

Living in Ephemeria

The Shortening Life Spans of Information

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Records and Reality

In this talk, I am going to put forth an argument that construes technological information as short-lived and ephemeral. Such a claim may appear counter-intuitive, even more so against the background of the durable and constantly retrievable character of computer-based information. Information storage and retrieval are central functions of the contemporary technologies of computing and communication. The database, a key artefact and technology of the information age (perhaps its technological and cognitive emblem), is one of the most conspicuous manifestations of the project of organizing and preserving technological information. Databases are repositories of data and information in which continuously updated records of social, economic and cultural activities are kept.¹ The disperse character of events captured and stored in databases recompense, or so is believed, for the fragile nature of human memory and the oblivion time brings. They also provide a technological remedy to the limited attention span of human perception and the bounded processing capacity of human cognition.² Data capture, preservation and, crucially, updatability are essential to databases.

Placed against this background, the claim positing technological information as short-lived and ephemeral may seem strange, if not paradoxical. For this reason it is necessary to closely consider the terms regulating the counter traffic of data and information and the

¹ Geoffrey Bowker, *Memory Practices in the Sciences*. Cambridge, MA: The MIT Press, 2005.

² Jannis Kallinikos, *Technology and Society: Interdisciplinary Studies in Formal Organization*, Munich: Accedo, 1996, and Albert Borgmann, *Holding on to Reality: The Nature of Information at the End of the Millennium*. Chicago: The University of Chicago Press, 1999.

premises on the basis of which the one is transformed to the other. Databases, as they are rightly called, contain data but scarcely information, if by information is and should be meant the living, actively sought content social agents draw on, in pursuing their objectives. Data can and is routinely rendered information. This normally entails making it anew relevant to the pursuits of social agents by retrieving and reinserting it into the flowing stream of life events. Bound to inform, information is inescapably tied to the exigencies of life and can scarcely be lifted out of the ongoing pursuits of social agents. To put it bluntly, information cannot be stored, data can.

Computerized data is thus no more than dormant marks that can be, and are often, brought back to life to become information. In some cases involving, for instance, personal details stored in bank accounts or police documents, the recovery of data to information is easy and straightforward, undertaken on a routine basis. In yet other instances, entailing the detailed reconstruction of past states or events out of data or records (e.g. market incidents, crimes, medical tests), the recovery of data to information is laborious and uncertain and may end up producing meagre results. This suggests that data holds a complex relationship to the reality it refers to and, by extension, to the information on which social agents draw in pursuing their objectives. The journey from data to information is not always straightforward. From this point of view, databases do contain data and whatever information promises these may make, but no information.

As a rule, cultural records (and data)³ are made of semiotic traces cast in the form of one or another of the three archetypal media species of text (including alphanumerical text), sound and image.⁴ To record inescapably implies drawing on the semiotic capacity of

³ By cultural records I do not mean records of cultural activities but whatever records a culture produces. Financial and economic records but also records of nature are thus cultural records in this wider sense.

⁴ One should of course recognize the production of cultural records through architecture and other forms of shaping the material world, like sculpture or agri-culture. These forms do not immediately concern us here in the sense that they do not primarily represent cognitive forms of cultural production and information.

these media to wrap up whatever information is to be preserved. There is no way to produce cultural records and data unless one relies on a medium. Media have over the years been moulded to a variety of systems or conventions of representing and mediating the world. Musical notation, for instance, is different from financial accounting (both instances of text based systems) and both differ from pictorial methods of representation. Record production, therefore, by necessity obeys the semiotic conventions and rules underlying the variety of systems by which humans capture and represent incidents and events, including the production of records out of other records⁵. In a similar fashion, records are moulded, and increasingly so these days, by the categories and standards that govern the technological capturing of information and its storage and accumulation as data.⁶

Like footprints in the sand, records are semiotic traces of incidents or events, taking shape after their passage, or at the very moment in which the incidents/events that cause them are fading away⁷. The record, say, of an economic transaction in monetary terms is a slim and posterior image of the reality that caused it; minutes and records are selective remembrances of the meetings or settings to which they refer. What is recorded is a selective, culturally or institutionally biased, reconstruction of the incidents or events it is associated with. The object and output of the activity of recording are the outcome of a series of choices (or selections) driven by semiotic conventions and rules and the technological imperatives by which semiotic production takes place these days.⁸ Only what can pass through the bottleneck of the semiotic and technological systems through which the recording is

⁵ See, for instance, Umberto Eco, *A Theory of Semiotics*, Indianapolis: Indiana University Press, 1976, and Nelson Goodman, *Languages of Art*, Indianapolis: Hackett, 1976.

⁶ Geoffrey Bowker, *Memory Practices in the Sciences*. Cambridge, Ma: The MIT Press, 2005.

⁷ Jacques Derrida, *Writing and Difference*. London: Routledge, 1976 and Vilhelm Flusser, *Towards a Philosophy of Photography*, London: Reaktion Books, 2000.

⁸ See, e.g. Lev Manovich, *The Language of New Media*, Cambridge, Ma: The MIT Press, 2001.

made can be captured and preserved. If not, it will most probably be bypassed, ignored or even distorted.

Financial records, for instance, encode a number of presuppositions, including the semantic standardization of the financial categories and terms that make sense for a community (nowadays a global one), the numerical operations that capture and aggregate monetary value and the rules by which these are assembled into representation systems, including the forms through which these operations and rules have been digitized. Records and data are thus no straightforward descriptions of the life incidents they refer to but oblique reconstructions of these. Even a video recording that pretends to map truthfully the situation it records is made possible through a series of choices as, for instance, what to film (and therefore what not to film), for how long or from which angle and so forth.⁹ The lies of photographs, Susan Sontag¹⁰ observed sometime ago, are trickier and more powerful precisely because of the fidelity to events and the mediation of truth that photographs are usually believed to carry.¹¹

The Perishable Nature of Information

As Sherlock Holmes knew so well, traces (signs or clues) are made sense of by placing them within a context in which they acquire a significance they may lack on their own. In a similar fashion, stored data is brought back to life to signify again by linking it to other data and the ongoing pursuit of social agents. The resurrection of data to significance is increasingly becoming a key technological project manifested in the pursuit and construction of technological arrangements in which data is linked and aggregated. Such a development is substantially propelled by the ample technological possibilities of mixing and combining standardized data in various formats.

⁹ See, e.g. Lev Manovich, *The Language of New Media*, Cambridge, Ma: The MIT Press, 2001.

¹⁰ Susan Sontag, *On Photography*, London: Penguin, 1971.

¹¹ See also Vilhelm Flusser, *Towards a Philosophy of Photography*, London: Reaktion Books, 2000.

Before I take up the issue of the technologically driven generation of information out of data, it is necessary to have a proper understanding of the concept of information. Whether produced in technological or traditional forms, the semantic life of information is always time limited. As earlier indicated, the production and use of information address the needs of social agents to act in specific ways and evaluate the outcomes of their action. As distinct from a data, information has an active and living quality that bounds its production and use to the present. Or, to put it differently, the generation of information is bound to be a situated act.¹² Much like speech, information cannot last. It is just a difference, in Bateson's unsurpassable formulation,¹³ that makes a difference. Difference should be understood as the perception of shifts in meaning occasioned by the confrontation with facts and data or communicative utterances. Information is in this sense always meaningful. "It does not make any difference" in vernacular English should be interpreted as implying that the "it" indeed carries no information.

In this respect, information presupposes a subject (a collective or individual agent) for whom it makes a difference. By the same token, it presupposes a stock of knowledge and a memory to which it makes a difference by contributing (through design or accident) something new, something which, not yet known, carries a lower or higher, as the case may be, degree of novelty.¹⁴ But being a novelty, information cannot have lasting value. News lasts only for a while. The informativeness of information measured by the degree of newness it carries for a particular group of social agents varies and can indeed be high. Yet, it is destined to last only for a limited time. It is in this sense that the production of information is bound to the present, even though its semantic content may refer to the past or even a state of affairs pro-

¹² The meaning of situatedness must nowadays be stretched to include technologically mediated forms of action and communication.

¹³ Gregory Bateson, *Steps to an Ecology of Mind*. New York: Ballantine, 1972.

¹⁴ Albert Borgmann, *Holding on to Reality: The Nature of Information at the End of the Millennium*. Chicago: The University of Chicago Press, 1999.

jected to the future.¹⁵ Thus evaporating, information recedes to data while its semantic content, if significant, becomes absorbed into a wider stock of knowledge against which it emerged as a difference in the first place.¹⁶

Expanding the Present

In such an account, information emerges as intrinsically short-lived and perishable, irrespectively of whether its production is driven by technological or traditional means. What is then the distinctive character of the technologically driven production of information out of data and computerized records? What does it add to the already ephemeral semantic life of information? In many respects, the speed and processing capacity of the technologically driven production of information out of data accentuates its disposability and thus contribute to its shortening life span. What is easily produced is readily replaced. Furthermore, the pervasiveness of data multiplies, rather considerably, the occasions in which social agents encounter digitized versions of life that they need to make sense of. Shortly, these developments firmly place technological information at the centre of social life. Let me elaborate.

Even though information is predominantly a cognitive category, the conditions under which it is produced in traditional settings are firmly rooted in social practices and the emotional or other kind of attachments these engender.¹⁷ The production of information out of data loosens these bonds and weakens the link between shared and context embedded webs of meanings and the production of information, even though established values (e.g. profit, freedom, privacy, equality) may persist as focal points around which these operations evolve. Social practices and the established webs of meaning to which they are associated provide a relatively stable framework within which informa-

¹⁵ Jannis Kallinikos, *The Consequences of Information: Institutional Implications of Technological Change*, Cheltenham: Elgar, 2006.

¹⁶ Much of the digitized trivia that abound in technological contexts these days add of course very little to, if they do not obstruct, the process of knowledge building.

¹⁷ Brown, John Seely and Duguid, Paul, *The Social Life of Information*, Boston, Ma: Harvard Business School Press, 2000.

tion production and use have traditionally taken place. It is this stable framework that the production of information out of data undermines.

As a technologically driven social practice, the generation of information out of data contrasts with traditional or context-embedded forms of information production that schematically speaking exemplify the opposite trajectory from reality to information. Traditional forms of information production normally entail the recording of life events or, in some cases, the preservation of prescriptive knowledge, detailing how to go about accomplishing a task.¹⁸ Reciting and reuse of information have of course been widespread practices in oral cultures.¹⁹ Similarly, the recycling of data cast in paper-based documents (indexing or ratio analysis in accounting) has been a standard administrative practice until recently.²⁰ However, there are important differences between these older practices of information reuse and the technologically based resurrection of data to significance. The affluence of digital data and their standardized and interoperable character vastly amplify the opportunities for recombining data, a process that occurs through comprehensive technological mediation and crucially automation. Aggregation, data mining and commodification of data already sustain a lucrative and steadily growing data industry that provides evidence of the distinctive and novel character of the phenomena I indicate. The perception of reality is increasingly hanging on data and the automated forms through which they are made to produce steadily new cognitive configurations.

The pervasiveness of data and its involvement in communal and private forms of life suggest that data recombinations are bound to transcend the deliberate strategies of economic agents and the pursuit of profit. Recombining data is becoming, and is bound to do so even more in the future, a mode of living driven by desire, accident, oppor-

¹⁸ Albert Borgmann, *Holding on to Reality: The Nature of Information at the End of the Millennium*. Chicago: The University of Chicago Press, 1999.

¹⁹ Walter Ong, *Orality and Literacy*. London: Routledge, 1982.

²⁰ Jannis Kallinikos, *Technology and Society: Interdisciplinary Studies in Formal Organization*, Munich: Accedo, 1996.

tunism or the seductive play with the promises of technological availability.²¹ In such cases, the pursuit of objectives and the meanings underlying it are not a guide to social action but accompaniments of it that emerge *aposteriori* and often out of haphazard and fleeting encounters with data.²² Meaning and purpose are not any longer the anterior matrix that guides the production of information. Placed in this context, the perishable nature of the value of information and the rapid evaporation of its signifying force emerge as one of the primary drivers of the data growth we currently witness. For, what perishes usually drives its replacement. Data growth itself furthers the ephemeral character of information.

One of the most vivid examples of the time bound character of information that some of you may have heard me reciting before is provided by the operation of global stock markets. Information is constantly injected into the digitized circuits of stock markets in the form of price differences that are supposed to translate business, economic and political realities to prices. News (information) about these realities are fed onto the relevant circuits on a permanent basis by key players like Dow Jones, Reuters, Bloomberg and many others, resulting, through complex mechanisms of translation that do not concern us here, in price changes. Information in the form of continuously updated price differences keeps the markets attuned to the underlying realities and the shifts of trading patterns across the globe. In this respect, constantly updated information constitutes the vital essence without which stock markets would not be able to function.²³ Updated information is the blood, as it were, that runs through the arteries of stock markets. The transition to digitized circuits of information dissemination have made these markets even more attuned to the present than they have

²¹ Bonnie Nardi and Kallinikos, Jannis, Opening the Black box of Digital Technologies: Mods in World of Warcraft, 23rd EGOS Colloquium, Vienna, 5-7 July 2007.

²² James G. March, *A Primer on Decision Making*, New York: Free Press, 1994.

²³ Karin Knorr-Cetina and Bruegger, Ursula, "Global Microstructures: The Virtual Societies of Financial Markets" *American Journal of Sociology*, 107/4: 905-950, 2002.

ever been and thus substantially constricted the life cycles of updating and the time span within which information signifies.

Contemporary life offers other examples of the immersion of information into the present and the need to recompense for its short life span through permanent cycles of updating and data expansion. Some of them include regular reports of rush hour traffic, flight and hotel accommodation booking systems, online item shopping, inventory, logistic and customer relationship management systems in business, bank account management and updating systems to name but a few. All these systems and technologies record on a regular or continuous basis a myriad of details or transactions, mapping in an impressive fashion the shifting texture of differences, which the ongoing character of life engenders. It is by virtue of such extensive and continuous recording and updating that these systems retain their time calibration. Without such calibration to the present afforded by the constant (often online) updating to which they are subjected, the value of all these systems is prone to perish. Indeed, a case can be made for the fact that modern technologies of computing and communication and the updating practices they sustain converge towards the ideal of real time, an expanding, almost oceanic, present constantly in motion in which everything occurs simultaneously.

Updatability is the clearest indication of the short-life span of information and its immersion to the present. The regular or continuous updating of databases and information systems in general thus demonstrates the short time horizon in which information is inscribed. It also indicates the double bind into which the quest of updatability is caught. On the one hand, updating makes evident the need to recompense for the ephemeral semantic life of information by constantly renewing or refreshing the data sustaining the operations and the utility of the relevant computer-based systems. On the other hand, updating itself contributes to the short life spans of information. Updating cannot but render obsolete, or, at least, partially obsolete the contents that it updates. To some degree, updating is outdating.

Interactive Classifications

The terms regulating the traffic of data to information and vice versa analyzed above demonstrate the mutual implication and the shifting importance, which the technological developments I have outlined confer to them. Such a view differs from the dominant, hierarchically premised, trajectory of data through information to knowledge. Information, as portrayed here, is crucially depending on data (and knowledge), while data is accruing and growing by the semantic demise of information.

The emergence or generation of information out of data is, of course, one mode by which information is produced. Many people may justifiably point out the persistence and abundance of older, context-embedded modes of information production that exemplify the trajectory from life to information. A variety of practices, systems and technologies are geared to record facts or incidents occurring in a world out there. Reports on weather, traffic, politics, sport, finance, of nearly everything, are prolifically produced everyday. Meticulous mechanisms are employed on a routine basis in businesses and other settings to record a broad range of organizational and market activities, transactions and shifts. At first glance, everything seems to run more or less as it has always done. Surely, a bunch of new technologies and information practices exist but these may not change the world considerably. This is a widely shared view of the contemporary condition.

Do not deceive yourself, however. You may have forgotten or underestimated Google, Ask.com, Ebay, Facebook and others. Most probably you may not have heard anything about companies such as Acxiom and ChoicePoint that increasingly define our lives. They do so by meticulously sweeping the remains of ephemeria, aggregating tones of data left behind by the massive and recurrent semantic demise of information and constructing, in this process, options and courses of action, profiles of people and life patterns, in short another reality, not discernible in any other way than through data analytics. Data aggregation is a huge business today that in concert with the technologies and practices of data searching, data mining and profiling

draw, and will increasingly do so in the future, the contours of our age. The mode of recycling is much more advanced in our cognitive than in our material life.

These developments suggest that the generation of information out of data (or other information) is increasingly gaining significance. In so doing, it reverses or, at least, considerably modifies the historical trend in which data/information predominantly resulted by the engagement with and the recording of life incidents and events undertaken by situated agents. French sociologist Jean Baudrillard depicted the artifices of modern life and information by invoking the image of the cosmonaut that, encased in his capsule, swings in the ethereal heights of technological communication able to gaze at his country of origin only from afar.²⁴ The image is evocative. In a sense, we are all info-nauts in the expanding infouniverse. No longer the impression and cognitive companion of reality, information increasingly emerges out of the recontextualized permutations of standardized, and context-free data²⁵. To engage a mathematical imagery, information is not any longer the independent variable that governs the production of data. Rather, it becomes increasingly a derivative of the cognitive or semantic configurations produced out of data permutations.

The recycling strategies of data and information manifested in the diffusion and growing importance of data aggregation, search engines, metadata and navigation techniques, data mining and profiling provide a descriptive explanation of the technological and institutional processes that keep on building the modern *Erewhon* I call *Ephemeria*.²⁶ But the ephemeral and ethereal nature of information should not be taken to imply, as Baudrillard's imagery may suggest, that the production of information out of data increasingly entails the distancing from life and reality. It does so in one respect. In yet an-

²⁴ Jean Baudrillard, "The Ecstasy of Communication," in Hal Foster (ed.) *The Anti-Aesthetic: Essays in Postmodern Culture*, Port Townsend: Bay Press, 1983.

²⁵ Elena Esposito, "The Arts of Contingency", *Critical Inquiry*, 31/1: 7-25, 2004.

²⁶ Ephemeral derives from the Greek of the day (epi+emera), that is, something that lasts no more than a day.

other, technological information forges the moulds by which life is carried out. The causal mechanism involved is similar to the one Hacking subsumed under the notion of interactive classifications. If institutions classify people in particular ways that are tied to rights and obligations, it is very likely that people will take onboard the classifications and act accordingly.²⁷ His typical example is “women refugees” in Canada (Ian Hacking is Canadian). Women arriving in Canada from authoritarian or war befallen regimes are usually caught in the institutional network, or the matrix as he calls it, of immigration policies. They, sooner or later, confront the power of institutional classification “woman refugee”, taking onboard the role of the refugee and whatever it prescribes and affords.

But how are data and information tied to such interactive effects? Institutions, after all, have significant resources to provide incentives and the power of making and enforcing regulations, both of which are essential in turning classifications to social roles. Data and information are of course entangled with the operations of organizations and institutions. In cases involving data mining and profiling, the classifications produced out of data permutations are the outcome of powerful economic or political interests that seek to profit from these. In such cases, profiles may be taken on (wittingly or unwittingly, knowingly or unknowingly) by social agents who may therefore come to act in ways that would have never been possible without the generation of information out of data. The simplest case is represented by prompts like the ones Amazon uses when you buy a book or DVD (customers who bought this item bought those as well). But there are more complex and legally controversial uses of personal classifications based on profiling and data mining, as when companies or other institutions use the data and information to produce profiles that are imposed on or used

²⁷ Ian Hacking, *The Social Construction of What?* Cambridge, Ma: Harvard University Press, 1999.

to seduce particular individuals or groups through a mix of transparent and non-transparent marketing strategies.²⁸

You may not know but everyone of us has nowadays a *digital shadow* cast by the growing body of digital traces our internet habits leave and personal details, captured by a variety of information systems and digital artefacts employed by others.²⁹ What can or should become of our growing digital shadows is destined to become a contested and probably bitter economic and political issue in the immediate future.

The so-called preference engines provide another example of the ability of data based classifications to erode and shape what once might have seemed at a safe distance from the alchemy of data permutations. In the urban and solitary settings of the contemporary world, preference engines promise to mate us with the appropriate person with whom we may have the type of experiences we are searching for or the person from whom we will never separate.³⁰ Knowing who we are does not any longer depend on the search for the true self, as psychoanalysis and clinical psychology has taught us, but on the knowledge computers produce of ourselves through preference mapping based on database analysis of habits and character traits. In this respect, the classifications of data mining and profiling produce the moulds and models of social life. Surely, cultural artefacts have always been implicated in the forging of particular ideals and modes of conduct. The case of John Hinckley that enacted Martin Scorsese's taxi driver (played by Robert de Niro in the film) in his attempt to assassinate Roland Reagan represents perhaps a dramatic illustration of how

²⁸ Mireille Hildebrandt and Meints, Martin (eds), *RFID, Profiling and Ambient Intelligence*, www.fidis.net, deliverable 7.7, 2006.

²⁹ See John Gantz et al. The Diverse and Exploding Digital Universe, IDC report, 2008, <http://www.emc.com/leadership/digital-universe/expanding-digital-universe.htm>

³⁰ Ian Ayres, *Super Crunches: How Anything Can Be Predicted*. London: John Murray, 2007.

cultural (artistic) fabrications can trespass to reality.³¹ Data mining and profiling may seldom produce such dramatic effects but they have, on the other hand, become pervasive practices that impinge upon the life of entire populations.

Postlude: Back to Ephemeria

The attempt to understand the pervasiveness of information and its ephemeral nature stumbles, sooner or later, upon the substantive question concerning the causes and reasons of the historically speaking recent infatuation with information. Why now?

Modern technologies of computing and communication are usually given the credit or the blame. However, the issue cannot be accounted for by reference to technological factors alone. To be sure, the granularity and standardization of technological information, the impressive processing and storage capacities of the technologies of computing and communication and the interoperable technological universe they construct are important drivers behind the central and pervasive role of information in contemporary life. These factors offer a descriptive, as I indicated above, but no substantive explanation of the phenomena in question. As forcefully revealed by the imaginary desktops of Vannevar Bush, the development of electronic computing is to some degree the outcome of the effort to resolve the mounting problem of information management to which paper-based systems and the humble technologies of writing and printing gave rise.³² Considered from a larger time frame, electronic technologies of computing and communication resolved a variety of problems that befell administration in paper-based cultures but aggravated others, some of which I have tried to describe in this talk.

³¹ Rosanne Kennedy, "Spectacular Evidence: Discourses of Subjectivity in the Trial of John Hinckley", *Law and Critique*, 3/1: 3-28.

³² Geoffrey Bowker, *Memory Practices in the Sciences*. Cambridge, Ma: The MIT Press, 2005 and Albert Borgmann, *Holding on to Reality: The Nature of Information at the End of the Millennium*. Chicago: The University of Chicago Press, 1999. See also, Jannis Kallinikos, *Technology and Society: Interdisciplinary Studies in Formal Organization*, Munich: Accedo, 1996.

The centrality of information in contemporary life is undeniably bound up with the open and mobile character of modernity and the ways modern societies evolved over the last few centuries.³³ The decline of closed and stable late medieval/early modern communities led to the gradual establishment of geographically expanded social aggregates (nation states), marked by accelerating mobility and steadily shifting configurations of people, projects and resources. The mapping therefore of incidents and details, the charting of resources, contributions made and outcomes achieved became an important means for instrumenting and controlling the contingencies intrinsic to a mobile and shifting economic, social and personal life.³⁴ It would not be an exaggeration to claim that without written information, formal organizations and modern society, as we know them, would have been practically impossible. Like money, standardized data and information became the idiom of the age. In this respect, the modern social order accords a central role to information whose production has evolved to a key structural mechanism by which agents, governments and businesses seek to calibrate outcomes (successfully or unsuccessfully) against preset goals and objectives.

However, as I have been at pains to argue in this talk, this understanding of information as a subservient means to the end of control cannot account for the current role technological information plays in social, economic and institutional life. Once subservient perhaps to social or economic goals, information has substantially grown, threatening to subsume an impressive range of social roles and functions under its wings. The processes through which information currently grows exhibit functional emancipation and are only partly controlled or controllable. Particular aspects of the phenomena I described in this

³³ Niklas Luhmann, *Observations on Modernity*, Stanford, Ca: Stanford University Press, 1998.

³⁴ James Beniger, *The Control Revolution: Technological and Economic Origins of the Information Society*, Cambridge, Ma: Harvard University Press, 1986.

talk may be firmly controlled by specific groups or agents but the aggregate outcomes seldom are.³⁵

I do not hope to deal with this central sociological issue here. But it is necessary to keep in front of us the central insight following from these observations. Transience is intrinsic to contemporary life. Information is part and parcel of a game in which most processes and forms are steadily changing, subject to frequent decomposition, reshuffling and recombination. Even contemporary architecture gives in to the quest of mobility, projecting to the future an image of physical structures made of bits and pieces possible to dissolve and reconfigure to new patterns. Those characteristics of the technologies of computing and communication I earlier analyzed both represent an expression of these trends while at the same time they diffuse and reinforce them. It comes therefore as no surprise that the forms created by data links, structures of metadata and techniques of data search and aggregation, data mining and profiling, in short the current key instruments of worldmaking, to use Nelson Goodman's words,³⁶ achieve only a modest permanence. Indeed, they are and will increasingly be part and parcel of a world in which entities, states, processes and forms, including personal identities (recall the construct of the digital shadow), will be subject to dissolving and recombination on a nearly permanent basis. Welcome to Ephemeria.

In his masterpiece, *The Savage Mind*, a book dedicated to the logic of primitive classifications, Claude-Lévi Strauss has attached an epigram of Franz Boas³⁷ whose associative and evocative force has captured my imagination. I would like to recite it hoping that it will capture yours. Though intended to describe a quite different context, it seems to me that elegantly describes our age as well. It reads as follows: "It would seem that mythological worlds have been built up, only

³⁵ Jannis Kallinikos, *The Consequences of Information: Institutional Implications of Technological Change*, Cheltenham: Elgar, 2006.

³⁶ Nelson Goodman, *Ways of Worldmaking*, Indianapolis: Hackett, 1978.

³⁷ Franz Boas is a key figure and one of the founders of social anthropology as a scientific field.

to be shattered again and that new worlds were built from the fragments."³⁸

³⁸ Claude Levi-Staruss, *The Savage Mind*, London: Widenfeldt and Nicolson, 1966.