INFORMATION FOR ALL OR KNOWLEDGE FOR THE ELITE? THE CONTOURS OF A DISSIMILAR EUROPEAN INFORMATION POLICY

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In the areas of telecommunications and databanks, the following developments are likely to occur in the former CMEA countries: 1. Eastern Europe will loose human resources through brain drain. 2. Owing to a chronic lack of hard currency, information transfer from West to East will decrease. 3. The change from large national markets to small markets will involve immense cost and will impede the development of market economies. 4. In telecommunications, the technical integrity of networking will be endangered by inadequate planning. 5. Improvement to only metropolitan telecommunications and supply of telecommunications only in response to economic demand will deprive the general market of investment and ensure that telecommunications is available only to the rich. 6. Financing of Eastern European telecommunications by Western European firms will lead to dependency. 7. Western telecommunications firms will be interested in serving only the economically powerful. 8. Eastern European enterprises will become merely branches of West European concerns.

Keywords: Eastern Europe, databanks, telecommunications, information policy

THE NON-SIMULTANEOUSNESS OF THE SIMULTANEOUS

Hampaté Bâ, the great historian and philosopher from West Africa, once said, "In Africa, every old man who dies is a burned library"[1]. This sentence contains, in compressed form, many important pieces of information. If writing is unfamiliar to a given culture, then the individual develops a huge capacity for memorising, in a comprehensive and precise manner, a great variety of information units. An old man, who is two or possibly three times older than his associates, as is common in traditional societies with short life expectancies, embodies the collective memory; his natural death is actually equivalent to the burning of the Alexandrian library in 47 B.C, since large amounts of information and knowledge are irrevocably lost. For those who survive him, his death - perhaps violent and deliberately caused by people of an alien culture - becomes a kind of cultural identity crisis and can acquire features of cultural genocide.

To-day, almost everybody knows or at least guesses that there exists a close connection between the quality of information processing and the level of technology, but the fact that both concepts should also be considered in a cultural context seems much more surprising to a German intellectual than it would to a French one. So,

when François Mitterand claims that the world's TV broadcasting stations depend on just two image banks, it is not surprising that his words echo those of Hampaté Bâ.

> "The dissemination of information processed and largely controlled by a small number of dominant countries could cause the rest to lose their memory and sovereignty, thus jeopardizing their freedom of thought and decision..... All cultures and languages will be threatened with uniformity."[2]

In international information relationships, there is differentiation into dominating countries (those exporting more information than they import) and peripheral countries (mainly the developing nations and Central and Eastern European countries). Inside each national society there is a subdivision into 'information rich' and 'information poor', corresponding to the above international differentiation.

It has long been known in social science that when the flow of information increases in a given society, those with higher social and economic status tend to take possession of this additional information more quickly than those with lower status. If social mobility in a society is weak, such information appropriation results in an increase in the information abyss between these social sectors. In other words, the information gap between the political, economic and scientific elite and those on social strata beneath this elite is constantly growing. This becomes quite clear when one considers, for example, the information supply for foreigners who have emigrated to Western Europe. The gulf between 'information rich' and 'information poor' in Western industrial countries has widened since the 1970s.

First, generally oversaturated markets, especially in the consumer goods sector, and growing international competition resulted in an ever faster and sharper reduction of innovation cycles. This also happened with information products and services. In the early 1980s, electronic data processing reached the 'man in the street' in the form of PCs. Meanwhile, industry launched into very many more complex applications of information processing: so-called expert systems, computer integrated manufacturing (CIM), just-in-time production, and multimedia systems.

Second, informatisation of Western industrial societies has changed the ratio of information to entertainment in the electronic mass media remarkably. The introduction of television in the 1940s and 1950s was justified on democratic and educational grounds and the share of cultural and informative programmes was then much higher than it is now. These days there is much empirical evidence to support Neil Postman's polemic on the deadly entertainment of the television screen[3]. Those who contribute to the increase in the quantity of television programmes, through cable, satellite or pay television, stimulate the growing supply of entertainment and the declining supply of information. 'Infotainment' is a very suitable, though cynical, concept for new marketing strategies in the television industry. If we view the television sector and the highly specialized electronic media from the standpoint of polarisation into information poor and information rich, certain consequences of society's informatisation become clear. Small countries and members of lower social strata increasingly become passive recipients of entertainment supplied through the mass media. In contrast, a small number of dominating countries (the USA, Japan and core EU states), as well as national elites, become active

producers and users of electronic information. 'Infotainment for many and information for few' could well have been the title of this paper.

After the radical political changes of 1989 in Eastern and Central European countries, and after the results of referenda in Denmark and France on the Maastricht agreement for the EU, the idea of a two-speed Europe has become accepted. The idea is erroneous in many respects. First, if we consider the economic, technical and social differences among Albania, Andalusia, Apulia, Bohemia, Hungary, Baden-Wurttemberg, the Rhein-Main area or Greater London, it becomes clear that at least three or four speeds are involved. Second, the concept of speed conveys no interest in the quality of the vehicle, while the quality of the final destination is indicated only very vaguely. Third, there is only one speed in the development of Europe and this speed is dictated by the market dynamics of the dominating centres. The 'non-simultaneousness of the simultaneous' is an integral component of this single speed[4]. It is worthwhile considering in some detail this non-simultaneousness of the simultaneous in the context of the technically developed West and the less technically developed Central and Eastern Europe. The focus will be on databanks and telecommunications in the latter.

DATABANKS AND TELECOMMUNICATIONS IN CENTRAL AND EASTERN EUROPE

The informatisation of society presupposes the existence of certain technologies and becomes possible only after they have been mastered. So databanks as electronic storage systems acquire a prominent social function[5]. They show the following potential advantages with regard to consumer value characteristics: a comprehensive supply of information from all fields of knowledge, timeliness, fast and trans-border availability, selective and individually combined access, and the possibility of differentiating all the information obtained by further kinds of data processing. Electronic storage systems can be applied optimally only when they rest upon a well-equipped telecommunications infrastructure. What does the market for databanks and telecommunications in the former CMEA countries look like? In what direction will the market change in the face of non-simultaneous development under the dictates of the simultaneous?

In the former CMEA countries, databanks played a very important role in the development of librarianship, information and documentation activities. The All-Russian Institute for Scientific and Technical Information (VINITI) in Moscow, with its production of around 1.3 million scientific abstracts a year, was probably the largest abstract-producing institution in the world. In the long-term plans of the former CMEA countries, absolute priority was assigned to the development of the electronic exchange of special information. This was clearly formulated; for example, in the Complex Programme of the Scientific and Technical Advancement of the CMEA Member Countries of 1985, which planned an extensive exploitation of online databanks.

There are now about 1,700 databanks in the former CMEA states[6]. Of these, 15% are online and 85% offline. In the Community of Independent States, 121 databanks are offered over ten databank hosts. The online market in other countries includes

15 hosts in Hungary offering 104 databanks, seven hosts in the Czech Republic and Slovakia with 30 databanks, and there are five databanks in Bulgaria which can be accessed over 2 hosts. All databanks are focused on bibliographic information. Sub-division by fields indicates that over half of these are concerned with the natural sciences and technology. Mechanical engineering, earth sciences, mining and metallurgy are especially prominent. Chemistry is also well covered. However, there are few databanks covering economic information, though it is precisely this section that has shown the highest dynamics since the drastic changes of 1989.

TABLE I

Kinds, quantities and origin of primary documents as found through a comparative evaluation of two data banks in metallurgy from VINITI (Moscow) and COMPENDEX of the United Engineering Centre (New York)

	VINITI	COMPENDEX
Kinds of documents		
Journal articles	53.7 %	94.0 %
Conference papers	8.5 %	2.0 %
Books	7.0 %	1.6 %
Grey literature	3.0 %	0.9 %
Standards	0.2 %	0.1 %
Patents	27.2 %	-
Languages		
English	36.0 %	80.0 %
Russian	37.0 %	1.9 %
Japanese	11.2 %	5.2 %
German	9.0 %	5.5 %
French	2.1 %	1.8 %
Origin of documents	1. USSR	1. USA
	2. Japan	2. UK
	3. USA	3. FRG
	4. UK	4. Japan
	5. FRG	5. PR China
	6. GDR	6. USSR

Source: M.L. Fransazova, 'Comparative analysis of two metallurgical databases: VINITI-Metallurgy and COMPENDEX-Section Metallurgy' in *Online Information 88. Proceedings*, Vol. 2, Learned Information, Oxford, 1989, p.566-7.

Use of western databanks in Eastern Europe was always greater than it appeared and has been going on since the early 1980s[7]. Today there are also 'alternative' relationships among databanks in Western and Eastern European countries. The best known example of such relationships is that of the Freiburg Öko-Institute in Germany, the Robin Wood movement for environmental protection, and an institute in Moscow. Using the example of two databanks with similar subject profiles

(metallurgy) from Moscow and New York, Table I shows that Russian databanks could be quite competitive with their western partners. Because of the number of languages processed (especially Japanese special publications, inadequately covered in the West), some Russian databanks provided a higher level of services. In 1988, a US report on worldwide trends in computer technology stated that "the Soviets are probably about even with the West in the area of information retrieval systems"[8]. This positive evaluation should certainly not PRECLUDE a sober look at the weak features of the databank sector. These include insufficient computer power, lack of software, shortage of qualified programmers, inadequate user knowledge, no marketing, weak dissemination structures and - above all - very poor telecommunications facilities.

The telecommunications situation in the former CMEA countries was much worse than in the databank situation. One anecdote from the Soviet history of telecommunications may show simultaneously its strong and weak points. Against the background of a poorly developed telephone system, Soviet researchers designed electrical switching networks for the technical optimisation of telephone exchanges in the 1950s. While these networks were never applied in the USSR, American specialists spent $US200,000 on investigating the same problem. They succeeded in solving it five years later than their Soviet colleagues, being absolutely ignorant of the Soviet special literature on the topic[9]. Today, the discrepancy between research in communications technology in the former USSR and the mass application of its results may be as large as before. The research laboratory of Gosteleradio in Moscow has developed, nevertheless, its own HDTV standard, and the research project on ISDN (Integrated Services Digital Network) at the Institute of Information Transmission Problems in the Laboratory for Automatic Control Devices of the Russian Academy of Sciences, Moscow, stands up well to any international comparison. In contrast to such outstanding technological performances, the general technical level achieved in telecommunications in the former CMEA countries was rather low. The following trends reflect the general situation in telecommunications.

* Such indicators as the number of telephones per 100 inhabitants suggest that the technical level of the former CMEA countries is comparable with that of Turkey or Argentina, though this indicator varies over a rather broad range from sixteen for Bulgaria to five for Poland and two for Cuba.
* The proportion of telephone numbers taken by private subscribers was between 60 per cent and 74 per cent in different countries.
* There were waiting lists for private telephone numbers of millions of people in all the former CMEA countries, resulting in delays of several decades.
* Switchboard facilities were exclusively analogue.
* Very many switchboards were over 40 years old. Maintenance and repair costs were correspondingly high.
* A large share of international telephone calls had to be switched manually, when it was possible to establish a connection at all.
* The level of telex services was much higher than that of telephone services.
* The construction of data networks was only just beginning.

The reasons for this low technical level of telecommunications in the former CMEA countries are extremely complicated. Here we can briefly indicate only the following, and without trying to rank them: war damage; the agricultural basis of most CMEA economies after 1945; restrictions on the export of technology from the West; erroneous theoretical and practical evaluations of the functions of information in the production process; and the lack of economic stimuli for faster, more reliable and larger information flows of every kind. The consensus is, however, that the new market economies in Central and East European countries require a radical and fast modernisation of their telecommunications infrastructures.

How will the databank and telecommunications sectors develop in the former CMEA countries? On the premise that the opening up of the world market and privatisation constitute the two most important parameters for answering this question, the following trends seem highly probable.

TABLE II

Selective quantitative data on brain from Central and Eastern Europe to richer industrial countries

Country	Quantitative data
Hungary	At present 4,200 Hungarian engineers and scientists (15%) work abroad.
Rumania	In 1990, 150,000 Rumanians emigrated, 4% of them being intellectuals.
Poland	Between 1981 and 1988, 760,000 Poles stayed abroad for more than two years. Of these, 77,000 (10.1%) had university diplomas, 19,000 (2.5%) were engineers, and 5,700 (0.7%) were physicians.
	Between 1980 and 1987, 76,000 people with higher education left Poland.
USSR	Between 1987 and 1989, 376,000 Soviet citizens went abroad. Of these, 19% had a higher education and 25% were qualified workers.
	In 1989, 70,000 scientists and engineers left the USSR.
	In 1990, 184,000 Soviet jews went to Israel. Of these, 39% were scientists and people with a higher education (mostly engineers and architects).
	In recent years, 500 to 600 Soviet nuclear specialists have gone to Western Europe, the USA, Israel and Japan.
	In 1989, the Academy of Sciences in Moscow alone lost 250 scientists.
	Over recent years, the Lebedev Institute of Physics, Academy of Sciences, Moscow, has lost about 20% of its workers, who have gone to research institutes in Western Europe and the USA.

Source: Ian O. Angell and Vladimir A. Kouzminov (eds), *Brain Drain Issues in Europe*, UNESCO Regional Office for Science and Technology for Europe, Paris, 1991; Barbara Rhode, *East-West Migration/Brain Drain*, Commission of the EC and COST Social Sciences, Brussels, 1990, mimeo; reports in current news sources.

In a development similar to the brain drain of engineers and scholars from the developing to the industrially developed countries, the best qualified professionals from Central and Eastern European science and technology will move to the rich West (Table II). Thus, these countries will lose vast stores of knowledge and their technological level will fall.

Prior to 1989, there was a pronounced imbalance in all information flows between the former CMEA countries and Western European countries[10]. For instance, the Intervision countries showed ten times more television material from the Eurovision countries than the latter showed from Eastern Europe. About 65 per cent of imported television programmes in one former CMEA country came from the non-socialist states. In contrast, only 3 per cent of Western European television material was of Eastern European origin. Although information flows between East and West have become very dense since 1989, the old unbalanced pattern seems to continue. While the former CMEA countries welcome a flood of information from Western Europe, the latter shows little interest in information from Eastern Europe. For instance, in Hungary, it was possible to sell 120,000 copies of the biography of the Austrian Empress Elisabeth by Brigitte Hamann (this being an extraordinarily large run for a country of 10 million inhabitants), while Austria translates only 1.5 books per annum on average from Serbia, Macedonia, Croatia and Slovenia together. In contrast to the situation before 1989, information from the West can be bought in the East only for hard currency. Consequently, the acquisition of western literature by the former Lenin Library in Moscow has nearly ceased. Collections of special information in the former Czechoslovakia are similarly constrained:

> The input flow of foreign information sources has reduced substantially (especially since the 70's). It may be supposed that, at present, Czechoslovakia receives nearly one-third. .....of information sources compared to the total size of acquisitions in 1990.[11]

The splintering of previously large national markets (USSR, Yugoslavia, Czechoslovakia) into many small national markets, and their growing inability to cooperate substantially reduce advantages of scale in building up information infrastructures. This holds for both databanks and telecommunications.

A mixture of high and unexpected demand for telecommunications with (a) competitive western partners and (b) technologies that are incompatible or duplicate each other will be detrimental to the integrity of the technical network. This may undermine the achievement of such objectives as greater reliability, security and timeliness.

Especially when it is relatively small, a telecommunications market must achieve economies of scale and economies of scope. Both economic parameters can he reached only through the private mass market in telephone services. The Deutsche Bundespost TELEKOM, supplying about 500 products and services, gains 'profits' from only two services - telephones and telex. The income from this mass business makes technological innovations and value added services possible. When, as in Lithuania, telephone charges for private end users are raised by 300 per cent in just one year (1991), the resulting new sources of income may provide urgently needed capital for modernisation (in this case, for connection to the Scandinavian mobile radio system via the Norsat B satellite in February 1992). However, the

economic basis of the entire telecommunications system in Lithuania has been undermined.

Because of the lack of internal capital, the modernisation of the telecommunications sector in the former CMEA countries can be accomplished only with the help of Western capital. As comparable modernisation strategies in countries of the Third World show, this leads most often to an increase in external debts, and tends to produce an improvement of external telecommunications connections instead of uniform development of the internal telecommunications market.

The attraction of Western telephone companies to Eastern European markets should not conceal the fact that their interests there are still very small. Take Siemens AG, for example; although the company seems to be very active in Central and Eastern European markets, its turnover from all activities in these regions (50 per cent of it being in medical equipment) is less than 1 per cent of total turnover. Western telecommunications enterprises compete in the Eastern market only for local 'raisins'. In so doing, they stimulate socially divisive development in telecommunications.

The current openness of Central and Eastern Europe to world markets in telecommunications, information technologies and databanks can reduce local industrial and service enterprises to mere appendages of Western enterprises[12]. Before 1989, there were four large and flourishing electronics enterprises in Hungary; two of them are now on the verge of collapse and the others (Telefongyar and Müszertechnika) have become subservient to Siemens and Ericsson[13].

The non-simultaneousness of the simultaneous - the starting point of this discourse - will produce a single speed Europe. The speed will be set by the competitive technological triad of the USA, Japan and the European Union. Even if the Central and Eastern European countries are allowed to join the European train, they will be only the rear carriages. The informatisation of their societies will be determined, both internally and in comparison with Western Europe, by the sharpening contrast between the information rich and the information poor.

DISFUNCTIONALITIES IN EUROPEAN INFORMATISATION

The political strategy of societal informatisation, as formulated for the first time in 1978 by the French Government in the Nora/Minc report[14], and repeated twelve years later by the Central Committee of the CPSU in the *perestroika* of the former Soviet Union[15], probably includes at least two serious mistakes. The first is that informatisation has nothing to do with knowledge accumulation. The second is that informatisation of society produces progress only when technological reforms are culturally anchored.

The example of the statistical information systems of the former CMEA countries shows how misleading it is to confuse information with knowledge. A comprehensive study by Güttler[16] concludes that the statistical information system of the former GDR was very efficient and remarkably well organised, that technical software solutions were found that made possible fast processing and supply of comprehensive data. "The statistics organisation of the GDR had at its disposal an

information system to which there was nothing similar in the Western European countries with regard to processing speed and capacity"[17]. Güttler singles out two reasons why this system still could not function. First, it disregarded a special property of information; namely that it is subjective, purpose oriented and context-dependent. The mathematical concept of information should not be confused with social communication processes. Güttler's second reason is rather more intriguing. According to his calculations, monthly reports produced within the statistical system of the former GDR included about 45 million pieces of decision-relevant information. This corresponds to the processing time of about 2,604 man-days of 24 working hours a day, or to the monthly capacity of 5,760 bits per decision-maker at 0.2 bits per second. In other words: "The quantity of relevant information required for planning and management, received on the basis of the statistical information system, was too great for central evaluation and application"[18].

It could be claimed, though with some exaggeration, that the former GDR choked on the bulk of its information. This view may seem surprising only if information is confused with knowledge, when one does not want to admit that information scarcity should never lead to unwillingness in decision taking, and that abundance of information does not result automatically in a minimisation of uncertainty. Such a claim seems extremely bold when information scientists nowadays infer the knowledge concept from the mathematical information concept and further define it: "As knowledge of some knowledge carrier, we define the stock of all statements on the represented world, accepted by him as true ones, that are actually true"[19]. Yet, knowledge is not simply accumulated pieces of information; it also includes experience, reason, habits and practice. The current annual print output of the USA includes 40,000 books, 17,000 newspapers and 12,000 journal titles; there are also 27,000 lending points for video cassettes, 400 million radios and 350 million television sets, and 41 million photographs are taken daily. Though such countries as the USA are undoubtedly information rich, this does not mean that they are necessarily knowledge rich. Indeed, people from small and dominated countries could well be knowledge rich, since their knowledge has long been saturated with the experience of scarcity, poverty, pain, dependence and oppression. This knowledge is deep, lasting and indelible. If this distinction between information and knowledge is accepted, then the conclusion follows that it may be unreasonable for any country to enlarge its information systems quantitatively; the objective should be to improve them qualitatively.

Informatisation strategies cannot function without a cultural anchoring. Informatisation also involves internationalisation, and this process will always be accompanied by the worldwide homogenisation of cultures, as François Mitterand observed. It is precisely this externally-introduced international informatisation that is contributing to the internal cultural erosion within the former CMEA countries[20]. The decline of publishing and music, theatre and film culture, circus and libraries is accompanied by the import of *Dallas*, the cheapest pornography and trivial literature into the Central and Eastern European countries on a massive scale. An example of this cultural erosion is that 100,000 freshly-printed books from the stores of the former GDR's publishing houses (including works by Heinrich Mann, Arnold Zweig, Ernesto Cardenal and Richard von Weizsäcker) were destroyed in

Saxonian incinerating mills. Again, the smuggling of icons from the former USSR to the West is now a trade worth about $US13 million annually. The observation of Vaclav Havel is apposite:

> The return of liberty in a society with completely decayed moral scales has led - probably inevitably - to an explosion of all possible bad human properties. And even if this was probably inevitable and hence could be expected, the extent of it was by far greater than could have been imagined beforehand by any of us.[21]

Despite this process of cultural erosion, culture represents precisely the factor that will hamper any externally-controlled informatisation of Central and Eastern Europe. Culture cannot be spread from above: it always comes from below. By its nature, culture is usually local and regional. Nor is it limited to what is defined as culture by bureaucrats. It is rather the immediate world in which people live; it embodies knowledge accumulated over generations, reflects the characteristics and values of one group in comparison to another, and manifests itself in language and dialect, and in feelings of belonging, nationality and identity. It is precisely for these reasons that culture is not amenable to instrumentalisation, privatisation or commercialisation.

Although the Rome treaties of the European Union include no clauses concerning the EU's competence in the sphere of culture, the EU Commission has long been active in the field of cultural policy. This is in conflict with German constitutional law and undermines the legal foundations of the treaties of 1957[22]. Though based more on suspicion than on knowledge, a wide distrust has sprung up in Western Europe towards the Maastricht agreement. There is a justified fear behind this distrust, associated with striving to preserve local and regional cultural identities.

When we recall the civil wars in the Caucasus and the former Yugoslavia, it is hard to believe that from such suffering and scarcity something like a cultural identity will one day arise, without external direction, a cultural identity that is internally peaceful and non-aggressive. Still, a look at Jamaica, exemplifying here all developing countries, shows that this is possible. Rex Nettleford, the Nestor of Jamaican social scientists, made the point nicely.

> Our Caribbean heritage constitutes the suffering under enslavement, indentureship and colonialism. It also constitutes survival and what exists beyond that survival which is why we are all here. A knowledge of that process is vital as well as a grasp of its implications for what is happening and what is likely to happen in the future. That knowledge lies deeply embedded in the collective wisdom of our ordinary people..... This is indeed cause for much despair but I take my cue and declare, instead, for hope thanks to the calypsonians and the reggae composers as well as to all those who have invoked the authenticity of a Caribbean reality either for the purpose of independence, or for creating works of art, or for just simply surviving. More than that I invoke that hope-in-despair which is also part of the heritage keeping us in dialectical embrace not only with the travails of the contemporary world and the doubts of an uncertain future, but also with the knowledge that despite the uprooting, the suffering and the pain, we have survived.[23]

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20 For more details, see Jörg Becker, 'La relación entre público censurado y público comercializado en el cambio de sistema en Europa Oriental' in *Comunicación Social 1992. Tendencias*, FUNDESCO, Madrid, 1992, pp.136-50.

21 Cited in Antonin Liehm, 'Osteuropa: aufstieg in die freiheit', *UNESCO-Kurier*, 7/8, 1992, p.44.

22 There are two reasons for this infringement. 1. According to German constitutional law, cultural policy falls exclusively within the competence of German federal provinces. 2. Mass media policy, as an important section of cultural policy, is regulated by article 5 of the German constitution. Article 5 is part of the human rights catalogue in the German constitution. As long as there are no democratically legitimated human and constitutional rights at the European level (and the European Convention for the Protection of Human Rights and Civil Liberties of 1950 fails to provide precisely this constitutional legitimation), the interference of the Commission of the EU in German mass media regulations represents a violation of the German constitution.

23 Rex Nettleford, 'Preserving the Caribbean heritage', *Combroad*, September 1990, pp.31, 34.