The right to forget, the right to be forgotten
Personal reflections on the fate of personal data in the information society

Ivan Szekely

As the paper's subtitle suggests, my intention has been to present my views in a format that is decidedly different from the standard style of academic writing. Amalgamating the languages of scientific and literary approaches, the paper is meant to establish a common thread that runs through the separate topics of data protection literature – a leitmotif centered on the problematics of remembering and forgetting, if you will. As a result, readers will not find any numbered sections, bullet points, footnotes or end notes which would hinder the continuity of reading. There is, however, an annotated reference list at the end.

As I am writing this essay, which is concerned not so much with codified law as with moral rights and values in a changing world, I am conscious of the fact that I am up against a stiff headwind, in a social climate where the prevalent trend in public discourse on recent history favors the public exposure of crimes and criminals, real and imaginary; where the political dialogue confuses the increasingly outworn problem of informers under a totalitarian regime with the issue of identifying with, or showing loyalty to, the previous government's ideology; where scheming historians mistake the unveiling of the previous regime's transgressions for probing into and disclosing people's private lives; where the millions of naïve Internet users take the claims made by the big IT corporations about the eternal life of information technology at face value; where "the code is the law"; and where not only the cohort of the technical intelligentsia (an interested and willing party), but also the social science elite of postmodern society (people dazzled by the chimera of a relentlessly changing market for attention on the one hand, and unable to comprehend the real forces of social interaction on the other) all seem to fall for the promise that everlasting storage of, and ready access to, all the information, at all times and in all places, actually paves the way to the redemption of mankind, and in any case new technology will solve social problems and make people happier.

In short, the present milieu does not provide favorable conditions for the tranquil contemplation of forgetting. But still, what is it that lends actuality to the phenomenon of forgetting? It is a transformation which can readily be defined, but it also has some very basic consequences, which the majority of people tend to overlook. In the course of human history, forgetting was the norm and remembering the exception. Now it seems to be the

other way around: it is the act of forgetting, or the ability to forget, that is becoming the exception.

It would be easy to explain all this simply by reference to advances in computer technology, digital information processing and cheap storage capacity. While all of this undeniably constitutes the technical basis for the phenomenon, the mere fact that this development started in the first place, and has continued unabated ever since, is the consequence not only of the selfless efforts of individuals who have made use of their constitutional right to carry out research, but also of a hitherto inconceivable concentration of interest and power, which has used this technology to effect a dramatic transformation in state and society, in the business and personal spheres, and in private and public relationships. If people find modern society too complex and incomprehensible, then they will find this "information society" all the more so, and I would even venture to say it has been deliberately designed to be so, in order to prevent its citizens from comprehending, or even wishing to comprehend, the social trends, including those that have a direct bearing on their own fate. We may call it a specific manifestation of Beck's risk society, where, under the permanently changing conditions, our experiences do not constitute solid enough ground for our decision making; where the future is largely unpredictable and our decisions have unforeseeable consequences; and where, despite all this, we live out our short- and long-term plans.

Today, not even the world of Internet can escape the attention of social critics, nor is web 2.0 exempt from critical reviews by political economists. However, I would once again like to call attention to the fact that since the laws are being written by the code writers (IT experts and their paymasters), these theoretical arguments never even register on the radar screen of the data processing monopolies and the power centers – for them, the only restraining force appears to be bad publicity and the wrath and withdrawal of the masses who (unwittingly) supply them with their data. And even if these ideas were to attract the attention of socially responsible legislators, no laws that could possibly result would have any chance of either practical implementation or adequate management of the actual problems, since from the moment of their inception they would be in conflict with the technologies and organizations controlling the IT world – and also the associated commercial, political and ideological power structures.

*

It would be easy to claim that the current method of information storage, which holds out, at least according to its promoters, the promise of eternal life for our data, is merely a quantitative development in the evolutionary process that characterizes the history of mankind so far. However, just as genetic engineering is not merely a more effective version of our previous breeding selection practices, and just as war is not merely a more effective continuation of politics, the current scale and perspective of digital information storage cannot be regarded simply as a step forward in the improvement of efficiency.

What is memory? It is many things: a need; a luxury; a natural aptitude; a key aspect of culture; a tool for survival; a field of science; the ability to foretell the future; and many more. There is internal and external memory, short, intermediate and long-term memory,

there is individual and collective memory, visual, auditive and notional memory. There is factual memory and emotional memory; implicit memory and memory of principles, relations, responsibilities, friendships and loves. There are techniques to retain memories and there are institutions to do the same.

However, there is one aspect that has always been a prominent feature of memory: the principle of selectivity, the recurring act of assessment. Whenever we go through photographs or letters that have come to us through inheritance, we look through them and read into them; at first we decide to keep most of them, but when the next house move or redecoration is upon us, we start to throw some of them out – and not merely on account of a shortage of storage space. In the end we only retain the documents which are the most important for us, and also the most characteristic, with the greatest power to jog our memory. These are the ones that we bequeath to the next generation, who – at least up till now – repeat the same process all over again. There is a well-known counter-argument, claiming that if a document or photograph or any recorded information can survive the selection process, it will eventually become a priceless treasure for some researcher in the future, be that a private individual interested in family history or a professional student of the past. And it is true that their special ability to survive is *precisely* that makes them so precious, lending them a value that they would never have in a world where everything was kept for ever. If we were to keep all the ruins from every historical period, all our worn-out cloths and chipped crockery, then we would not only overcrowd our physical world, but also lose our ability to distinguish between what matters and what does not. To preserve what is significant and discard the rest is what traditional archives are trying to do in their professional capacity: from time to time their representatives show up at the originating organizations and select the documents that should be archived, or preserved for future generations. They may make mistakes in trying to ascribe importance to some documents, in which case future researchers will be disappointed that others have not been preserved – but this is the very nature of long-term memory: all the documents of an archives are used by the readers, researchers or users in contexts and for purposes that are different from the original ones.

It is precisely this process, the acts of selecting, evaluating and deleting, which is missing from the promise and present state of eternal digital memory. Instead of the "extended arm" imagery applied to our brain and memory, which was how machines were visualized as the extensions of manpower in the not so distant past, here we are dealing with a totally incomprehensible system, or a complex of many systems, operated by robots for purposes completely unknown to us. The declared purposes, at the level of the promotional slogans, at least, are invariably about making our lives easier and introducing new services that are more affordable, or assisting us in managing our affairs more efficiently, or establishing e-democracy.

But before we, together with all those consumers living in the more developed societies – the masses of consumer idiots, to borrow the expression used by some of the more critical authors – decide to buy into the claim that the Internet and the ever-increasing information storage designed to last forever is in fact the charitable deed of a superior being, a free public service, which has only one purpose: to offer us, free of charge, more and more

services in education and entertainment, we should note that we never hear about *e-dictatorship*, only about *e-democracy* (even though dictators and dictatorial organizations could lay their hands on our personal data preserved for eternity in IT-land just as easily as charitable organizations), which is somewhat analogous to diagrams of productivity figures which invariably move upwards on the charts displayed on walls, or airplanes rising proudly, or photogenic models raising their eyes optimistically above the horizon – we could continue with the list of the long-established clichés in the world of promotion. However, thanks to the dedicated efforts of advertisement psychologists, these clichés are actually working, to the extent that they permeate the thinking of large masses of people. And the crucial elements of this thinking are comfort, (seemingly) low price and high speed, as well as the absence of any need to pay attention and apply critical thinking. A certain amount of temporary attention is generated by the so-called "danger discourses", but these are never directed at the essential features and are didactically misconceived: warnings along the lines of "Honey, never make contact with strangers on the Internet!" usually elicit the opposite reaction from the target audience.

*

Nowadays forgetting is an expensive business. Selection, evaluation and scrapping are all expensive and labor-intensive processes (in other words, they require much time and attention), so instead we keep the hundreds of photographs taken during a hike or a party without selection, along with the masses of e-mails and carelessly drawn sketches. By now even in this area the situation has been reversed: previously it was the memory part (the recording, the storage and dissemination of knowledge) that was costly and labor-intensive and the limits of the processes led to the natural decay of information, in a way constituting an ecological balance between current, semi-current and historical information.

But why should we want to forget? Even if we were to pretend that we had lost our mental and emotional premises, social axioms, a priori notions and our whole value system, we could still list a host of explanations for the advantages and necessity of forgetting in the capacity of an objective, external observer.

On the individual level, if we did not have the ability to forget, we would share the fate of the mnemonists described in well-documented case studies: Funes and Shereshevsky both experienced the incurable condition they suffered from, for which the outside world actually celebrated them, as a lifelong imprisonment – in other words, we would be unhappy. And even if the accumulative and unselected memories resided outside our operational memory, somewhere in a continuously accessible backup storage area, the implications would still be similar. On the one hand, we would be unable to make use of one of the most important elements of our personal informational autonomy, the freedom to decide whether to store or share information about ourselves, to control the fate of our data, and to determine what to share with whom, and for how long. As long as our backup storage is not a notebook kept in a securely locked drawer, but a supposedly private, electronic mail box or document storage facility accessible not only to the user but also to a circle of people of unknown size and dubious intentions, the beautiful idea of information self-determination remains an illusion.

On the other hand, if we were to preserve everything, we would become prisoners of our past. And what I am referring to here is not simply our acts, later re-evaluated and repented, nor our deviations of various grades of severity, nor our transgressions, but the freedom to control our lives and to develop our personalities. The early ideals of personal freedom had always included the possibility of starting life anew, and the chance to leave our personal history behind. "Go west!", the Americans urged us, although that advice can now be heard only in romantic Western movies, as the Wild West, the terra incognita, no longer exists.

Naturally, our mentioning this ideal should not be construed as a latent support for murderers and other villains in their attempts to put their guilty past behind them – and we only need to emphasize this in light of the common experience of human rights campaigners, who are regularly accused of being hell-bent on "defending criminals". The decision about the fate of these types of information clearly cannot be left to the persons concerned – at least for a certain period of time. Information related to crime and punishment (in practical terms: criminal personal data) is exempted from the main rules of information self-determination: it is regulated by special provisions in constitutional law, which permit the curtailing of the individual's information autonomy on principles invoking the interests of society at large. At the same time, however, after the expiration of a certain period whose length depends on the severity of the crime, the legal accountability for these officially sanctioned deviant acts will be ended, implying that the obligation to keep a record of them will be lifted and, as a special category of sensitive data, control over such records, at least in principle, will be returned to the data subjects. In modern democracies based on the rule of law, only war crimes are exempt from the statute of limitations, meaning that information about people found guilty in such crimes will never be private; any other acts condemned by society or prosecuted by law will sooner or later lose their relevance.

But as we are confronted with certain cases listed as illustrations by Viktor Mayer-Schönberger in his seminal book on the need for forgetting, we find that these are not isolated and individual incidents; instead, here we are dealing with an essential feature of a system incapable of forgetting. In his book we can read about an elderly and well-respected professional, who in the 1960s was found guilty of the offense of taking LSD. Thanks to the eternal memory of digital technology, he was still made to pay the price in his seventies, when a border official refused him entry after identifying him as a suspicious element.

It is not just individual cases of trauma caused to people later in life by digital memory that we see here; we can also discover the possibility of citizens' actions (occasionally supported by the law) to implant RFID tags or miniature radio transmitters under the skin of persons convicted of child molestation, so that their movements can be constantly monitored, and thus forever barring them from shedding the consequences of their acts; or the possibility of people's names ending up in DNA databases set up for the mandatory genetic identification of individuals judged suspicious or dangerous, and the impossibility of having one's name removed from such databases even in a clear case of mistaken identity.

*

The chances of forgetting are closely connected to the extent of surveillance, which provides source material for digital memory. But does any community have the right to spy on people, or to stigmatize them in any way, for the purpose of ensuring wider acceptance for its own norms? Living in the public eye, or in forced openness, is a well-known phenomenon in certain Protestant societies: the reason they have no curtains in their windows is not because this is how Big Brother set up its Panopticon, nor because the inhabitants of the house do not have the right to screen their private sphere from the outside world, but simply, because it is *not the proper thing to do* – the people inside the house must feel the public's eye on them at all times, so that they behave precisely as demanded by the community's morals and preferences.

However, the problem of individuals perpetrating serious offenses is different from the above-mentioned manifestations of ideological coercion or the enforcement of preferences in taste: in their cases we talk about real stigmatization. The question is whether the risk of the possible repetition of deviant acts justifies permanent limitations on the individuals' autonomy, their excommunication and placement in a virtual pillory – even when the statute of limitations, in the legal as well the moral sense, has already expired in relation to the concrete offences.

The word *risk* has attained key importance here, not only from the viewpoint of the individual child-molesters, but also regarding the new and supposedly modern – in my view, however, fundamentally flawed – concept of society. I refer to the so-called actuarial society, named after insurance mathematicians who weigh risks down to fractions of a percentage point, which confesses to principles that have served to justify the establishment of a surveillance society – or to use a less polite term, a voyeur society. According to this concept, it makes no sense to talk about normalcy and deviancy; it makes no sense to explore the individual and social motives behind the individuals' actions; it is enough to consider the statistical probability of any given offense. As to the question of what exactly qualifies as deviant, "bad" and, therefore, reprehensible behavior, it is up to our bosses and business and political elite to decide. And on the point of minimizing the statistical probability of the occurrence of criminal acts, this can be achieved by increasing the likelihood of being detected, which in turn is best served by keeping everyone under constant surveillance. This, and this alone, will prevent "criminals" from carrying out criminal acts – according to this ideology. Naturally, this will also be the only thing that will stop those who engage in the surveillance profession from committing crimes, such as abusing the specific knowledge they have acquired while spying on other people. Therefore they, too, must be placed under surveillance, along with those who spy on them, and so forth. All this is closely linked to society's approach to deviant behavior. The system even has its own name: it is called New Penology. The full-grown system, quite understandably, relies not only on real-time surveillance, but also on infinite digital memory, ever-growing personality profiles, and ever-more accurate probability calculation.

Instead of Panopticon, which suggests the existence of a central hub of surveillance (and is meant to generate in the subjects the feeling that they are under surveillance, thus enforcing their compliance to the prescribed norm), a better metaphor for the society described above would be Peripticon: this, too, is meant to keep society in check by giving its members the

feeling that they are being watched, but here nobody knows who the observer is; from where and when surveillance is conducted; and who will make use of the results of the observation; when, and in what way.

In such a society – as in every surveillance society that never forgets – individuals will develop distorted personalities, as they can never behave as free persons (even if they are not aware of it at every moment); instead, their behavior will be shaped by expectations, pressures and opportunities. This is already different from the situation which the German Federal Constitutional Court described in its momentous ruling more than a quarter of a century ago; namely, that anyone who is left in the dark as to what information his communication partners hold about him has a limited freedom of decision-making – what we have now is no longer about communication partners, or any kind of partners, only an incorporeal, virtual environment of surveillance. The overall effect of such changes in individual behavior is likely to alter the fabric of society, and in my opinion, to alter it for the worse.

And as for the spies and the non-forgetters, the current situation offers them an even more dangerous weapon: one way to bring about a zero-tolerance society. The possibility of storing information on everyone, of retrieving and using it at any time against anybody, is the perfect means to detect and sanction the slightest deviation from the ideologically, politically or commercially preferred behavior.

*

The degrees of memory and forgetting are related to the degrees not only of surveillance but also of public transparency. Today we are inclined to think that public transparency is a binary phenomenon: information is accessible to either everyone or no one. Nevertheless, the historically or functionally emerging institutions of public transparency have not evolved along such logic. Public transparency has degrees, and that applies even to access to public information, even though this seemingly contradicts the existing legislation on freedom of information. Still, public transparency always had some kind of functional purpose specificity. In a court hearing, the control of publicity is meant to guarantee the honesty and fairness of the legal process; however, control in this case should be understood as control by the people affected and their immediate entourage, rather than unbridled Internet publicity for people who are totally unfamiliar with the context. The earlier practice, whereby the names of the offenders are published according to "local customs", served to exert a restraining influence on the local population, rather than to build the profile of the offender on a social networking site of immense proportions (where these data, incidentally, may be construed as special category sensitive data according to EU data protection norms). Nowadays, this kind of publicity has been removed from the umbrella of the original intentions and legitimacy.

We can see a similar kind of functional target specificity in the way people share various segments of the information they are privy to, with the various circles of people they are in contact with. There are things that we are only willing to share with our spouse, while we may limit other information to family circles, and there are types of information we would

divulge at our workplace, in the supermarket, or while speaking at a political rally. We behave very similarly, when in our personal lives we share with the various circles of the outside world only some segments of our identity. We are teachers at school, valued customers in the supermarkets (and we are not asked to show any identification to prove it), patients with a medical history at our GP, buddies in our local pub, and occasionally stupid fools "who can't be more careful" on the subway. They each form segments of our identities, which partially overlap, yet in specific situations and circumstances we never reveal all of them together; not because we have "something to hide", but because in a specific life situation only one specific segment of our identity has a function and relevance – the others quite simply do not belong there. These partial identities, along with the information associated with them, also have a relevant temporal aspect; at a class reunion organized many years after college or during a get-together of former colleagues it would be anachronistic to revert to the old class or workplace hierarchy among the participants, even though telling old stories usually forms an essential part of such reunions.

However, this thoroughly wired world of Internet can easily connect these partial identities, and can even create new ones in the process. But it doesn't even stop there: it markets them and exploits them. There are whole computer technology systems designed specifically for the management of people's identities. These are developed to make it easier for the stronger party in information transactions (the administration or the service provider) to manage the user identities of its clients, actual or potential.

One of the few developments that may still offer a glimpse of hope in the present environment of information technology has been the emergence of user-centric identity management systems, of which the most advanced and the most suitable for systemized use are PRIME and its successor, PrimeLife. Such systems would be built into the "Internet" as an invisible intermediary layer; in other words, they would be built into the complete network services seen and used by us, automatically implementing most of the rules that deal with our data and identities. The software itself would execute all the relevant provisions of the data protection laws; it would carry out the data protection provisions agreed by the service provider and the client, while also implementing the individual user's preferences within the above framework. By selecting the appropriate settings of a PRIME-compatible application, one could have one's photographs automatically deleted from any social networking sites after the expiration of a specified period of time – as long as the social networking site itself is PRIME-compatible. It would even delete copies of these photographs forwarded to any other, PRIME-compatible websites. Similarly to the method employed by the indexing function of search-engines, an ideal, user-centric system of identity management would search the remotest corners of the Internet in order to perform its task, which in this case would be the deletion of photographs. (At this point, my students never fail to ask: What if someone has already copied the pictures onto a pen drive? Well, it's true that no PRIME system will ever be able to erase those photos from a pen drive, but as soon as anyone attempts to upload the pictures back on the Internet, the system will instantly delete them.) However, the broad scale implementation of such systems is not expected to happen soon, not only because of the technical snags, but also on account of the powerful opposition of the adversely interested monopolies of information management.

On the basis of what I have written so far in criticism of the information management monopolies, my approach may come across as slightly activist. While on the one hand I am not suggesting that all that I have written about the problems of forgetting is completely value-neutral, on the other hand I would like to add a cautious word of praise for one of those monopolies: Microsoft.

One of the most promising developments in the information technology of identity management in the past few years has been the concept of private credentials. Together with a number of related software applications, it has been developed by Stefan Brands, probably the most talented member of the new generation of cryptographers. These virtual certificates allow us to take our real-life partial-identities and transfer them to the online world, or even to use them for building new ones. We can use these private credentials to identify ourselves in various online situations, without having to worry that someone will connect our partial-identities and take advantage of them without our approval. These certificates can also be used to verify our various entitlements, as well as our age, qualifications and other personal information, without allowing the information seeker to connect the various databases that are being accessed in the process of authenticating the information. Naturally, the task of "forgetting" the data about the partial identities, i.e. the deletion of the information, will continue to be left to a system not unlike PRIME, but in this way we can be sure that information will be floating around in the promised "eternal" memory of Internet only in fragments, rather than in the form of complete profiles and biographies.

Well, three years ago Microsoft bought Brands' company 'Credentica', together with all its registered patents. Information experts, as well as most people taking an interest in the deal, were all convinced that this would be the death of Brands' concept. The software giant would simply lock up the patents in its vaults and thus try to prevent the spread of the idea. Brands was the only one who continued to maintain that Microsoft's intentions were, indeed, sincere and the company was serious about incorporating the patents into its software packages; everyone else had their doubts. And then recently, the unexpected happened: Microsoft built the system of private credentials into some of its software packages, or rather, it made provisions to allow the incorporation of the system, and it even published its source code under the name U-Prove. We must not, however, delude ourselves. Microsoft was not starting to act on the basis of a sudden access of human kindness: it was still driven by business considerations; still, this move undoubtedly helped to considerably improve its image in the profession as well as among the organizations of civil society. Obviously, this was not the sole motivation behind the decision and the company's business strategy also called for this move, but still, it would not hurt, and it might even help, if the demand for information autonomy – including guarantees for self-determination in the various phases of remembering and forgetting – were to be met by the market also as a result of commercial pressure.

*

There is one thing we must not forget even in the optimistic, privacy-friendly technocratic milieu of user-centric identity management systems, namely the fundamental difference between human memory and computer memory.

Memory is like a dog that lies down where it pleases, Nooteboom writes. He was, of course, referring to human memory, using a metaphor based on the behavior of another creature, man's best friend, the dog, rather than, say, one's frequently freezing computer. In comparison to its digital counterpart, human memory is *imperfect*: it distorts, omits and selects; it seizes upon some memories and blows them up out of proportion, while relegating others to insignificance, not to mention the fact that it has a tendency to re-evaluate the past from time to time. We may experience déja vu or remember an imaginary memory; in a life-threatening situation, our whole life may flash before our eyes; we may invent incidents that allegedly took place in the past, and after repeating them a great many times we, too, may stop doubting their reality. We may use mnemonics, write diaries, take photographs and archive our e-mails; we may use memoirs or artworks to aid our memory; still, our memories will always be produced and interpreted inside our self. For this very reason, human memory is also *perfect*: it is perfectly human.

Confronting human memory with factual history can often have unwanted consequences. Shortly before my mother died, I decided to take her back to the scene of her childhood vacations – if I may relate a personal memory here. Throughout my childhood I often heard stories from her about a fabulous family estate set in a huge orchard, which also featured an uncle working as a physician in a mine and keeping exotic plants; various family friends, including a half-witted painter; lunches in the garden, labyrinth-like pergolas and a beautiful house. All this, of course, referred to the period before the Second World War, but I thought that perhaps the two of us should make an effort to revisit her past, or at least recover traces of it – and my mother concurred in this.

It was a mistake. After reaching our destination – a large village just outside Budapest, which has since then been elevated to town status – we found an elderly man of more or less the same age as my mother, who could still recall the garden and its owners and could give us directions. Driving on roads that were almost impassable for cars, we had a hard time finding it. Of course, what we found there was a mere shadow of all the things that had stood there back in the old days, but even so, it became quite clear to us that there had never been a fabulous estate here, with a huge orchard and a majestic house. We saw a small plot of land and the remains of a small house, located in a not particularly attractive setting. People who revisit the scenes of their childhood – kindergarten or elementary school – after many years, invariably find the place, which once meant the whole world to them, shockingly small and insignificant; something similar happened to us there. Sure, there were photos and surviving objects, but these only seemed to serve the purpose of fuelling our memory, rather than replacing it. We should never have gone there: then we would never have experienced the distress of witnessing the demise of this important element in individual and family mythology.

Individual memory, but also family and communal memory, consists of such elements, and it is these elements, with all their fallibilities, that after all constitute our culture. We need not

take this burden – the burden of human remembrance – off the shoulders of our descendents.

*

Thirty. Thirty what? Years? Euros? The average weight of something? Of whom? Of what? – It is a well-known fact that a piece of data has no meaning by itself: it only has meaning in context. More precisely, data are always produced in a context: we might say, in the context of some information. When we place the data back into their original context, we can retrieve the information. But what happens if we record the data in one context and then interpret them in a different one? Well, in that case we shall get new information. This is what computerized data processing systems and computer networks routinely do. It is a welcome and promising prospect from the viewpoint of scientific/technological development, but has controversial and negative tendencies in the realms of human communities.

The term "function creep" is frequently used in the data protection jargon. As long as a computer system retains data recorded for a specific purpose in its memory, there will always be a great temptation to flout all rules of purpose specificity and make use of those data in a different context by exploiting the growing technological potentials of data analysis. It is in fact more than just a temptation: by now it has become part of the mainstream procedures, involving techniques which are being taught on information science courses all over the world. We build up data warehouses by accumulating personal data, which are no longer relevant and lack legality or legitimacy for data processing (in other words, they are designated for oblivion), in order to bring them back to life and make them suitable for analysis according to some uniform criteria. We employ data mining techniques to extract information from this sea of accumulated historical data – and to draw conclusions in addition to, or in some cases completely independent of, the original purpose, in the hope of discovering certain patterns, such as the signs of secret proclivities, the existence of which the data subjects themselves may be completely unaware of.

Of course, there are techniques that take into account the interests of both the data management monopolies and the data subjects and, therefore, achieve the desirable balance between remembering and forgetting. For one thing, it is quite possible to build data warehouses and employ data mining techniques using data that have been stripped of all personal aspects. In such cases the data records are still individual: they contain the complete history of the clients, their gender, age, shopping habits, etc. – everything, short of their name, address and other data usable for personal identification. This will not prevent us from carrying out sophisticated data analysis, the type that we would do on personalized data; we can draw interesting conclusions on the basis of behavior patterns; also, if the identifying data (age, occupation, home address, etc.) of a person newly registered in the system are available, we stand a good chance of guessing that person's preferences and predilections – without remembering the personal identity of the old data subjects. There is only one thing that such a system is definitely not capable of doing: providing support for direct marketing campaigns based on former clients' behavior patterns, which are analyzed subsequently and then used to target those very same clients (incidentally, in clear violation of the law). And if there is still a need to carry out data analysis on personal data beyond the

original purpose, we have the whole arsenal of PPDM (Privacy Preserving Data Mining) methods. By employing them, we can conceal the link between the data and the data subject, sometimes through the use of statistical manipulation and sometimes by adding what, in information theory, is known as "noise".

As these examples have shown, sometimes it is the new technology itself that offers solutions to compensate for the harmful side effects of new technology. However, the application of such methods is by no means widespread in practice.

Up to now, the divergent academic fields concerned with the study of memory have constituted the home ground of psychologists. Now it appears that this area will become the monopoly of IT professionals. And the majority of the information experts seem reluctant to come to the rescue of the weaker party: they do not exactly exert themselves to develop and operate systems that would serve the interests of data subjects.

Curiously enough, the social scientists have not yet shown much interest in sounding out the views, knowledge base and attitudes of IT professionals. The studies have focused on users, the young, the elderly, consumers, citizens and suchlike populations; the views of IT professionals have almost never been surveyed. Admittedly, there is some controversy about the definition of an IT professional nowadays, when so many people use computers in their daily work; yet, it is a meaningfully defined population. And if it is true that the code is the law, then the code makers are the de facto lawmakers – it is evident that their views, along with the views of their paymasters, have a crucial bearing on the direction the development of information system affecting and controlling our lives will take. All this will change thanks to some groundbreaking research which has been initiated in this neglected area: an international research project named BROAD that is now well under way. The analysis of the survey data has not yet been completed, so it would be too early to release the results, but the project's starting hypothesis is perhaps worth mentioning here: it is postulated that, at least in Central and Eastern Europe, the majority of IT professionals are socialized so as to serve the more powerful side in the field of information (the authorities, the business monopolies, the service providers – in other words, their paymasters); it is the latter's priorities that this majority has internalized, with only a small minority with markedly divergent values thinking differently – they are the ones that the authorities (mistakenly) call "hackers". The position of the majority is understandable: they receive their commissions, salaries and career opportunities from the stronger party, so why should they worry about the weaker side, the data subjects of the information management systems? Then there is also the typical thinking of technocrats, which makes no substantive difference between humans and inanimate objects, living creatures and abstract entities, no distinction between an RFID dog tag and a chip implanted under the skin of a human being.

IT professionals also play a crucial role in the development and popularization of the visions of eternal digital memory. And while the first popular utopias emerged from the works of early science fiction writers – we should remember H. G. Wells' "World Brain" from 1938 – the iconic figures of the present are either IT professionals themselves, or users who represent the worldview of IT professionals. Sometimes even the scientific advisors, in some ways affected by their war experiences, seemed unable to resist the allures of popular

utopia: as early as 1945, American journalists were writing about the memory extender machine, or memex, which would enable people to access and tap the knowledge base of earlier ages. Perhaps the best-documented person living today is Gordon Bell, a well-known figure among the designers of the early computers and networks, who in his old age is being sponsored by Microsoft to constantly wear a digital device that takes a digital picture every thirty seconds, capturing virtually every aspect of his life and then archiving it for digital eternity.

Today several information experts hold on to the naïve, utopian notion that the total information produced in the present as well as in the future will soon be orbiting around the Earth as some kind of a public utility service, thus for ever defeating all limitations of space and time. The only problems that we are likely to have then will arise from the technical aspects of digital forgetting. Such a world would be controlled by engineers (IT professionals) and the ethical application of the information would be guaranteed by the wiring of the system and the wisdom of respectable old IT professionals. It would be quite interesting to conduct a discourse analysis on the social composition and motives of the groups that develop such a worldview; on the identification and motivation of the groups that are interested in disseminating and raising the popularity of such views; and on whether they have the capacity to look beyond the boundaries of these views and whether they have the willingness to listen to arguments and proposals that are outside the realm of such a paradigm.

*

Forgetting and forgiving. Somehow these are also related concepts. Mind you, I am fully conscious of the fact that proposing this idea would be beyond the pale in current public discourse, and that in the milieu of a transitional society the lessons of the past, or the overcoming of long-suppressed traumas, would always enjoy primacy over reconciliation and letting bygones be bygones. Regardless of the fact that it is not just the mnemonists who feel unceasing sorrow, a society that is constantly forced to confront its past, and to re-live every single moment of it, will also feel perpetually depressed.

From our little world here in the Danube Valley, we watch – with some interest, perhaps, but without much empathy – the former adversaries making peace with each other and cooperating successfully, either as old soldiers who once faced each other from opposite sides of the front line or as travelers on the road to the realization of the European Union through the joint efforts of nations which had long considered each other as ancient adversaries. While none of them seems to forget the essential point, all of them nevertheless forget what it is that stands in the way of shaking hands and establishing peaceful coexistence and even cooperation. We can only hope that our southern neighbors, too, will one day reach this stage. This may remind us of the truth and reconciliation committees in South Africa, East Timor and even in the United States, besides numerous other countries ravaged by war, genocide and other humanitarian catastrophes, where public reconciliation between former enemies, perpetrators as well as victims, is encouraged in the course of a cathartic experience. Such a mixture of rituals, too, sets the stage for remembering, forgetting and forgiving.

And this is the point where historians, or the professional students of our recent history in particular, enter the picture. Some of them are convinced that historians belong to a privileged caste in society, whose mission is to uncover the atrocities of the past. Their raw material is people, i.e. the individuals who populate historical events and documents, and in their missionary zeal, they feel that the end justifies the means. In plain language, they want to be seen as a cut above the rest: they reserve for themselves the right to make decisions about people's life history and personal data. They wish to overrule the subjects' right to self-determination, for example, by denying them the right to forget. Naturally, I am not talking about the actions of persons occupying public office, nor of the crimes committed by politicians, generals and their henchmen and informers: I am referring to the people who simply got caught up in the wheels of history. Through legal provisions characteristic of the democratic transitions, historians, along with any other qualified researchers, do receive some kind of a concession in the study of the past; however, when it comes to the publication of any personal data discovered in the process, the legal limitations kick in. The legislators of the democratic transition were of the opinion – maybe they still are – that historians and professional researchers are people who hold themselves to higher ethical standards and will not abuse their privileged position of being privy to personal information. However, some students of recent history take pride in exploiting their privileged position, not to mention the fact that anyone determined to publish personal data without the consent of the individuals concerned will face little difficulty in obtaining a research certificate.

In 1996, following a lengthy investigation in which I was able to assist, the first Hungarian data protection commissioner produced a detailed analysis of an undertaking in the course of which personal data related to the persecution of Hungarian Jewry during the Nazi era was recorded on microfilm and then sent on to the Yad Vashem Archives in Jerusalem. Holocaust survivors are history's private victims, who are doubly entitled to the right of information self-determination. Those historians and activists who are trying to debunk the Holocaust deniers' claims by publishing the documented life histories of flesh-and-blood people seem to forget that these people, too, have the right to forget and that their moral right to refuse to carry the stigma of Holocaust victims and to bear witness in public is also guaranteed under the law. The Commissioner's recommendation tried to offer at least a symbolic confirmation of this right, shadowed by the hostile feelings of the historians concerned, who regarded the recommendation as a pointless constraint upon their work. They seem to have overlooked the point that by failing to respect the Holocaust survivors' right to forget, they in fact behaved similarly to the persecutors of the Jews: by regarding them as a faceless mass, they actually assist in the virtual, rather than physical, deportation of these people, who are once again being sacrificed on the altar of history.

*

Not so long ago we were still worried about the possibility that the technical problems surrounding the archiving and long-term storage of digital documents could lead to the appearance of a "hole in history". And now we are shocked to discover that we can no longer remember how to forget. We could even say that we have *forgotten how to forget.* It is important to emphasize, however, that it is of course not historical or

scientific/technological information that I am concerned with in this essay. What I have been talking about all along is the preserving versus forgetting of human information (concerning individuals and families, small groups and communities); still, this type of information has a crucial bearing on our lives, culture and social environment.

Naturally, we still have the "right" – or I hope that we *still* have the right – to control the data about us, including the framework and time limits of their storage and accessibility, at least according to the letter of the law. The elaborately developed arsenal of the data protection law contains provisions for enforcement, for example through the principle of purpose specificity regulating the time limits of data handling or the data subjects' right to have information regarding them erased. And while we also have the moral right to do all this, the range of *actions* we can actually take is diminishing. Just as the metaphors of Panopticon and Peripticon are being replaced by the metaphor of the Bewitched Palace's House of Mirrors, a hall where our image is multiplied in distorted reflections of different sizes, we can feel that our information reflections, instead of being a real-time process, have now been extended in time and will perhaps continue bouncing back and forth for ever.

Can we learn to forget again? Forgetting, similarly to remembering, has many different modes. We may still continue practicing some of them, but others we have started to forget. One of them is infantile amnesia: considered by Freud as highly significant, it still attracts much attention from psychologists who develop various methods either to lock memories up in our brains forever or to bring them out into the open; another one is social amnesia, which the historians studying our recent past attack with great conviction; then there is forgetting for self-defense, deliberate and unconscious; our external memory can break down: our notebook can perish by fire or our Winchester can give up the ghost.

Since digital forgetting is a costly affair, and since it is likely to be even more expensive in the future, there is a danger that it will become the luxury of the wealthy, of the people with the necessary resources, such as money, influence, knowledge and focus. In itself, neither money, nor education, nor critical thinking is sufficient. The liberal intelligentsia, not particularly well-off in terms of money yet much better endowed when it comes to intellectual power, will have to wake up to the reality about the Internet: after bedazzling them and enticing them with its boundless horizons, the Internet also raised their intellectual threshold level, instilling in them a perpetual demand for stimuli. Expecting an information/communication revolution to be delivered to our doorstep every day, we fail to acknowledge that the Internet has become a sort of intellectual fast food of the modern era and that the truly precious things are precisely the individual, human aspects that require focused attention and time. Just as synthetic curtains and windbreakers have lost their appeal as status symbols in Eastern Europe, while hand-woven fabric and hand-embroidery are coming back into fashion, so is a real-life postcard with a handwritten message becoming more valuable than an automatically generated, virtual birthday card. In a sense, forgetting has a similar role in the age of information storage and processing.

The majority of people in modern societies must be convinced to re-cultivate a demand for the right to forget: they must learn how to recognize and use this right. To achieve this, however, a new generation must come forward, whose members attach importance to their

personal autonomy while still retaining a strong demand for critical thinking; whose desire for comfort does not necessarily take precedence over their yearning for freedom; and who can still remember how to forget.

References

Below is a list of the more important direct and indirect references, arranged in the actual order of their occurrence:

Lessig, Lawrence. *Code and Other Laws of Cyberspace.* New York: Basic Books, 2000. – Lessig's best-seller, in which he expounds his view on how code becomes law in information societies.

Beck, Ulrich. *Risk Society: Towards a New Modernity.* London: Sage, 1992. – The originator of the concept of reflexive or second modernity wrote his classic treatise on risk society as early as 1986.

Fuchs, Christian. "Critique of the Political Economy of Web 2.0 Surveillance". In *Internet and Surveillance. The Challenge of Web 2.0 and Social Media,* edited by Christian Fuchs, Kees Boersma, Anders Albrechtslund, and Marisol Sandoval. New York: Routledge, 2011. – The author, who applied Marxist ideas to the world of Internet, made an ambitious attempt to develop the political economy of Web 2.0.

Borges, Jorge Luis. "Funes, the Memorius". In Jorge Luis Borges, *Ficciones.* New York: Grove Press, Inc., 1962. – A famous 1942 short story capturing the short life of the Uruguayan mnemonist; analyzed by Draaisma (see further below!).

Luria, Alexander Romanovich. *The Mind of a Mnemonist. A Little Book about a Vast Memory.* New York: Basic Books, 1968. – Writing about Solomon Shereshevsky, who is referred to in the book as "S", Luria, the prominent Soviet neurologist, describes the numerous experiments he carried out for many years between the two Word Wars.

Draaisma, Douwe. *Why Life Speeds Up As You Get Older.* New York: Cambridge University Press, 2004. – Revealing a strong empathy for the various theories of memory, a remarkable book by the famous Dutch psychologist and historian of psychology.

Mayer-Schönberger, Viktor. *Delete. The Virtue of Forgetting in the Digital Age.* Princeton; Woodstock: Princeton University Press, 2009. – While not being the first to address the problem, the author produced the first book with a comprehensive argumentation about the need as well as the difficulties of forgetting.

Bentham, Jeremy. *Panopticon, or the Inspection-House (1787).* Its modern edition: *The Panopticon Writings,* edited by Miran Bozovic. London: Verso, 1995, pp. 29–95. – Originally put forward by Foucault, this proposition became the classic metaphor of the surveillance society.

Székely, Iván. "Kukkoló társadalom – avagy van-e még függöny a virtuális ablakunkon?" ["Voyeur Society – Does Our Virtual Window Still Have a Curtain?"] In *Az internet a kockázatok és mellékhatások tekintetében* [The Internet, with regard to possible hazards and side-effects], edited by Judit Talyigás. Budapest: Scolar 2010 [In Hungarian]. – My study on voyeur society for the above publication.

Feeley, Michael M., and Jonathan Simon. "The New Penology: Notes on the Emerging Strategy of Corrections and its Implications". *Criminology,* 30 (1992): 449–474. – A much-cited sourcebook of the new school of penology.

http://www.prime-project.eu, http://www.primelife.eu – These web sites make available documents from the first and second phase of the development of a comprehensive user-centric identity management system.

Brands, Stefan. *Private Credentials.* Zero-Knowledge Systems, Inc., November 2000. http://osiris.978.org/~brianr/crypto-research/anon/www.freedom.net/products/whitepapers/credsnew.pdf – One of the author's earliest expositions of the system of private credentials.

Nooteboom, Cees. *Rituals.* Baton Rouge: LSU Press, 1983. – The original source of the earlier-quoted metaphor of memory.

http://www.broad-project.eu – The homepage of the BROAD project (Broadening the Range of Awareness in Data protection).

Wells, Herbert George. *World Brain.* London: Meuthuen & Co. Ltd., 1938. – A highly visionary piece of early sci-fi about the world brain.

Bell, Gordon, and Jim Gemmel. "A Digital Life". *Scientific American* 296 (2007): 58-65. – A description of the ideology behind MyLifeBits, a tool that records everything.

Armengo, Roberto, Kent Wayland, and Priscilla Regan. "Facebook Funhouse: Notes on Personal Transparency and Peer Surveillance" (paper presented at the fourth Biannual Surveillance and Society/SSN conference, London, UK, April 13-15, 2010). http://www.surveillancecultures.org/abstracts.pdf – A presentation given by the researchers who originally proposed the House of Mirrors metaphor – for the moment still only in highlights.

"Recommendation on the microfilm recording of documents containing personal data relating to the persecution of Jews during the Nazi period, and on their transfer to the Yad Vashem Archives in Jerusalem". In *The first three years of the Parliamentary Commissioner for Data*

Protection and Freedom of Information, edited by László Majtényi. Budapest: Office of the Parliamentary Commissioner for Data Protection and Freedom of Information, 1998. – An analysis of conflicts between the legitimate purposes of unveiling historical events and the privacy rights of the victims of history. Also available at http://abiweb.obh.hu/dpc/index.php?menu=cases/FOI/1995&dok=19961231

"A történelemben lesz egy lyuk" ["There Will Be a Hole in History"]. In *E-világi beszélgetések.hu* [E-World Conversations.hu], edited by Judit Talyigás. Budapest: Peszto Kiadó, 2003 [In Hungarian]. – A conversation with me, originally conducted for a collection of interviews with the main contributors to the establishment of the Hungarian information society.