the less firmly established the church's ties to traditional localities, the tighter and more total its administrative net. For the new laypeople, parishes and dioceses simply took the place of the ancient Attican and Athenian demes and Roman centuries or tribes. Organizing cannot proceed without dividing tasks and demarcating spaces.

A holder of title or office in whom authority has been vested sees to the regulation and administration of the transmitted inheritance, to its proper circulation among the believers (or knowers), and ultimately to the adaptation of both these services to the external milieu. To do this, the useful redundancy of a hierarchized institution is highly recommended. Emile Poulat has insisted on the obscure *commutative* relation between a body of knowledge and a power, between a science and a potential, between a *know-what* and a *know-how*. Can we not shed light on this relation by seeing it as the effect of the praejudiciative (originative, initiative) relation that joins a memory to a territory, or more broadly, the symbolic to the political?

No territory, ideal or physical, exists without a capital (from *caput*, head). Every school has its headmaster or principal, every doctrine its founder, every county its administrative center, and even Fourier's phalansteries were
set up with father-directors. Fortifying a territory also means deposition of doctrine (or with Islam and Judaism, investiture of a sacred language). An orthodoxy is authorized to escort and drive home a founding and appropriately political partition of territory between inside and outside. "To make stable," "to enclose," and "to make faithful" all imply one another. Does not the praise we lavish on the systematic modern nomad (so frequent among contemporaries) forget that historically the nomad was a conqueror and thus a potential sedentary? All territoriality is organized according to a center that directs and peripheries that undergo. This is the difference in nature between a network (which is technological) and a territory (which remains political).

The capillaceous model of cyberspace communities sometimes relegates the pyramidal or linear model of organizations once wielding authority to the Stone Age. I have my doubts about the results of blindly extrapolating any order of reality into another (however denigrated the more traditional one as "neolithic"). The Internet is a headless network, a decentralized rhizome stretching limitlessly and horizontally. This is why the giddily anarchical World Wide Web, despite the metaphoric momentary highs to which it currently carries us, seems incapable of transmuting the virtual neurons of a planetary brain into the members of a real community of feeling and action. A collective intelligence does not ipso facto produce an electorate or electoral solidarity. As data is not knowledge, so a pc is not a polity. Cyberdemocracy is the dream of technocrats who have forgotten their partially animal existence. Only by remaining preoccupied with this latter have those definitive religious or political prophets who are invested with official duties of demarcation ensured their success over time.

The fate of the commons, or socius, is territorial, our genealogy as zoological beings contributing to it innately.2 Large groups' organizational fabric depends on their means of locomotion and mobilization. In my book L'état séducteur: Les révolutions médiologiques du pouvoir I sought to delineate those relations that join together technologies for transmitting and institutional forms for governing. It is not hard to appreciate furthermore that cyberspatial information highways do not make for the same kind of empire, give rise to the same kind of metropolitan hegemony, as the metalled or cobblestoned roadbed constructed by human labor. The Roman Empire's static constructedness—pyramidal and radiating outward from the central Urbe—and its mania for accumulating and storing are markedly different from the dynamic, mobile, network architecture of the U.S. Empire, in which flows (of capital, goods and services, information, and people) have displaced stockpiles. A network is not a nonterritory but an organized con-

nectedness (a basic definition of the French réseau, which was coined at the beginning of the nineteenth century to describe the linked systems of urban waterworks for carrying water and draining sewage). Networks cannot meet the same criteria of practical effectiveness that apply to a simple relation ordered in a single direction.

It would be worth examining, on this score, the discontinuous shift in evolutionary rhythms one observes when moving from the institution responsible for conveyance (organized matter) to its material infrastructure (materialized organization). There is, on the one hand, the dependence of the quodat, how, of initiation that belongs to technological progress proper and unfolds as a product of numerous human agencies interacting with the material. On the other, there is the relative inertia of the quid—the agency of the initiating (toward whatever end)—that properly belongs to every group formation. Jewish ritual today observes the same rites, celebrates the same religious holidays, chants the same psalms and to the same swaying of the body that it did three thousand years ago. The tallit, or prayer shawl, is held in one hand, the Torah scroll in the other, as shown on the Wall of Jerusalem. The Roman Catholic Church conserves mindsets and administrative structures inherited from the technological era of Constantine. Believers in information, contemporaries of the atomic age, follow the same liturgical calendar and move among the same mental and physical topography of holy places (Rome, Jerusalem, Santiago de Compostela) as people in the time of windmills and Philip II. They are oriented toward the same space-time coordinates because of a sui generis organization, an Ekklesia, that is itself not easily disoriented. This Ekklesia has crossed memory's successive technological periods intact, through the letter, the analogue, and the binary code. It is itself a self-reproducing memory, with a supra- or interethic ical ethnicity endowed with a vital independence and animate with internal programming like a living being. Even when televangelism made its appearance on the scene of Protestant cultural settings (an example of how new material devices mediate religion's propagation), it did not modify the evangelical canon (the initiating quid of collective formations). The mobile array of organized matter innovates while the stationary motor of material organization conserves. But the innovative effort of the evolving technolog y has a need for organizational stability. To find fault with the pedagogical or religious agents of memory—whether school or denomination, time's gifts for the forgetful—for turning their backs on the present and on modern life is to fail to understand their very reason for being. The school couldn't possibly be ashamed of an attachment to the past so much a part of its
very function (and so disruptive of the amnesia induced by commercialism and consumerism). Transmission withers on the vine when the present is taken as the only model. And innovation itself withers with it, scorned for the past being the greatest enemy of progress.

**CHRISTIANITY'S MEDIOLGY**

The formation of revealed religions offers an exemplary field of experimentation. It is more rewarding to study than the propagation of secular ideologies spawned during the last century, developments whose timescale is more condensed but whose effects are more superficial (despite all the sound and fury). Did not the organizing of belief in a single God, particularly the evangelistical message's multisecular diffusion through Rome's Western world, take to its maximum performance a culture's symbiotic efficacy, that is, the production of real, material effects (political, territorial, and administrative) from immaterial givens (words, signs, and images)? Just as the genius of the Incarnation provides a code of intelligibility for study in mediation in history—a kind of mystic calculus—so too the genesis of faith in Christ furnishes my approach with its via crucis. This historical genesis attests, better than any other historical experience, to the general truth that the object transmitted does not preexist the process of its transmission, if it indeed appears that Christianity invented Christ instead of the other way round.

Is there a more telling sign of the dual nature of the mediating organizational body, of its inherent ambivalence, than the meaning of the Greek word *ekklesia*? In liturgical Greek it designates first the main body of an architectural structure, the physical site as meeting place; then, in the aftermath of this meaning, the institution of grace, the corpus mysticum of the Christ. (A similar usage is not immaterial in this respect: do not the terms *cinema* and *theater* suffer, or benefit, from the same equivocation?) Its first version uncapsulized, its second capitalized, *ekklesia* carries the double signification of a single crucial operator—a linking mechanism, like the kingbolt connecting the front and rear axle and wheels of an automobile chassis or the trucks of a railroad car—that proved decisive in the transmission of the message-Messiah (and whose double nature in Jesus as fully man, fully God, founded Christology). "The reason for the Christian faith is that Christ died and regained life" runs the causal argument. The objective validity of this reason counts less to our way of thinking than the fact that its initial, historical stimulus was objectified, formulated, and reformulated by a church that learned to assure its perpetuation across the centuries, down to our own. It is irrelevant to methodology whether Jesus of Nazareth was raised from the dead on the third day; the central question is to know how the tradition that established him was elaborated and carried on. Why is it that Adonis, Attis, and Osiris, eastern mystery cults all, have not come to be worshiped among modern-day celebrants, while the Christian mystery was carried across the centuries? Dwindled and weatherbeaten it may be, yet it is still proclaimed and preserved by communities of the faithful gathering together and setting up churches distributed over five continents two thousand years after the "facts." Unable ever to know if Jesus was brought back to life, we are positive however that people believed it happened. The psychological mechanisms of such a belief are not hard to imagine. Jesus' disciples could not endure the grief of losing him; hope against hope got the better of them, and they saw him alive again in imagination and posited his continued life in heaven. Here is the real miracle of the faith. And here are the grounds to say that the idea of Jesus' heavenly life explains his apparitions on earth and not vice versa. The idea outlived the visions, and faith in the living Christ outlived the particular sightings following his death. How the miracle has been renewed and renewed, making its way to us (witnesses to nothing)—is the central question.

- So, yes, the generation of Jesus' apostles has long vanished, in subjection to biological law, but not their belief. It was transmitted to Paul of Tarsus, for instance, someone who did not meet the living Jesus during his ministry yet saw him with his own eyes risen from the dead on the road to Damascus. The converted Paul found ways to convert others, who in their turn forged the chain from age to age, city to city. The articulation of Christian faith turns on solid pivots: on relics, sacred images, and holy scriptures that are directed less toward propagating the memory of past words and deeds than the impersonal interpretation that the distant alleged witnesses, Matthew, Mark, Luke, and John, are supposed to have given them in their lifetime. Doctrine refers to an admirable propagation of Christianity, adding further cause for believing in it. The mediologist, whether or not a believer, has the task of supplementing admiration with an explanation.

Wherefrom we can deduce that, strictly speaking, there are no "founding key words" or "founding principles" (ill-chosen expressions at best) from which traditions and institutions of transmission originate. A mediological approach would do well to renounce the idealist's illusion that our culture is founded on a few simple formulations or messages that brought about its
The Medium’s Two Bodies

present state. The institutional body supposed to relay these disembodied word-principles has gradually invented its own origin. The words it is held to have transcribed it was indeed the first to compose. The holy speech of Jesus did not come first, only to be gathered and set down by apostle-medi-ators subsequently and then finally broadcast on all fronts (omnes gentes) by members of the priestly body serving as mere relays. Instituted Christianity uttered the Christian proclamation. “A word become world” has it backward; a world was only uttered through and in the priesthood’s speech. Holy writ is produced by particular communities making use of it as needed in order to communify. Hence, in the case of both Christianity and Islam, the belated character of their sacred scripture: following their faith, interpreters still found license, for several centuries, to reinvent after their own fashion the revealed religious texts they claimed only to be quoting verbatim. (Six centuries were needed for the Christian church to adopt and establish the twenty-seven books of the New Testament.)

Likewise is it fitting to take cum grano salis the hackneyed expression of historians of philosophy “Plato’s ‘founding idea’ that... What indeed would Plato have amounted to had he not had the brainstorm of purchasing a plot of land near the Athenian suburb of Colonus where he established a sanctuary of the Muses? This proving ground for the mind, dubbed the Academy, became the collective property—of a school. Plato launched this religious association, and in turn it instituted the thinking of its founder as foundational. What would we have known about Plato’s ideas without his nephew and successor, Speusippus? Without Xenocrates and, after him, Polemon? All of them became links in a chain across time and helped build the coherence of a doctrine (and thereby its capacity to become doctrine) in rivalry with the organized schools of the Lyceum, the Porticum, and the Garden (each one a territory generating its own war machine).

The disciplines invent the teachers. And, as it turned out, the Neoplatonists—more orthodox even than the direct successors installed in the Academy—invented Platonism. If you wish to understand a theology, examine its corresponding ecclesiology: you will pass from the form to the formative matrix. From the consequence to the cause. The critical agencies of acculturation (into Platonism, religion, Marxism, psychoanalysis, what have you) are bodies rather than spirits. Only bodies can deliver the message. To think is to organize. If you begin by incorporating, the incorporeal will be given to you in the bargain, the line of succession opened unto you. An inheritance is recorded only once you have made the record to which it is owed.

Crossroads or Double Helix?

THE TWO LINES

This, then, is the nodal point of my proposed diagram of transmission’s criss-crossing lines, the point where organized matter and materialized organization interact, where material base and social relations are in their most dialectical relationship to one another. It is impossible to treat the communitarian level of authority separately from its means for communicating or to treat sociability separately from technicity. If such a vantage point can stake a single claim of originality, it is its refusal to sacrifice either the technical equipment or the institutional group when analyzing the trails left by symbols. What matters most is to travel along the ridge from which both these historical slopes can be scoured. One must take in both the mundane matters of the highway department and the sublimities of the lyre, both civic and literary genius, the laying down of both pipes and party platforms. Transmission’s genius is a long ambivalence.

For those with a lingering preference for the genius of Christianity over that of the engineers, it is essential to bring together two etymological ancestries of the word religion about which philologists have quarreled since the days of classical antiquity. Authors such as Cicero relate the word to the verb legere, “to gather or bring together.” Others such as Lactantius and Tertullian argue for ligare, “to link together.” Does not the one naturally imply the other? Without indeed gathering up saints’ relics, without collecting here and there from far away bits and pieces threatened with extinction (the relegere part), how is a durable link ever to be forged between contemporaries (the religare part)? A scrupulous conservation of traces and a capacity for rallying together, each activity in solidarity with the other, constitute one and the same operative function practicable two ways. Whether or not
they derive from individuals' particular confessions of faith, the ties that bind those individuals in depth depend on their confidence in some external symbol, a jointly held factor x. A formal axiom holds that community lies only at the foot of the edifice of symbolism overseeing it.

As things now stand, we are struggling to overcome the separateness of the two cultures that, comfortably set in their ways, preside over the jurisdictions of knowledge. Within the human sciences, each specialization partakes of the conveniences and indolence of insularity. Barriers a miraculous departure from custom, historians and sociologists (who specialize in the study of materialized organization) turn their backs on technological circles of activity and the devices used in different periods for recording and organizing human memory, from systems of writing to the national highway system, from our tools of inscription to our habits of touring and circuits of travel. They study institutions, collapse the history of ideas into that of so-called great works and doctrines, and remain exegetes. Specialists in organized materialities—scholars of the history of technology and of memory machines and observers of material culture—do the opposite. Often they bracket institutional questions and the parameters of social or political history. Under the rubric of technological history, the invention of pendulums and escapements for mechanical clocks, say, will be anatomized (as in the work of David Landes). The philosophy rubric generates treatises on being and time and Heideggerian phenomenologies of lived temporality. The paths taken by these two kinds of researchers are averse to intersecting.

The one camp—will follow the trajectory of processes of mechanical reproduction and printing while the other traces that of religiosity in the West. One side details the nineteenth century's epic of road and rail construction; the other, the republicans' inroads in the French provinces. For the political historians, it is as though the modes of political domination were somehow independent of the ways of handling geographic distances and time delays. As if a given political culture were not first of all a distinct technological culture, or as if the civic sensibilities of a contemporary were unrelated to his preferred toolkit of accoutrements for influencing people and decisions. (Is not the republican politician, more adept at the unspon-
taneous delayed broadcast, also a bibliomaniacal mincer of words on paper? And is not today's democrat a swimmer in the audiovisual flow of sound and images? The first one will send you a letter, while the second will call you on the phone.) Political history continues to isolate politics from technics as if the size of sovereign spaces were not a function of communications and the networks of rail-, road-, and waterways available to transport. (Did not

the transnational highway system contribute as much to "building one Europe" as the Brussels Commission? Will not the interuniversity Numeris network add more to the consciousness of European unity than the intergovernmental agreements concluded in high quarters?) As if our present policies of humanitarian diplomacy and our legislation that has written intervention into law were not the implacable result of live satellite and radio coverage abroad, as oblivious to borders as it is to international law. As if the nature of the social bond, anywhere, could have nothing to do with the instrumental braiding together of human aggregates. And as if there were no coinciding at all between mediological revolutions and political turning points, between the Phoenician invention of the vocalic alphabet and the emergence of the Greek city, between Gutenberg's printing press and Luther's Reformation, the industrialization of the book and the formation of national consciousness, political journalism and the parties of notables, Marinoni's rotary press and the expansion of mass party politics.

We expect the citizen to be well instructed in the laws that she or he arranges to have taught. Thus every major reshuffling of technologies of the letter—in rough chronological order, artisanal, industrial, and (intangibly) electronic—means a corresponding change of saddle for the citizenry. This pervasive material conditioning may seem to take place at the lowly level of the roadbed or even underground, but this does not rule out the new technological protocols' sublimation into a regulating ideal by the metamorphosis of procedural necessity into obligatory forms of social interaction. For the Athenian city-state, the idea model was orthographical; the letter of the law, etched onto a stele that all could read, made possible reciprocal supervision between citizens and representatives, contrary to the aristocratic orality of Sparta. For the Enlightenment, the model was typographical, following Kant's definition of the public use of Reason as the person whom one styles as knowledgeable before the totality of the reading public. For the Second and Third French Republics, it was bookish and schoolish, with that period's extended projects of permanent civic education (from primary school to popular adult education, taken up under the Fourth and Fifth Republics as l'action culturelle) and its goal of democratizing knowledge so as to split up power. Public space can be conceived as that space where written utterances circulate under certain concrete conditions that are rarely, if ever, thematized (stationers, delivery of mail, roadways, railways, customs seals, typesetting, etc.). A modification of the networks of communication has the effect of altering ideas. The electromagnetic telegraph, for instance, dynamized the republican structuring of the state; television tends to shat...
ter it. To cite another example, de Gaulle might well have been vanquished by the redoubtable forces evoked in Napoleon's remark, "There is more reason to dread the hostility of three newspapers than a thousand bayonets," if his solemn and authoritative "voice of France" had not managed to drown out the grumblings of critics who depended exclusively on the written word. Could not a political history of France or the United States be written by evoking in historical succession, to borrow from Woody Allen's terms, their newspaper days, radio days, and tv days?

Opinions about the means and pervasive emissions of mass communication today are distributed between two continents. Optimism prevails to the west of the Atlantic, a certain pessimism to the east. There would seem to be a face-off between a European line and an American line (however many complicated provenances, exiles, and mixed breeds one might also identify). Is not the first line philosophical, critical, and generalizing; the second, empirical, quantitative, and microtargeted? Doubtlessly so, yet the cultivation of aprioristic explanations and each line's territorialism are antagonistic only superficially. The American approach bubbles with energy and sings of cybertech liberation, while the more nostalgic European one mourns a loss. Might we call this match the Manic meets the Melancholic?

Indeed, Europe favors the more political moment of cultural transmission (the Frankfurt school's critical theory is emblematic here). A mistrustful deconstruction uncovers the ideological manipulation and social control behind the equipment of cultural production, so many instruments of enframing and subjugation. Communication is instrumentalized by domination. In this political totalism, the strategic intent of the engineers and mechanics dissolves or neutralizes all constraints that otherwise might belong to the machinery itself (networks, material base of inscription, devices). The culture industries' internal logic, as Edgar Morin showed a while back, implies, however, a promotion of what is singular, shocking, indeed abnormal, so that the stereotypical consumer takes in a steady and random diet of manufactured prototypes of novel experience (films, music, dress, etc.). The conformity machine thrives on uniform anticonformity; its media are the newest panacea, leading to no less than a planetary blossoming of democratic individualism. Being counted part of the network as an imaginary cure for the ills of exclusion casts the chill of a technologic asepsis onto what is hotter matter: the political question, proper and improper. The American line of approach to transmission does tend to dominate more fully when it dissociates communication from domination by excluding normalization behind machines and equipment, in all their deceptive fascination.

On the European side, political realism is allied with technological angelism; on the American, political angelism with technological realism. Pierre Bourdieu tries the case of television. These pessimistic inheritors of the Enlightenment mean to demystify the anti-Aufklärung applications of an instrument that by their lights could be put to better uses in more capable hands. Their humanist diatribes against industrial alienation are animated by a classically instrumental view of technology conceived as the sum of mere props and nonessential tools at the disposal of a cause that far surpasses them. With his concept of mechanical reproduction as degradation of the original's aura, Walter Benjamin belongs fully to this grand lineage, although he is both more artistic and more genuinely inquisitive vis-à-vis the innovations of his time.

As befits a nation of engineers and pioneers of industry, the American line favors instead transmission's technologic moment. Its media are the newest conduit, channel, or network of civilization-as-content-provider, occludes the nature of information spew itself and how it might enslave its human receivers. Transmission via satellite, we are told, obsolesces the nation-state and political rivalries of yore. Yet territorial disputes are replaced by wars between competitors about norms, the euphemistic technological equivalent of nationalist expansionism. This heralded rejection of ideology turns exorbitantly ideological in reality. We see it break out in today's euphoria of exclamations over the Web and information superhighway as paths to salvation. Digital interconnectedness for everyone is offered up as the newest panacea, leading to no less than a planetary blossoming of democratic individualism. Being counted part of the network as an imaginary cure for the ills of exclusion casts the chill of a technologic asepsis onto what is hotter matter: the political question, proper and improper. The American line of approach to transmission does tend to dominate more fully when it dissociates communication from domination by excluding normalization behind machines and equipment, in all their deceptive fascination.
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symmetry, which holds at the thematic level, fails however at the level of surface coverage. (Nor of course does it apply to the matter of intellectual coherence: pitting Adorno against Bill Gates mixes apples and oranges.)

Given the eviction of politics by the business and government administrator, the fecundity of research labs, and the huge shift of the United States’ winds of change from a westerly to an easterly direction, the last two decades have put the European line in the minority even in Europe. It would be a shame to react by buttressing oneself on traditional European-line arguments prioritizing domination in order to thwart the American-line hegemony prioritizing communication. It is better to refuse such an alternative by both technicizing the political factor and politicizing the technical factor at the outset. By way of further illustration: “America” reflects primarily on the roadway and the cable while “Europe” gives thought to the missionary or the message. Our rule of thumb will be Euro-American: we must put the pilgrim back on the pavement.

THE TRAGEDY OF TRANSMISSION

Toward the last century’s close a certain romanticism rethought more deeply the bittersweet material constraints of perpetuation. Maurice Maeterlinck lamented that Nature dictates we die at the moment we transmit life. Edward von Keyserling observed that the flame only brightens and gives off heat by consuming its own substance. The philosopher and sociologist Georg Simmel (1858–1918) coined the phrase “tragedy of culture” to express how vital force, to realize itself in the world, has need of its own antithesis, which makes it die. The rigidity of concepts and norms blocks and enfeebles a surge of spirit that, did it not infix and entrench itself within the objective limits of a given form, would never be prolonged. So it goes with every cultural emission’s prolongation: things and people to relay its work must be carried on by institutions that soon become fixed into exclusive, normative, dogmatic, ritualistic, corporate societies. Immanent to the affirmation of a cultural value is its negation.

Did not this immanence of death to life find its canonical representation in the Christian myth of the Incarnation, also a superlative emblem of profane mediations? Manifesting itself in the flesh, in order for it to happen as a presence amid humankind, the Word was held to make itself vulnerable to shedding tears of blood and to giving up the ghost that it might one day
itself to be embedded in a larger field of mediological interactions. There, the moorings beneath pull against the shimmering panoplies above, and our ethnic automatisms interact with our universal machines.

INTERDEPENDENCIES

It goes without saying that the field is complex. One speaks more appropriately of interactions and bipolarity than of entrenched antinomy. Bruno Latour and others have shown there is no discrete technological object purely technological and totally inhuman or reducible to a purely instrumental neutrality. Technology is freighted with positive or negative values, fitted into institutions or social networks (like the speed bump or the alarm clock). We would never understand that things can speak to us about human beings if inanimate objects were not endowed with a kind of social soul. The manufactured and even standardized machine-object (the automobile) can also vehiculate dreams, style, values, and the self-image of an era. Thus can it also materially emblematize an era's spirit in symbols, especially at a distance (think of the Deux Chevaux or the Mercedes). I will venture further to say that, even well before the culture industries came about, never has there been culture without machinery or the invention of a machine without a culture farther back in time. The technological gesture itself appears out of a laying of memory traces, the way an apprentice must go through certain motions, recorded and repeated and appropriated so as to be carried on. From gesture also the tool derives its efficacy, for which as much savoir-faire is needed to preserve the tradition mentally as caloric energy to enact it bodily. After the studies of Alain Gras and Philippe Breton, among others, we know just how much the history of mentalities fuses with that of our machines and how much that of our machines prolongs existing myths and nourishes new ones. This happened with Icarus, the Golem, Pygmalion, or Frankenstein. No stark demarcations can be traced between these domains, or sworn enemies drawn into contrived face-offs. Everybody has some firsthand idea of how much artisanal competence in handling certain materials or apparatus is assumed in the most minimal implementation of a cultural activity or conservation of documentary material, news, or other datum within a text, picture, or score. Recording, saving, archiving, and consulting: all imply know-how, sometimes personalized and sometimes, as so often today, delegated to machines.
As soon as one cuts through complication by filing under culture relations between people and under technology people’s relations to things it becomes clear that subject-subject relations are mediated by the objectively material, as subject-object relations are mediated by subjectivities that are underlying, collegial, or collective. Mediation works its will in both directions. This explains the perils of erecting Technology as an autonomous megasubject, whether to demonize it as a megamachine, in the case of the visionay technophobes, or to idolize it as the Good Mother, in the case of cyberutopian delusionaries. A technologic determinism has the drawback of cultivating only mechanistic causalities. The best cure for them is, yet again, the history of technologies themselves, for which a simplified diagrammatic causality is ordinarily replaced by systemic tautological circles of the type, say, that blames the lack of vegetation in the desert for inhibiting rainfall there and the absence of rainfall for eliminating vegetation.

Invention proposes; community disposes. Each of these two agencies holds “half the program” (in Daniel Bougnoux’s phrase). If one denotes by culture the system of practices, codes, rules, and expectations appertaining to a historically constituted group—the national mindset—such a group configures a sort of domestic interior that will be capable, as a function of its needs, of either assimilating or rejecting a given innovation. Some specific characteristics of a technology it will find useful in one situation, for some purposes, others unusable (at least at first) in another situation. Much as each organism selectively picks up from its environment pertinent information that blinks its signals only to it, a lineage of cultural evolution singles out, from a complex of available innovations, the ones most meaningful to it and that it alone can best optimize. Nobody hypothesizes that Gutenberg’s invention, introduced into New Guinea, would have produced the Renaissance or that the Internet can make interactive cybernauts appear at the foot of mountains in Nepal. And although nineteenth-century England possessed the technological base for it (ranging from industrialized printing to railroads to the educational network, scholarly grapevines, and institutional niches for men of letters), it did not produce that culturally specific figure of the intellectual (typically French because historically overdetermined).

I find convincing those cultural historians such as Roger Chartier who counter the theme of explosive technologic revolution with that of attitudinal gradualism. They exhibit the ways in which changes in behavior in the West preceded and anticipated the abrupt caesurae presumed to have provoked or ushered in those changes. Revolutions in the practice of reading, for example, fail to coincide perfectly with those of book production. As early as the fourteenth century, Petrarch’s humanistic writing inaugurated, at a time when copyists were still laboring in scriptoria, the tools and methods of easy readability it would take two centuries for printers to reinvent in the sixteenth. And the university system of the so-called peciae, or quires of exemplaria for student use, vastly expanded the production of manuscript texts two centuries before the advent of printing presses. At the same moment in northern Europe, the devotio moderna was already entreating the faithful to read the Bible individually, well before Luther and Calvin. And the birth of the protobook, or codex, in the first century A.D.—well before Gutenberg obviously—precociously transferred graphic spaces from scrolled surface to portable volume, simultaneously enabling silent reading, marginal annotation, pagination, and new classifications first based on titles and then on authorship.

Need one truly choose between technicism and culturalism? What appears to make a revolution, such as that of printed texts in accounts such as Elizabeth Eisenstein’s, is an encounter between an emergent disposition to praxis (method of reading, writing, classifying) and an innovational system of tools and media. Without the quasi-chromosomal conjunction of cultural breeding ground with new technology, an innovation will not come forward and take over.

**DEMARCATION**

Uses of the terms technology and technics are as numerous and contradictory as those of culture, so it is no easy task to grasp their proper meaning or what essentially separates them. Up to a relatively late stage in human evolutionary development, there was good reason to assimilate both technological and cultural instances under the category art, which, following its original definition, referred simply to that which contrasts with nature and its gifts (ars est homo additus naturae). The one and the other make up what is super-numerary: collective derivative productions, supplements to our genetic baggage, and learnings acquired from history rather than hereditary gifts. Past this common point, however, there is grave divergence in the series.

Let us cast a glance on our environs. In whichever country you visit at the end of this century you will, always and everywhere, find internal combustion engines, towers with power lines, airports, and computer terminals. And whether in Beijing, Cape Town, or Lima you will see the same objects,
dress and brand names and countries of manufacture differing little from place to place. This is why, from one meridian to the other, you will feel comfortable and seldom out of your element or exiled, because human beings in 1999 share the same standardized competencies. How to use a car, keyboard, or escalator will not change according to latitude and social milieu. You may well be caught terribly off guard, however, by Chinese characters and deftly handled chopsticks in Beijing, by the smooth sway of worshipers gospel-singing at mass in Cape Town, or by an Indian’s shaking his head up and down for “no” in Lima. Had you been visiting Peking, Cape Town, or Lima in 1857 you might well not have come across a single one of those banal, unprestigious innovations you had become so used to in Europe (so much so as to have missed their artificial character). But then as now you would have come up against the same ideograms, cuisine, and set of gestures and experienced similar moments of foreignness.

All of this puts us on the trail of a further distinction worth noting. Let us, again, designate culture from an anthropological viewpoint as the repertoire of forms, intuitive schemas, and corporealized memories every society makes available to its members. Those cultural practices present weak variability over time and strong diversity over space. Conversely, technological realities register strong variability over time (in particular, from the period of the first industrial revolution) and consistent uniformity over space. The dis-symmetry between properties results in an almost perfect chiasmus. There are some three thousand spoken languages in the world and only three gauges for railroad track, two standard voltages for the world’s appliances, and one International Civil Aviation Organization stipulating telecommunication among all airships in one code, English. But the intensive and persistent use of the French language would enable a resurrected Racine to converse as an equal with Claude Simon. A technical system translates coherences that for every age are woven among the different tools and apparatuses, at all points in the space of practice. A cultural system ensures, for one given locality and only one, those coherences that are knitted between periods and generations.

A contrast in rates of change, between the evolutionary stability of civilization’s “geology” (or spheres of activity), on the one hand, and industrial innovation’s fast-forwarding, on the other, induces the cultural equivalent of disturbed personality: a crisis of temporality. More than just discrepant rhythms of growth, these two time lines at variance with one another mark two wholly dissimilar regions of being. Our machines become dated like our sports records; not so our dreams or our poems. Human beings, who evade time through fantasy, plunge back into it through technology. Our objects hold fast to their historical context while our works can escape from them. These two orders of creation have a complicated history, certainly, but the history of technological objects arrows forward and is by nature perfectible. Successive technical variations of models and prototypes are arranged in relation to a quantifiable, increasing performance scale. They always go from a less to a more, as with speed or reliability; from a least to a better or best, as in efficiency, performance, and output; from a larger to a smaller, as with compactness; and so forth. In contrast, the history of civilizations aligns incommensurable totalities. Cultural relativism is conceivable—no culture legitimately being able to put itself forward as the standard for all the others—whereas technological relativism would hardly make sense, except aesthetically or speculatively. A tractor will outperform a plow, period. These things are not open for discussion as tastes and colors are. A balance sheet of yield per acre speaks for itself. For the descriptive ethnologist, no one group of people is superior to the others; for the historian of technology, or the technologist, some tools are indeed superior to others. In the cultural realm, before and after count for nothing; chronology is never an argument for or against.

Which things exactly, then, are technological, and which cultural? I suggest that technologic covers those devices or systems that, so to speak, carry a one-way ticket, and cultural those that are open to trips back in time at any moment in history. Once artillery was invented, no army sought to supply itself with crossbows. After the appearance of the railroad, no transportation authority made use of the stagecoach. After antibiotics, boiled decoctions changed their status. But in, say, art history, no irreversible ratcheting ever upward exists: Picasso can recycle art nègre for his own purposes, and I am permitted the luxury of preferring Cimabue to Dubuffet. All periods and all schools are fair game; cultural history does not obey time’s arrow. And nothing warrants the supposition that Rawls is a more pertinent political philosopher than Rousseau just because he was born later or that the good Doctor Schweitzer had loftier ethics than Saint Vincent de Paul because he had stored up three additional centuries of spiritual experiences. In the history of forms, norms, and values, the notion of an irreversible threshold or watershed lacks pertinence. Yesterday’s technological object informs me about the one I had in my hands yesterday. Yesterday’s preserved painting or myth teaches me about what I am today and can become tomorrow.

Information about our technological past is of very clear interest of course, but of a different nature, as demonstrated by its cultural afterlife. The
industrial object that has fallen into disuse will be stored in an open-air
museum of science and technology. The art object ends up in a museum *tout
court*. No engineer will go off to the museum of technology maintained by
the engineering institute in order to improve his present-day work, yet
Cézanne regularly looked at Poussins in the Louvre to learn how to paint bet-
ner: paradoxically, the work removed from its context continues to function,
whereas the desituated machine is kaput. An art museum can be a school for
apprentices, while a technology museum remains a storehouse of interesting
dead curiosities. A museum of modern art in the hands of the active artist
functions like a laboratory. A museum of industrial arts and sciences, as far
as the active engineer is concerned, connotes only melancholy. Such is the
unjust role switching of the archives. In a confrontation with the works that
preceded it, the art object transmits futurity. The once-revolutionary indus-
trial object, however, once it is withdrawn from circulation, transmits only
pastness. Those who dismiss the philosopher’s method of the *distinguuo* as
idle diversion will recall that in a sense not keeping the political and techno-
logic orders separate has cost our species over the last two centuries a few
hundred million souls. Were not the illusions of linear progress or progress
as a mechanical certitude toward the end of the eighteenth century and the
beginning of the industrial revolution the fruits of an excessive extrapolation
of technoeconomical time onto politicocultural time? This conceptual con-
fusion has engendered hopes without an object and thus in the end, at the
point where we now find ourselves, a kind of groundless depression.

Let me put the same idea in other words. Culture is inherited; technology,
received. Culture is transmitted by deliberate acts. It is a singular content of
intimate concern to me, to my identity proper, for which I am personally
responsible, it being incumbent on me to will it to those who will come after.
Technology is transferred and disbursed spontaneously: I derive good from
it but am not really needed by it; it stands in availability. (This points up the
difference between conserved things and stocked items.) There are technolo-
gical lineages but only cultural legacies. For those things that differentiate
me from others, that single me out as different, I feel a sense of responsibili-
y. Of those things by which we all resemble one another, I am a consumer, a
user, a receiver, and a victim but not a designated recipient or beneficiary. For
all its rendering possible and easy the act of messaging, technology is never
itself a message. Only culture can be addressed to someone.
NOTES

[All translations are mine, unless otherwise indicated. Wherever possible, French texts cited in the original are followed by citations, within square brackets, of English translations. Translator’s notes are set off in square brackets and followed by the abbreviation "Trans."—Trans.]

1. THE MEDIUM’S TWO BODIES

1. One can contrast this enterprise of constructed duration with post- or premodern declarations of precariousness and transience, apotheosized in the happenings of the 1960s. Let us recall, however, that even Hinduism and Buddhism’s consecration of impermanence is taken to give entry to the atemporal. And though Navajo sand paintings, which so fascinate contemporary tastes, are designed to be erased, the shaman’s elect training in the execution of an ephemeral work still presupposes the transmission of a know-how, that is, a collective victory over the ephemeral.

2. [The sociologist Rodney Stark undertakes just such an inquiry into the networks of transmission of early Christianity. See his Rise of Christianity: How the Obscure, Marginal Jesus Movement Became the Dominant Religious Force in the Western World in a Few Centuries (San Francisco: HarperCollins, 1997). In a sense, Stark goes in the reverse direction, by using source material and statistics on contemporary cult activities to better reconstruct the new faith’s plausible routes of transmission in the first few centuries A.D. But the same mutual insights into past and present to which Debray refers apply in this study.—Trans.]


4. [Debray owes his debt in this area to a growing body of scholarship tracing the history of libraries and literature as an official, popular, or pedagogical institution. Pertinent overviews in English include Roger Chartier, The Order of Books:


6. “[SPEUSIPPUS (b. circa 407, d. 339 b.C.), Athenian philosopher, son of Eurymedon and of Plato’s sister Potone. He accompanied Plato on his last visit to Sicily (361) and succeeded him as head of the Academy from 347 to 339. Of his voluminous writings only fragments and later reports remain, but Aristotle treats him with respect and it is clear that he continued and helped to shape some major philosophical interests which the Academy had acquired under Plato.” (Gwilym Owen, entry in *The Oxford Classical Dictionary*, 2d ed., ed. N. G. L. Hammond and H. H. Scullard [Oxford: Oxford University Press, 1970].)—Trans.

7. “[XENOCRATES of Chalcedon, son of Agathenor, disciple of Plato and head of the Academy from 339 to 314 B.C. POLEMON of Athens, head of the Academy from the death of Xenocrates (314–313 B.C.), who converted him from a dissolute life and whose zealous follower he was, to his own death in 370, when he was succeeded by his pupil Crates.” (Guy Cromwell Field and William David Ross, in ibid.—Trans.

2. CROSSROADS OR DOUBLE HELIX?

1. [Historical spadework of the kind Debray’s approach champions is not lacking. There is sociological inquiry into the genesis of technical systems, as well as technical inquiry into social ones, though it is arguable that one or the other focus tends to dominate in one or the other kind of research. Of the former, there is especially the work of sociology of scientific and technical knowledge, as in Steven Shapin and Simon Shaffer, Bruno Latour and David Bloor, David Landes and Otto Mayr, but much of their work, which oscillates sharply between the documented details of case histories of empirical science and more sweeping theoretical pronouncements, is laudable more in its reconstructive detail and as monographs of social constructivism in scientific knowledge rather than of daily life in its concrete material-technological determinations. To cite stray examples more in this latter vein (whatever it may lack of theoretical or mediological self-consciousness), Georges Vigarello traces the history of cleanliness and plumbing as a social institution in *Le propre et le sale: L’hygiène du corps depuis le moyen âge* (Paris: Seuil, 1985). Benson Bobrick offers a social history of city transport with *Labyrinths of Iron: Subways in History, Myth, Art, Technology, and War* (New York: Holt, 1981). Margaret and Robert Hazen’s *Keepers of the Flame: The Role of Fire in American Culture, 1775–1925* (Princeton: Princeton University Press, 1992) documents the social organization of heating and flame. Wolfgang Schivelbusch does much the same thing for urban and rural lighting in *Disenchanted Night: The Industrialization of Light in the Nineteenth Century* (Berkeley: University of California Press, 1995) and for railway travel in *The Railway Journey: The Industrialization of Time and Space in the Nineteenth Century* (Berkeley: University of California Press, 1990). Catherine Bertho-Lavenir has edited an institutional study of *L’histoire des Télécommunications en France* (Paris: Érès, 1984) (see also n. 4, below). Thomas P. Hughes takes up electrification in Western society (1880–1930) in his *Networks of Power* (Baltimore: Johns Hopkins University Press, 1983). And the development of astronautics appears as a sociopolitical and cultural phenomenon in Howard McCurdy’s *Space and the American Imagination* (Washington, D.C.: Smithsonian University Press, 1997) and Peter Redfield’s “Beneath a Modern Sky: Space Technology and Its Place on the Ground,” *Science, Technology, and Human Values* 21, no. 3 (summer 1996): 251–274. A thorough (and brief) overview of the professional impact that the U.S. history of technology and media has had on a generation of French historians is traced by Catherine Bertho-Lavenir in her “*Clio médioptique,*” *Les Cahiers de médioptique*, no. 6 (2d semester 1988): 106–114. While these studies pass for something we might vaguely term “material history,” they also flesh out the historical component of a mediological approach, to the degree that machines in these cases constitute the very medium, or ecology, in which new social groupings adapt, commune, suffer, and the like, vis-à-vis the technological world. For similar monographs on the material history of painting, see Debray’s remarks in ch. 7.—Trans.]


3. [By “angelism,” Debray seems to be referring simply to the reduction of the actual material mechanics of message bearing to the nonessentiality of an instrument (in the sense of a mere means to an end), alongside the respective determinate political realisms with which it is paired. The term in French typically betokens a disposition to believe oneself incarnate, to behave in the manner of pure spirit. For more on medieval angelology, however, as a once heavily freighted code for the hierarchies and dynamics of transmitting messages and doctrine, see ch. 3.—Trans.]

4. Frédéric Barbier and Catherine Bertho-Lavenir have observed this guiding principle of historical inquiry admirably with respect to the last two centuries (from the ancien régime’s library collections to Japanese video) in their *Histoire des médias: de Diderot à Internet* (Paris: Armand Collin, 1996).

5. “[Truly, truly, I say to you, unless a grain of wheat falls into the earth and dies,
it remains alone; but if it dies, it bears much fruit. He who loves his life loses it, and he who hates his life in this world will keep it for the eternal life” (John 12:24–25).—Trans.


3. THE EXACT SCIENCE OF ANGELS

1. [This translation is slightly modified from A. Poulin, “Duino Elegies” and “The Sonnets to Orpheus” (Boston: Houghton Mifflin, 1977), p. 13.—Trans.]

2. ["Let no one disqualify you, insisting on self-abasement and worship of angels, taking his stand on visions, puffed up without reason by his sensuous mind, and not holding fast to the Head, for whom the whole body, nourished and knit together through its joints and ligaments, grows with a growth that is from God” (Colossians 2:18–19).—Trans.]

3. [This unknown late-fifth-century author of mystical texts on angels was for a long time erroneously conflated with a Dionysius the Areopagite mentioned in The Acts 17:34. By the middle ninth century, both were also confused with the bishop Dionysius or Denys (Denis) who had been sent to Gaul by Pope Clement I in 250 and was martyred in 258(?), along with a priest, Rusticus, and deacon, Eleutherius, on present-day Montmartre (occasioning the legend of the beheaded saint carrying his own head to burial at the site of the église Saint Denis).—Trans.]


5. The royalist character of the church and the clerical character of the royal court mirror one another. In the French Republic the president still has his “House” (the official appellation of the staff of the presidential palace). And the ceremonials of democratic life are as suffused with precedents and the according of status, and ministerial councils as obsessed with quarrels over formalities, as in the old Merovingian rituals or Saint-Simon’s memoirs. While the order of protocol may change, the protocol itself endures. Observing formalities is doubtless what is deepest in political existence; so too does it withstand all changes in regime, latitude, and vocabulary. Men must be separated by rituals to keep them from slaughtering each other, a truth Sartre considered self-evident.