

INFORMATION HISTORY – ANTE PORTAS

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Abstract

The paper is a list of passionate arguments for the ‘emancipation’ of the Information History, reviewing its pre-history, suggesting five basic research streams and surveying the latest literature.

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1. The Phenomenon of Information as a Sociological and Historical Challenge

Enhancing Marx’s commodity fetishism idea, Ferruccio Rossi-Landi distinguished between two forms of reproduction:

1. material production of consumer goods;
2. linguistic ‘production’ of verbal information.

The Italian scientist pointed out in his analysis that the complication of meaning exchange (and its detachment from commercial exchange¹) is accompanied by the complication of the social structure, and by breaking up communication into the stages of production, exchange and consumption of meaning and information this way, we can even write a world history in which exactly this phenomenon is placed in the focus of examination.

Unfortunately, Rossi-Landi’s several-decades-old fertile approach has remained a torso. Instead of dealing with the characteristics of *information goods* from a solid historical perspective, sociology yielded ground to modern descriptive schools of economics. Had it, however, been recognized that information and knowledge patterns could not be consumed either per se or as goods, and indeed, that their possession could practically be viewed as reproduction, or had it been realized that they could not be monopolized as easily as tangible commodities, several principles of economic and social history would have been seen in a new light.

¹The fact that Rossi-Landi seems to disregard the meaning exchange forms that existed prior to the establishment of the commercial relationship does not reduce the value of his analysis.

Yet, it is perhaps even more painful that analyses approaching from *commodity relationships* to *proprietorship* failed to take into consideration the two reproduction cycles, and completely ignored the issue of *information property* and *knowledge property*. Because of this, of course, the investigation of property-based *social structure*—except for some aphoristic and disconnected paragraphs—also disregarded the examination of the role and the importance of monopolies of information and knowledge, authority exercised with respect to information, and inequalities affecting information. The persistent focus on the issue of technological determinism had all been in vain if precisely the systems of information and knowledge technologies were left out of the energy-centered world of tools, equipment and machines.

The reason for ignoring the information phenomena is more or less well understood. Without the problem itself ever having been presented as a specific theme by these authors, the approach concentrating on the material sphere instinctively set aside the information dimension as accidental, irrelevant and complementary in all important aspects, while grasping the key issue, the essence, in material production.

The letter Engels wrote to Joseph Bloch beautifully indicates the core of the problem: in addition to the ‘ultimate decisive economic conditions’, political and other conditions, *and even traditions haunting people’s mind* play a role, even though not a decisive one. The letter sent to Conrad Schmidt² implies the same motif: ‘although the *primum agens* is the material way of existence, it does not prevent *intangible spheres* to exercise responding, but *secondary influence* on them.’

Although by that time the triumphal achievement of the telephone and the telegraph had been an accomplished fact, and the advanced press reaching broad masses was just beginning to emerge, it is not surprising that the classic authors did not perceive that the once accidental information aspect was becoming increasingly important, nor that they did not even *retroactively reevaluate* its role in different analyses.

Today, as previously distinct domains of information converge, as the field of telecommunications merges with computer science, media and education in a triumphal period of knowledge technology and knowledge economy, and amid the dominance of the information sector, all this can be relatively clearly perceived – just as the world-historical importance and transformation potential of the new economic-social quality labelled the ‘information society’ seems equal to the significance of the creation of modern capitalism.³

In the light of this, however, it is quite surprising that this recognition did not retroactively induce a methodological shift in social history. For in the same way as, viewed from the perspective of the capitalist revolution, Marx’ works made the

²The two letters, see: September, 1890 MEM vol. 37. p. 453.; August, 1890 MEM vol. 37. p. 426.

³Manuel Castells, a theoretician starting from the left, initially attempted to display the transformation using the categories of information theory, and at a time (in the opening issue of the journal ‘Competition and Change’) he wrote about ‘means of information development’— only to replace the phrase later, in his three-volume monography, by introducing the terms ‘*network society*’ and ‘*information age*.’

whole preceding history of mankind interpretable as the ‘precapitalist’ period, it seems equally reasonable to introduce the concept of a ‘*pre-information*’ *epoch*, in an attempt to initiate an information-centred historiography.

2. The Latest Stage of the Conceptual Siege

In May 1998, Alistair BLACK has published a brief, but challenging work in *Library History*⁴, in which he discusses the library history as a sub-domain of the ‘*information history*’. His intent has been to persuade the librarian community that book and library history, when its place is considered in the taxonomy of sciences, is in fact *a sub-field of a broader discipline*. Despite the debates emerging around this proposition, a conceptual shift is slowly moving ahead. The Japanese professional association has even decided to reflect the new approach in its name (*Japan Association of Library and Information History*).

The conceptual revolution, however, goes far beyond Black and his colleagues, because if the sub-domain principle applies to library history, it also applies to press and printing history, to telecommunication history, and to a plethora of different disciplines, particularly to communication history with its seven to eight decades of historiographic tradition.

LOTMAN (1973) suggests a different approach, but he also comes to the recognition of the essentially same conceptual perspective in his definitions of culture. Lotman starts from the principle that in the course of their life struggles, humans are involved in two processes: ‘the consumption of material-tangible values and the preservation of information’. For human beings as biological entities the first process suffices, yet social life presupposes both processes. That is the reason why we can claim that culture, this peculiarly human quality, involves “all non-inheritable information, the complex means of information arrangement and preservation”. This implies, though Lotman does not reach this conclusion, that *the history of culture is the history of information management*, and that *the evolution of culture*, if we accept the existence of certain evolutionary criteria, *is nothing but the development of effective information management and preservation*. Furthermore, culture is not just an information inventory but an extremely advanced information management mechanism, a ‘complex organized mechanism of cognition’ that *also* acts at the same time as the field of social battles for the possession of information.

Building on all of this, CSEPELI (1985) introduces one of his first principles of an information history approach: ‘the more perfectly a society is able to provide information for its knowledgeable members and to ensure the inclusive distribution of knowledge (information surplus) provided by culture, the more perfectible (capable of development) it is.’

⁴BLACK’s intellectual journey (1998) led from the paradigm shift of library history to information history. His 1995 manifesto urged a ‘new library history’, which tried to link a discovery-based pedagogical strategy to the new perception of library history. See also: BLACK (1995).

Once we adopt the above information-historical paradigm as a working definition, we suddenly discover that two sets of sources will offer us ample material. The first set comprises the tradition that has elaborated certain questions in part with a similar approach and a similar theoretical aspiration. Sources in this tradition involve the *forerunners of information-historical thinking*—from *Leibniz* who studied the relationship between Chinese script, thought, and social development; through the intellect-centered world history of *Condorcet* and *István Hajnal*; and finally to Harold Adams INNIS⁵ and Claude LÉVI-STRAUSS⁶. The second set of sources is found in the superabundant historical literature that is based on the elaboration, in the form of individual disciplines, of certain *groups of phenomena* involving specific *tool-activity-institution* interactions. Such disciplines can be viewed in this context – in terms of their academic standing and sovereignty⁷ – as the auxiliary sciences of information history.

3. The Professional Source Regions of Information History

Without aiming at completeness or searching for inherent correlations, it is possible (as adapted from Z. KARVALICS, 2000b) to take into account the most self-evident areas⁸ where, following the above logic, we come across auxiliary sciences⁹ of information history.

⁵Harold INNIS (1950, 1951) authored two works in an attempt to put communication phenomena into a world-historical perspective, with the aim of creating a historical outline of the initial and newer forms of information technology that influence society. In his pioneering works, he linked *the individual media to historical projections of space and time*. Yet Marshall McLuhan, his only real follower, narrows down the historical interpretation to the immediate, 20th-century historical prelude of the information age.

⁶According to LÉVI-STRAUSS (1962, 1973), ‘the interpretation of society as a whole can be viewed as a Copernican revolution with the help of communication theory’.

⁷Some of these, such as measurement history, diplomatics, or heraldry, had in their traditional context already been regarded as auxiliary sciences by the nomenclature of the taxonomy of sciences.

⁸A category can often be divided into a set of further sub-histories. A good example of the density and depth of such subdivision possibilities is *library history*, which can be divided into dozens of branches of catalogue history or even copyright history. Likewise with audio devices, which constitute a comprehensive category because of their large number, though behind them, so to speak, we find the individual histories of several tools. The same is applied to electronic video recording and transmission devices which have not even been represented as a separate category. The category of *language* involves various sub-fields that need to be studied (development history/anthropogeny, history of different languages and language families, artificial languages, or even program languages), and the seemingly homogeneous category of *writing systems* can be complemented by numerous further sub-histories such as cryptography-, stenography-, letter-, or style-history.

⁹The first four rows in the ‘Tool’ column include intangible, yet tool-like information technologies. Although they possess no physical features, they do imply a sort of cognitive skills development, and can be enhanced by tools (consider for example the devices used by education technology to support the non-material methods of education – in the table, *didactics* – their history, or the instrumental means of

Table 1.

TOOL	ACTIVITY	INSTITUTION	PHENOMENON, META-PATTERN
Language	Thinking	Science	Technology, professional skills
Mnemonics	Speech	Press	Culture, Cultural sophistication
Writing and numerical systems	Writing	Printing press	Symbol, meaning
Didactics	Learning, teaching	School	Tradition
Audio and video recorders, transmitters	Translation, interpretation	Mass communication	Convention, customs, norms, standards, jurisdiction, law
Measuring tools	Decision	Intelligence	Fashions
Writing tools	Correspondence	Archives	Religion, system of beliefs
Books, printed paper	Reading	Library	Prestige, prejudice
Calculators, computers	Computing, accounting data (base) management	Professional information apparatus	Confidentiality
Maps	Orientation, navigation	Censorship	Propaganda, manipulation
Telescopes, microscopes	Perception	Museum	Art

By means of the monographic elaboration of the above tools, activities, institutions and meta-patterns, involving the identification of their cross-correlations and their embedding in the social-historical process, it will be possible to *investigate the information metabolism systems of* different societies and larger historical units (empires, regions, etc.), bound together by their economic and cultural linkages. The structures of the *creation* (emergence, production), *preservation and dissemination* of information should be grasped from the perspective of how their functioning and transformation influences the most important aspects and *indicators of development and effectiveness* of the whole society (region). Within this scope, special emphasis needs to be placed on *the role that these structures play*

memory development. The tangible tools of information technology require an extensive historical typology all by themselves, depending on the *senses used during information management, the characteristics and function of the supported information activity* (receiving, saving, storing, delivery, processing) and the *technique of the solution* (traditional, optical, electronic, analogue/digital, etc.)

in fundamental qualitative transformations, because the most general questions of historical science always refer to the sharpest possible comprehension of the essence of these transformations.

The emerging concept of information history, which so far has only gained real ground in the framework of library and documentation science, can be displayed in a schema following the earlier mentioned authors and Z. KARVALICS (1996b):

Table 2.

Information-centered historical analysis	Information metabolism system history	Historical informatics	Information history	The history of information
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In this schema, ‘information-centered analysis’ focuses on a given historical period, process, or event and utilizes an information approach to achieve a better description of its subject.

The concept of an *‘information-metabolism system’* places the complex set of information processes of a given era or of a given area into the focus of investigation.

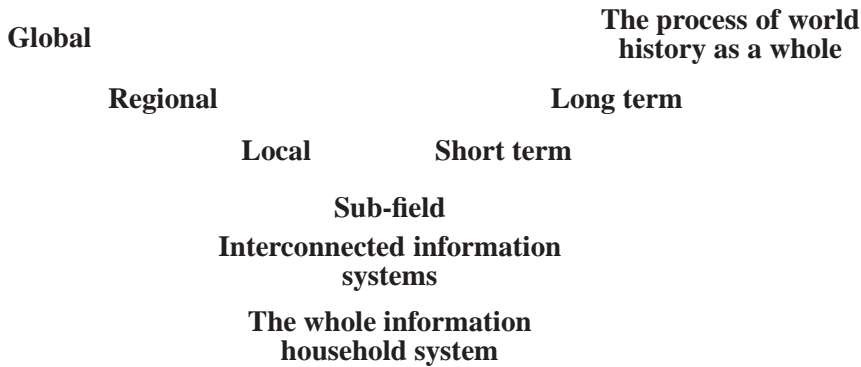
The mission of *‘historical informatics’* is to study the social history of a given information activity, information technology or information institution.

‘Information history’ aims to develop a valid model and a uniform terminological texture of information-based historiography, as applied to the process of world history.

The *‘history of information’* scrutinizes the information phenomenon, both in its qualitative and quantitative aspects, as a basic organizing principle of living systems, beginning with the emergence of this phenomenon¹⁰ at a given point in the evolution of such living systems.

Independently of their specific types or genres, these missions can be further subdivided according to (1) the spatial scope; (2) the length of the time period involved; and (3) the scope of the information cross section covered by the study. The following figure indicates the potential growth in the comprehensiveness of analyses along each of the three dimensions indicated:

¹⁰Perspectives that deal with information as part of the physical conception of the world may be ignored by sociology for methodological reasons.



It seems that the concept of *information history* helps us to grasp something important and of current concern. For now, the importance of this concept lies not primarily in the successful reinterpretation of the historical process, but in that it provides better means of explaining and analysing the current state, referred to either as the Information Age or the Information Society. The realization is increasingly widespread that the information society cannot be comprehended without leveraging the historical perspective (WARNER, 1999), and that information and communication technologies can only be completely grasped by way of depicting their historical course, that is, via *historical informatics* as defined here.

As the information history approach¹¹ has only in recent years surfaced in the public mind, no really profound and classifying monographies have as yet emerged. Individual contributions of research representing the above nine approach levels, nevertheless, are already raising many exciting questions in various directions.

4. Brief Review from the Literature of Latent Information History

Beginning with the 1970s, a growing number of works has been published having taken an information-historical approach, often overlapping with microhistorical researches which have methodologically updated historical science and have usually been organized around some core topics.

The most renowned and accepted of the latter researches include writings on *collective memory* (HALBWACHS, 1925); the *school of researches dealing with oral communications and the use of written records* (especially GOODY and WATT, 1963; PARRY, 1971; HAVELOCK, 1976; ONG, 1982; GOODY, 1986; and many excellent analyses by their followers); the classic studies on the development of the *structure and diffusion of modern mass communications*, beginning with the printing press, the modern mass press, and the media (EISENSTEIN, 1979 and HABERMAS, 1965); *information historical monographies* on

¹¹Since 1991, the author has published several works on the subject in Hungarian, in addition to the ones referred to here.

Greek civilization (Rosalind THOMAS 1989, 1992) and the Carolingian period (MCKITTERICK, 1989); and *reconstructions of conceptions about the world* (especially GINZBURG, 1971 adopted from Bahtyin and Gurevics) and studies of systems for conceptualizing history (KARP-BIRD, 1987) which in this context may be regarded as informational meta-sets, i.e., information about information.

Yet, as suggested by the nationalities of the above mentioned authors, (Canadian, English, French, Hungarian, American, Russian, German, Italian, etc.), these individual analyses of specific epochs could, in the absence of a conceptual-methodological framework covering the whole historical process, not be interwoven with one another to form a unified representation or school. This has proven to be a major bottleneck even for the scientifically sound three-volume world-historical review following in Innis' footsteps (*The World History of Propaganda and Communication*, LASSWELL–LERNER–SPEIER, 1979). Though this work offers a historical survey, the excellent chapters written by recognized experts of the different periods and regions merely follow one another without coalescing into a comprehensive whole. This lack of integration explains why neither the American trend toward information history, notwithstanding that it has produced exciting monographies, nor the German 'Kommunikationsgeschichte', have succeeded in establishing themselves as schools of thought.

Nevertheless, the last few years have seen extremely exciting and convergent monography sensations, favored by the latest anthropological breeze of historical science. These works might even be perceived as a single chain of arguments, were it not for our awareness that no such inner relations exist between them.

BRISTOL (2000) for example gave a new impulse to the narrative of the oral tradition and the use of written records when he demonstrated the abundant connecting paths between the culture of printed books and that oral tradition, and showed the ways in which this mutual relationship can be used to evaluate the entirety of communication technologies and the importance of their epistemological and social implications. LOVE (1998) pointed out the interesting phenomenon (which proponents of the evolutionary approach would not hesitate to classify under the heading of pre-adaptation) that for a considerable time after the spread of printing, many authors and text selectors still preferred manuscript dissemination. While their preference was motivated by various reasons, including the intention to escape censorship or simply to bypass printing that was stigmatized by strange ideological considerations, they nevertheless contributed to the diffusion of a newly emerging social mechanism of agency – that of information broker and information supplier – an agency embarking on text duplication aimed at satisfying the increasing demand for textual information.

In the meantime, almost fifty years after IVINS's (1953) pioneering guidance, the verbal-written dichotomy was replaced by the need for analyzing the imaged-written-verbal trinity. Different periods, differing social systems, and distinct systems of thinking all compel clarification of the relationship between the meaning of images and the meaning of actions (WANDEL, 1995). They all throw light, besides, on the differences in the latter relationship between the information elite and the average 16th-century citizen who had no access to printed communication.

BRUBAKER's (1999) exciting reconstructions, as though offering a chronological parallel to all this, revealed how Byzantium – whose classical authors many times regarded images as more precise conveyors of expressions than words – used images extensively in representations for communication. CORBIN (1999) went even farther when he attempted to integrate into this model sensory experiences and emotions lost during the civilization process, together with the fourth sense, hearing. Analysing the practical communication functions of bell-ringing, Corbin showed how the bell reflects socioeconomic and political struggles, and how supervision over the bell becomes the pledge of control over the symbolic order and everyday routines of 19th-century rural society in France.

It was not by chance, either, that the issue of the symbol production, conceived as a historical problem extending the above quadruple model into a new dimension, has come into prominence. Although the trend of symbolic anthropology had laid the basis for this shift in approach¹² a couple of decades ago, the real breakthrough is linked to ASSMANN's (1992) book. This work has established the importance of visible collective memory, signs, symbols and writing for the study of the formation of early states, with an unprecedented emphasis on the display of mutual relationships between writing, recollection, and ethnic or community identity in the specific cases of antique Egypt, Israel and Greece.

In addition to the changes discussed above, the revaluation of the study of information channels resulted in the emergence of a set of new approaches which promoted gossip and rumours, the parasites of the information-metabolism system, from the category of colourful features of cultural history to the rank of traditional social-historical discourses. After various approximations grounded in ethnography, the breakthrough was achieved by DUNBAR's (1996) magnificent, exquisitely logical analysis—in which he discovered the self-same societal embedding behind the phenomenon of gossip and the evolution of language – and most recently TEBUTT's (1997) elegantly detailed work about the gossip history of English working women. And as the supposedly seamy side of information has suddenly come into the focus of attention, we can now enjoy in a more comprehensive context the chronicle of VINCENT (1999) who has provided a review of the fencing-in of communication, the emergence of a new type of secrecy, and the latest systems of control¹³ on all levels of the information-metabolism system, from rumours to bureaucracy, and from medical records to the press.

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¹²For a nearly thousand-page, comprehensive overview of the latest issues, see LOCK (1997).

¹³ The cybernetic category of *control* (used in various forms) as an explicatory principle can clearly be traced back to the influence of BENIGER's single landmark work (1986), which sums up the questions of information society, information technology, and information history.

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