

Hypernomadization of Society Within the Context of Monopolization of the Software Market¹

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Abstract

Based on chosen aspects of the idea of software subscription as well as the Microsoft Corporation's .NET project, the author attempts to show that monopolistic actions on the software market cause conditions for an **assumption of total control over the global ICT infrastructure**, which may in the future threaten **society** with **hypernomadization**. This may in turn radically change relations between individuals and, e.g., the institution of state itself.

This text is a continuation of the task initiated by the paper *The Discontinuity of Cultural Process in the Digital Civilization - Main Dangers*. [Kocikowski, 2001]. This assignment focuses on a systematic display of **the dark sides of the information revolution**, particularly in regard to all that is connected with the lack of social control over the actions of corporate giants in the information branch.

Introduction

The main aim of the paper is to present arguments in support of the thesis that the uncontrolled development of ICT may lead to “**hypernomadization**” of society. First, I will recall the most important conclusions of the previous paper [Kocikowski, 2001] and explain some conceptual matters (controlled vs. uncontrolled development) - in point 3. Then, using as an example several chosen aspects of the program of a simplified actualization of software, licensing subscription, and the .NET project (passportization, authentication) connected with them, I will try to show that the realization of these aims may lead to the total takeover of control by monopolists over the global information infrastructure - point 4. Next, I will present the consequences of the proposed conclusion in point 4. I suggest that the end result of the downfall of network democracy and the loss by the PC of a typical network user of his/her hitherto sustained sovereignty will be the hypernomadization of society - point 5. In the conclusion, I will address the danger of occurring qualitatively new relations on the line **citizen - the institution of state**.

Recollections: Supernomadization of Society. Other Ascertainions

One result of an **uncontrolled development of digital technologies** may be a breakdown in the continuity of the cultural process, which as a further result will lead to the creation of a supernomadic society. The following essential features of such a community are: (a) the inability of freely making use of the heritage of analog civilization, (b) the possibility of making use of *ex definitione* impermanent (temporary) achievements of the digital civilization. [Kocikowski, 2001].

In describing a **supernomad** briefly, I have stated: “ ... I always have my cultural heritage, i.e., *data*, in my PC. My cultural heritage - *data* – is always *today, now* (3 months, half a year),

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because this is what the operating system is like *today*, because this is the format for file saving *now*. *Tomorrow* there will be new *data*, and *today* and *now* will always move irrevocably into oblivion. I live without a past, or in any case I do not have a past in the same sense as people in the analog (non-digital) civilization had one. I am 15 years old, but I might not have access to *data* from two years ago. I am 5 years old, and have no access to *data* from the previous year. I live with what I have *now* in my *PC* – I am a ‘supernomad’.” [Kocikowski, 2001].

3.1. Uncontrolled development. Essential explanations, ascertainties, supplementation

Let us recall the main thesis of last year's paper:

[A] Uncontrolled development of information technology may lead to **societal “supernomadization”**.

The term “**uncontrolled development**” used in thesis [A] concerns a process which possesses the characteristics of - speaking figuratively - “the powers of nature”. This means that either the initiation of the process, or one of its phases, or one of its results, or one of its significant elements, or finally, the process taken as a whole, **cannot be controlled by humans**. A good example of such a process, are natural phenomena, like the well known North American tornadoes or earthquakes.

Another, it seems permanent, feature of the analyzed term (“forces of nature”) is that the uncontrolled processes affect most often, sometimes very painfully, humans; as a result, human plans, intentions, expectations get thwarted, frustrated, and unfulfilled.

The course of the above-mentioned elemental processes cannot be controlled by humans, primarily for the reason that we do not possess sufficient material means or technological knowledge that would allow for this. **Our will**, our great desire is to take control over the forces of nature and cause their destructiveness to cease endangering our plans; nevertheless, we remain powerless in the face of an opponent which we are in no way capable of defeating.

It is commonly known that the theory of Karl Marx, whose statements I often make reference to here, contains the view that **the market economy is characterized by uncontrolled development** in the above outlined sense. Obviously there are certain adjustments which shall be considered later. According to the view cited, the economic process in a capitalist society occasionally directs itself against people, despite the fact that the intentions which usually accompany economic actions are rational, are very often noble, and respect the rules of the market economy.

A propos the above-mentioned rules - the misfortune of the players in the so-called market game is based on the fact that they fruitlessly try to overcome a certain paradox. Namely, in order to obtain profits (at the least) and to maximize them (the optimal state) they must produce and sell more and more products. Nonetheless, as a result of these very actions, after a certain time, a situation on the market develops where the sale of anything becomes difficult, and in the extreme case nothing whatsoever can be sold. Obviously in the latter case, we speak of a **phase of economic crisis**. What is amusing in all of this is the fact that the majority of players in this game are generally aware that without maximization of profit, it is no longer possible to remain in the elite club of capital owners. They are also aware that maximization of profit leads, after a time, to their exclusion from membership in this club. Potentially, of course, since exclusion concerns only the unlucky ones, and their list is composed each time (the crisis phase) by a totally uncontrollable mechanism. It has repeated its cycles for many years, striking

somewhere ..., only at some persons and without warning as to the extent of losses. Just like the most genuine **force of nature**.

Control of the economic process in a capitalist society is impossible to achieve within the phenomenon being described, because - as Marx had stated - as long as the players in the market game remain embroiled in their futile attempt at solving the earlier described paradox, the results of their own rational actions will be directed against them destroying all they had built with such great effort. This is wherein, among others, the difference between a “force of nature” and a “social force” is based.

3.2. Uncontrolled development. Essential explanations, ascertainions, supplementation

Let us recall the main thesis of the present paper:

[B] Uncontrolled development of ICTs may lead to the “hypernomadization” of society.

The term “**uncontrolled [development]**” in thesis [B] has a decidedly different connotation from the previous one, and concerns, in short, **a lack or relinquishment of control**.

In the Polish language, the word ‘**control**’ (“kontrola”) is used most often in the context of checking someone or something, whereas ‘**to control**’ (“kontrolować”) may be used in three ways: (a) in the sense of checking, investigating (someone or something); (b) in the sense of ruling (or exerting control over someone or something); (c) in the sense of exerting influence (on someone or something according to ones interests). [Markowski, 1999].

Thus, for the needs of this paper, when we speak of “**uncontrolled [development]**”, we are concerned with a situation where society is able and capable (in the above accepted meaning) of controlling **someone** or **something** but **does not take advantage of that privilege**. This someone or something may, for example, be a politician or the owner of capital, or the economic process itself. Control may be based on the fact that a given community accepts or rejects some project important to its life. In giving up the privilege of control, the community accepts, by the same token, the appearance in its life of a new state of affairs (products, legal documents, institutions, etc.), which prove to be disastrous, or at least dangerous and permanently endangering fundamental human values.

Finally, let us add to the considerations of this paragraph, that such terms as ‘community’ and/or ‘society’ which appear in the course of explaining the meaning of the formula “**uncontrolled [development]**” may denote a particular society (i.e. North American, or Polish society); a particular organization within a society (e.g. ACM or IEEE in the USA, or a given section of the NOT [Naczelna Organizacja Techniczna - Chief Technical Organization] in Poland); particular research and/or educational institutions; international institutions (e.g., EEC), etc. I assume that it can be the community of organizers and participants of the ETHICOMP conference as well.

Subscription and Updating of Software. Selected Aspects of the .NET Project

It is possible that the program for simplified software updating (SUP - ‘Simpler Upgrade Program’); subscribed licensing (SLO - ‘Subscription License Option’); and the associated .NET project may constitute a milestone on the road to a complete takeover of control over the

global information infrastructure. [*Note: In addition, the Microsoft Corporation. apparently issued a proposal to the producers of hardware asking them to manufacture computers accepting exclusively software created by Microsoft*].

I have been led to this conclusion by an analysis of universally available information; although, of course, I have no absolute certainty as to their appropriateness. I propose a very careful analysis of my line of reasoning and a joint consideration as to whether there is really anything over which to cry about.

The entities under discussion (SUP, SLO, .NET) have been sufficiently and exhaustively described on the Net, thus there is no need, I believe, to refer to generally available documents.

4.1. Simplified updating of software and subscription licensing

From the point of view of the aim of this paper, two matters appear to be crucial in SUP and SLO, i.e.: (a) remote updating (on the Net); (b) remote activation (on the Net, for instance, in Windows XP).

Remote updating and its consequences

Remote updating boils down to the fact that the owner, subscriber, or licensee performs an updating of the software (replacing an older version with a newer one) without needing to buy separately a disc with the updated version. The entire exchange operation is performed remotely by means of a specially prepared Internet service. This solution appears to be very convenient and advantageous to both parties. Nonetheless, the MC appears to have the greatest advantage in this case. Although the traditional updating (let us call it that way) introduced into the PC required an additional purchase of a disc with the appropriate contents, it was possible that it was done so only when the licensee considered it to be essential; he/she may also have chosen never to do this. A switch in the updating system from a traditional to a remote one requires not only preparation of an appropriate Internet service, but also some “structural” changes as these may be referred to, in programs installed for the first time; the programs must be prepared to employ the new procedure. These “structural” changes, even when considering the most far-reaching good will of a typical monopolist, need not lead to the improved situation of an individual user. Thusly, in looking after their own best interest, monopolists can prepare software, which may require updating after a time they may arbitrarily choose (for instance, three years or much less). Can this be considered a good solution?

The monopolist in question may equip a program for remote updating with a mechanism for unconditional upgrading, which is a radical, albeit completely feasible solution. “Structural” changes for signaling an event will be based on the fact that the non-updated version, following a time arbitrarily indicated by the monopolist, will cease to be a useful version in the sense that it will simply cease to function, or that the monopolist will stop taking responsibility for its proper functioning which within a system of licensing services rather than goods is probably the easier legal operation.

The mechanism of remote updating may also work according to a scheme, which may be described most briefly as a “background” upgrading. Many users may find such a solution attractive. The system automatically imports a newer version of the software into a given computer from the monopolist's Internet service in place of the older version, and the user learns about it incidentally, or while making the next licensing contract payment.

The last case shows in particular the danger of losing control by the Net user, insofar as it envisions a direct exchange of data between a sovereign PC, and another computer in the Net. I shall address this issue in the next section.

Remote activation (Net-based) and its consequences

Remote (Net-based) activation of software licensing means that the system following start-up, at a time arbitrarily chosen by the monopolist, **must** contact its Internet service in order to conduct the activation procedure. In the event of not fulfilling this **additional condition** the licensee can no longer make use of the purchased (and paid for) license; his/her computer is then, metaphorically speaking, dead.

The above described solution grants privilege to the monopolist, and his/her assurance that the advantage is mutual appears dubious, to say the least. The first serious reservation arises when each user is treated as a potential software pirate. It appears clearly that the monopolist uses the brutal principle of group responsibility and no amount of convoluted protestations to the contrary can change this fact. The corporation has, of course, a right to protect itself against the effects of piracy, but the solution presented is most unfortunate, because it appears as an example of the boundless arrogance of the monopoly.

Remote activation of licensing is connected with yet another important problem. Namely, **without my knowledge**, although through my own (coerced by the monopolist) agreement, an **exchange of data** occurs between my PC and the server of the monopolist activating the license. How can I be sure that the exchange concerning the trite, from my point of view, matter of the license, does not concern and never will in the future concern data that I would never want to or should not entrust to the “care” of the monopolist? Yet software prepared for remote activation **must be** equipped with a mechanism allowing for the exchange of data between my PC, which seemed to me till recently to be a sovereign one, and the Internet service of the licensing company. On what am I to base my conviction that this mechanism cannot be employed by some third party(s) or institution(s) for completely different, unacceptable to me, purposes?

4.2. .NET - Concept for a New Net Order in

The Microsoft Corporation's .NET project is, as is the majority of such present ones, a very complex structure, which can hardly be analyzed in the limited space of this paper. Furthermore, as I have already mentioned, there is no such need since it is possible to find data on the Net devoted to the technical level of the project; an extensive source documentation is provided by MC servers. [WWW#01, 2002].

I would like to declare right away that the object of my investigation is not strictly the technical aspect of the .NET project. I would not have the competence necessary to undertake such an effort anyway. Rather, I shall focus on some of selected results of particular solutions presented therein. I assume that the **concept of a New Net Order** is proposed in good faith. The aim of my considerations is an attempt to show that this concept contains numerous traps, which may potentially in the future constitute a grave danger for an international community of people priding themselves on respecting time-honored human values. Some such traps have already become the subject of investigations by international institutions. *[Note: In May this year, the Reuters's Agency issued following information: May 25, 2002, 9:05 AM PT EU probes Microsoft over privacy law "BRUSSELS, Belgium - The European Commission is checking whether Microsoft's system of collecting personal data from Internet users breaks privacy laws,*

*compounding the software giant's antitrust probe headaches in Europe". Brussels was also supposed to determine whether Microsoft's Passport service violates the privacy laws of the European Community, and whether MSC designed the system to work best with Microsoft's own server program (.Net!). There are voices that without registration in Passport access to many websites is denied, and that **it is impossible to cancel registration**, online at http://news.com.com/2100-1001-922911.html?tag=fd_top/ accessed 16.07.2002].*

Since it is impossible in this place to deal with the total content of .NET, I have chosen for further analysis the matters of passportization. This choice is, I have no intention of hiding it, completely arbitrary.

.NET - passportization, authentication

The passport is an immanent part of the .NET project, where the controlling idea is very simple. The monopolist states that, for the good and interest of his/her customers, he/she has prepared a **service of granting passports**, that is, special "digital documents" (digital certificates of authenticity) permitting visitation of websites, or other services requiring logging in. The service of the monopolist granting the passport is obviously an enormous **data base containing identifications, passwords, and selected personal data of the Net users**. The administrator of a website (service) "X", who wants to register visitors, places at the service entrance a referral script sending the request for logging-on to the service of the monopolist in order to confirm the entitlements (authentication). The return of an affirmative reply allows a successful completion of the logging-on process. This is basically all.

To its administrator, the advantages of taking over the authentication of users of service "X" by the service of the monopolist are obvious: no more problems with one's own data base, with maintaining all that is necessary to ensure effective, certified logging-on. The **average Net user** is probably happy as well, since **one passport** allows him/her to cross the borders of all websites (services) demanding registration. Let us assume at this point that the vision of universal passportization has already become a reality.

This idyllic scenario hardly contains the whole truth about what happens, or what is yet to come once the universal passportization in the WWW has been accomplished. What exists already - as is usual at the beginning of anything - is hardly perfect. For instance, a simple bug in the passport allows the attacker to do anything that the legitimate owner of the passport can do. [WWW#02, 2002]. Or, there is a way of stealing someone's passport [WWW#03, 2002]; although very likely this has been already dealt with. Well, as the saying goes: only those who do nothing make no mistakes. When it comes to the future ... , well, one can always speculate.

After some time, the administrator of service "X" - yes, the same one who was happy about the takeover of authenticating users by the monopolist's service, realizes, that the knowledge about who, where and (perhaps) for how long had made use of his resources, belongs no longer exclusively to him/her. To the same conclusion come the administrators (owners) of services "Y", "Z", "U", "V", "W", and others (like an Internet store, an Internet bank, an Internet escort service ... who knows, what else one will be able to do by means of the Internet). I repeat, the monopolist handing out passports possesses all the information about who, and when, in a given day, week, month, year, was using the Internet; and also about the websites one had access to. Will this monopolist always want to use this knowledge exclusively for his/her own, doubtlessly noble, purposes? Or, will this knowledge be shared; if so, with whom, and what for?

The Dark Vision of Hypernomadized Society

It is time now to try to present some general conclusions. Before that, however, let us remind ourselves of several basic matters regarding information technologies.

The computer system consists of a computer, in other words, **hardware** (e.g., a PC of an average Internet user), plus an **operating system** (e.g., UNIX, Linux, Windows XP), plus a **data bank(s)**. The **computer network** can be defined as a specific system of connections in a set of computer systems.

Direct control over the **processing and storage of data** in the user's PC is executed by the utilities (e.g., Microsoft's Office); indirectly this process is controlled by an operating system (e.g., Microsoft's Windows). General control over the work of a typical information system is thus performed by the operating system (e.g., Microsoft's Windows). Hence, it seems that the following conclusion is justified: the data processing and its storage in a PC by the average user of computer technologies is controlled by a product belonging to our hypothetical monopolist.

Let us assume that information systems are connected into a network, within which they can exchange data with one another. In order to do this, they have to be submitted to the control of a special software (of the client-server type, to put it in the simplest way). This software, for at least some time, may have had independent producers. It is precisely then that in the “wink of an eye” the most broadly understood exchange of data between - relatively sovereign, about which later - computers within the Net could be free from the influence of a corporation.

Free access to Internet websites and services (let us assume that the WWW will serve as a convenient example here) creates and reinforces the conviction that the Net can be an example of a broadly understood democracy. A democracy, in which the variety of numerous software tools, including languages; software creators and their products; means of accessing and providing data; etc., etc., can fruitfully coexist and cooperate.

However, the facts seem to indicate that the honeymoon is over. A certain new project .NET has arrived. Its main task is to unify and order, according to the aims of the monopolist, all significant matters connected with the exchange of data on the Net. The XP operating system has appeared into which the main components of .NET have already been installed or will, in the near future, be installed. A program of software subscription and remote updating has appeared. The use of software is becoming impossible without activation in the monopolist's service. Passportization of access to websites (services) has given privileges to the corporation in all possible aspects, particularly in regard to the matter of who, when, and with whom was connected on the Internet. An agreement between the producers of hardware and the monopolist regarding the production of computers requires exclusively a software “accepted by a certain corporation”. The question arises, is there anything else that needs to be shown in order to make the thesis about a **planned takeover of control over the global information infrastructure** a plausible one?

The whole beauty of the above mentioned “wink of an eye” of the Net democracy was based on the fact that the PC of each member of this unusual community was sovereign, particularly in the sense that they used the independent medium of an operating system, which had, in the universally understood sense, been the property of the user. The independent medium of the described OS was available freely on the market, and could be purchased or not; the decision belonged to the individual user. The same concerned all subsequent updates, extensions, etc. This was the one and only condition of using software.

The sovereignty was guaranteed further by the fact that the initiation of a given exchange of data between my PC and other computers in the Net required my own and exclusively my own acceptance; and could in no way be assumed through the imposition of the one and only proper passport of some monopolist. Not to mention the fact that the terms of using the software, for which I had paid my very own money, was also due exclusively to my own decision, the decision of someone who pays for goods and is free to do with them what he/she wants to do. Can you imagine General Motors issuing the ignition keys to a purchased car only under the condition of the buyer's personal appearance at the company head quarters and the signing of some inane obligation?

The sovereignty that I had mentioned a moment ago is receding imperceptibly into the past. One can talk about it in many ways, I will do it by telling a story. Let us imagine that a certain hypothetical monopolist on the software market changes the rules of selling (or licensing) his software. In addition, he/she makes any practical possibility of using the updated version of the OS the subject of the fulfillment of additional conditions (e.g., Net activation from his/her service). That way, he/she creates a situation in which the **independent medium OS** in the hitherto used sense **ceases to exist**. Let us inquire as to the results of such a solution.

The first important result of the situation presented above is that the hitherto existing **“sovereignty” of my PC ceases to exist**. The right to make use of the OS for which I had paid my own money no longer depends exclusively on me. **Above all**, it depends on decisions made in the **service** of the **monopolist** in question. My purchase of the OS medium (an expense), and functions connected with its installation are still the necessary condition for making use of the OS; but they are not a sufficient condition anymore.

The monopolist in question, may, after a certain time, reach the conclusion that it is more convenient to manage “sales” (licensing) of the OS, if he/she drops the façade that is/was the independent medium; and he/she will **transfer the whole process to the corporation's central computer**. The result of such a situation would really be dangerous. After a certain time the monopolist could create a system, in which **my PC** will be only a simple network terminal **forced** at every start up to import the OS from the central computer of the monopolist, or at least, to obtain permission for using the OS each time.

Taking the sovereignty away from my PC may go much further. The monopolist may prepare an OS version (or utility dependent on his own OS), requiring **storage of my data in the central computer of the monopolist**. In that case, nothing stands in the way of the worst-case scenario of the development of the digital civilization: my PC contains exclusively an OS as well as data, supplied by the monopolist's central computer.

I wish to remind you that an uncontrolled development of information technology has turned me into a “supernomad”, one of the individuals forced to store and process their cultural legacy in their PC. This data may be quite different tomorrow from what I have today, but it could at least be in my own PC. My influence was limited, but I could make my own decisions as to what to do with them. Well - at least I could look over the digital photographs of my relatives, or read my favorite publications when I wanted to without asking the monopolist's permission.

In a situation of an uncontrolled IT development, which vision I diligently presented above, I will be deprived of any semblance of influence over my cultural heritage. The foundation of this development is a **totally unsovereign PC** reduced through the power of a monopoly to the role of an ordinary network terminal, for which the OS and processed data are imported from a central computer. Even when I would like to have a look at my own CV (version from the year

2002 - let us assume that this had survived), or at the paper for ETHICOMP2002, I would have to request the permission of the monopolist. Who then am I, a human individual, entwined in this monopoly's power? The answer is: I AM A HYPERNOMAD.

Conclusion

The supernomadization of society is in reality the effect of elemental features of economy characteristic for capitalism: the endless, mad chase of manufacturers of goods for “new” solutions (ever new OS, ever new formats of transcribing data) interrupts the continuity of the process of human culture by cutting off the society from the ages of accomplishments of the analog civilization, since the cultural heritage of humans becomes practically available to them only on their PC.

Hypernomadization of society, depriving the individual of even the vestiges of sovereignty to what they have in their PC, **appears to be** the result of a certain plan. The conclusions resulting from the above presented analysis appear to indicate, that the monopolist is probably planning a total takeover of control of the global information infrastructure, thus he and all others who wish to help them in this are contributing to the sinister vision of a world filled with hypernomads. Their cultural heritage will reach their network terminals directly from the monopolist's central computer, since - let us repeat it once again - it is there and only there that DATA will be able to be stored. TODAY the monopolist's central computer provides users with a given OS; TOMORROW it will probably provide them with another. TODAY, the central computer provides them with certain DATA; tomorrow, perhaps, it will provide other.

May they never live to see the day when the screen of their terminal presents the sinister information: **Due to information, which you needn't know, we have erased your data. You have ceased to exist. You are no longer even a hypernomad.**

At the end, one more conclusion with a direct connection to the theme of this year's meeting. It is much easier for large monopolies to corrupt politicians, with their influence they more readily reach with their influence to the first seats of state power. There was never a lack of people there who have badly wanted to control the actions of the citizens of the global village. Total takeover of control of the global information infrastructure with all its results appears to be an interesting undertaking. Effectively realized, it will introduce totally new relations not only between institutions of monopoly and the citizen, and along the way, perhaps above all, between the citizen and the institution of the state. I can hardly believe that the citizen in this new relation will come out for the better than at present. But, perhaps, I am not right ...?

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References

- Kocikowski, A. (2001), *The Discontinuity of Cultural Process in the Digital Civilization. Main Dangers*, The Social and Ethical Impacts of Information and Communication Technologies, Vol. 2, 3-9; online at <http://mumelab01.amu.edu.pl/papers/k-paper.pdf>
- Markowski, A. (ed) (1999), *Nowy słownik poprawnej polszczyzny* (New Dictionary of Correct Polish), PWN Warszawa.

WWW#01, (2002), Microsoft.NET, online at <http://arstechnica.com/paedia/n/net/net-1.html/> accessed 16.07.2002.

WWW#02, (2002), Stealing MS Passport's Wallet, online at <http://www.wired.com/news/technology/0,1282,48105,00.html/> accessed 16.07.2002.

WWW#03, (2002), Microsoft Passport Account Hijack Attack, online at <http://eyeonsecurity.net/papers/passporthijack.html/> accessed 16.07.2002.