

OMNES ET SINGULATIM. AFTER RISK

Omnes et singulatim. Each and everyone, everybody. This Latin expression illustrates the age-old reflection on the relations between the individual and the collectivity. It is a political problem, a problem of government: how can the whole and its parts be properly structured. This is both a question of facts and a matter of values. It's a question of facts because the way the whole and its parts are structured depends on a set of material conditions. It is a question of values to the extent that it is the responsibility of men to act in such a manner that the material conditions that human communities depend on should not lead them to adopt intolerable, inhuman forms. Even more so because it is their responsibility to impress upon them a form which embodies values. The study of human communities shows that there are many ways to link the whole and its parts. It varies according to the size of the community: family, business, city, tribe, ethnic group, religious community, and state all offer different ways to link the whole and its parts. And each community has a history that bears witness to the changes in the whole-to-parts relations within their midst.

In recent years, especially in France, a particular form of whole-to-parts relationship has prevailed under the aegis of *solidarity*. This form is linked to the industrialization of societies, and to the type of labor organization that developed alongside. It proceeds from a holistic vision of the whole-to-parts relationship: the whole precedes its parts, which are but split

elements of it, dismemberments. Unable to stand on their own, they maintain a relationship of interdependence. Solidarity describes a community in which, because of interdependent relationships, each one vouches for the others; each one enlists the others in his or her behavior, which turns them into debtors. Solidarity describes a legal relationship of debt and credit within a social framework. Legally speaking, two agents are interdependent — i.e. in solidarity — as soon as one of the two binds the other one in a relationship as creditor. Solidarity describes a society whose members are, toward one another, in multiple relationships, where they form commitments to one another, and in which they find themselves enlisted by one another. This describes the legal interpretation of interdependence (the bonds are “in solidarity”). The value component consists in evaluating whether these relationships of interdependence and obligations are just. From this standpoint, “solidarity” describes a program meant to make the “natural” form of solidarity more just, a program based on the consideration of what each one receives from the others, and what each one reimburses from the thus-incurred debt. Since it appears that some receive more than they pay back, setting up a system of redistribution meant to restore some form of equality is justified. This system only works at the level of the whole. Solidarism finds in insurance mechanisms and institutions (which it promotes and “socializes”) the preferred instrument for carrying out such amendments in the distribution of social benefits and welfare costs. Yet solidarist vision, while holistic, is not totalitarian. It is not egalitarian. It is progressive: the point is not to detect abstract conditions of equality, but to give society, and the interdependent elements that comprise it, a movement toward increasing fairness by managing risks and opportunities.

This sociological vision of solidarity, which considers man as a “social being”, rose in opposition to the individualistic vision, originating in Hobbes or Rousseau’s natural law, according to which the individual — the isolated man — first comes against an association that is not chosen, but which he is subjected to because of the necessity for him to face whatever difficulties a hostile nature has put in his way. In this vision, men partner up by default. The association is a loss of freedom, necessary to address risk (especially those coming from others), but which should in theory be limited (which quickly becomes unlimited in so far as any reluctance or any withdrawal is perceived as a threat). Natural law, and its contractualism, is by no means synonymous with freedom.¹

This vision, these views, these collective imaginary productions do not come ready-made from the brains of philosophers. They respond primarily to political imperatives, they are forged in the battles for values, located in very specific historical conjunctures. They also use all that knowledge, science, and institutions can provide as arguments. Solidaristic vision is thus inseparable from the discovery of contagion by Pasteur, which calls attention to a fundamental interdependence between good and evil (according to my neighbor’s level of hygiene) that will give a “scientific” basis to the decisive notion of “mutual risk” (we are all each other’s risk factors). Here again, solidaristic vision will find in insurance a whole-to-part relationship, which it will then use as a model.

The question at hand is what kind of whole-to-part relationship is associated with the “data” world, “Big Data”, this world of data whose epistemology appears to be different from that of risk and insurance. The point is to examine the political

dimension of the world of data. To what extent does it present an alternative model to *Omnes et singulatim*, each and everyone? Which individual-group relationships arise from the world of data?

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To conduct this study, it is convenient to use the analytic grid proposed by Michel Foucault in *Discipline and Punish*, completed in *The Will to Knowledge*, and the courses he dedicated to “governmentality” at the Collège de France, as summarized in a lecture given as part of the *Tanner Lectures for Human Value*.² What does the work of Michel Foucault bring as regards the study of human groups and whole-to-part relationships? First, the idea that we must overcome the already established categories, overloaded with implied meaning (state, society, for example); then the idea that human groups are organized according to relations of knowledge-power, all of which are technical devices (technology policy), implemented by the protagonists in strategic relationships (where some seek to take advantage over others who resist). These devices can (and should) be analyzed as forms of the relationship between a type of knowledge and a type of power, both dimensions being both independent and interdependent, taking part in a circular sort of game of mutual reinforcement. The notion of “risk” for example, as constructed in the classical theory of insurance is a form of relationship between knowledge and power: statistical-probabilistic knowledge on one side, power relations as they are implemented in the insurance institutions through the sharing of practices. The thesis that we are putting forth is that the notion of “data”, understood as Data or Big Data, also designates a form of relationship between knowledge

and power. The technology of “data” models a mode of production of knowledge (which we have seen is different from that of risk) after power relations (which are not of the order of insurance-related pooling either). I would defend the thesis that “data” is, in the world to come, somewhat similar to what “risk” has been in the previous world. Therefore, the thesis is not, or not only, that the world of data would strengthen the world of risk, fill in the gaps, making it safer and more efficient, but rather that these are two heterogeneous worlds that would not so much be in complementary relationships as in relationships of contestation and substitution. We would seem to live in a world of “data”, something akin to what happened to Pascal’s contemporaries during the famous 1650-1660 decade with the advent of the theory of probability. The world of data opens up a new political universe. “Digital” power-knowledge must be regarded as original and in the process of transforming all power relations.

First thesis, which comes in two corollaries:

The first has to do with Foucault himself: today he could not, and could not have then written *Discipline and Punish* with the “panopticon” as the general pattern of power relations. I would like to show that the “data” device is not comparable to the panopticon, with its two organizing principles: the supervisor’s overhanging, hierarchical, asymmetrical supervision, as he who occupies the central tower above each individual, being themselves isolated, and banned from communicating with their neighbors. In the world of data, there is a kind of inverted panopticon, a panoptic reversal: the “real” monitoring tends to be done by

the individual, each singular point in the network, which tends to concentrate all knowledge (all in one, somehow) and control over what is central, hierarchical, domineering. On the other hand, singularities are in a perpetual side exchange, communicating within a network without having to go through a center.

That said, I obviously do not want to say that power has vanished from the world of data. The world holds many data relationships between knowledge and power, relationships in which knowledge enables power and vice versa. It is not an anarchic world. On the contrary, power relations are very intense, but forces of opposition are also very strong and very effective.

The consequence of this theory is that one should not analyze power relations in the data world according to the patterns of the old state power with its technologies of surveillance, control and domination. The dystopia of the old state is *Big Brother*. The fear of the citizen is that the state has monitoring devices that can paralyze freedom. One should perpetually defend oneself against this lingering threat because it is a central tendency of the state. The state is totalitarian in its genes, its provisions, and its organization. Power technologies in the modern state can be used for everything. Much of what has been written about new information and communication technologies suggests that these temptations exist, and that they will find new resources. Some examples include the fight against terrorism after September 11, the *Patriot Act* in the U.S., and the manipulations that accompanied the beginning of the war in Iraq. Think of biometrics, stigma, and discrimination made possible by genetics. Certainly, but digital knowl-

edge-power can also be seen as depriving the state of its means of coercion, and as forcing it to lose considerable strength. My thesis is that digital power gives citizens the means to reverse power relations, in which the supervisor eventually becomes the one being monitored. So one might think that the more digital power develops, the more it will empower citizens. Yet there is nothing inevitable about that.

Second corollary: if the relations of digital knowledge-power are not those associated with risk and insurance, which have framed the all-party reports under the aegis and the need for solidarity, we must try to see what form each and everyone — the *Omnes and singulatim* relationship — is likely to adopt.

There was considerable concern in the 90s, when a program of predictive medicine linked to the deciphering of the human genome was taking shape, that the new data available might lead to a strengthening of eugenic, discriminatory trends, and should lead to phenomena of individualization. Many measures have been taken around the world to avoid them. The UN even passed a solemn resolution prepared in the framework of UNESCO. These measures have undoubtedly been useful. However, as can be observed, the effects of power linked to digital technology are not necessarily going toward demutualization, toward the obliteration of solidarity. Digital technology can also be a resource for the subject. We also observe, from the very singularities, and even according to the data that can be produced and exchanged, certain movements of association and sharing. These movements affect knowledge management, particularly in expert relations, regrouping trends in disease management, the creation of financial associations

(peer to peer), and the development of social networks. Here again we are probably in a transitional phase between both worlds.

I. THE “DATA” DEVICE

The world is indeed a data device in Foucault’s sense. The world of data structures elements of knowledge and power. This is not simply about devices of knowledge, with their own epistemology, but this knowledge device, as we have seen, is tied to a particular economy of knowledge linked to the production, processing and storing of data that goes beyond privatization, trade, and globalization. This economy of knowledge is also an economy of power, power in the realm of knowledge but also in the relationship between those who collect and process data and those on whom they are levied or to whom they are returned as services. A whole series of social relationships are being rebuilt, redrawn, rephrased according to the new digital device, whether in the field of trade relations (marketing), in the field of medicine, in the areas of surveillance and security, in the area of protection, in the field of expertise or in that of the relationship between rulers and ruled, in the very management of citizenship.

A. Epistemology

Knowledge, in the world of data, is produced based on a twofold requirement which, in other configurations, would appear contradictory: on the one hand, we must gather the greatest amount of data (data that only exists *en masse*), the more the better; and on the other hand, they are treated one to one, without trying to erase their differences by integrating

them into categories. It is a type of resolutely nominalist knowledge, which bans the universal. We want to (and can) stick to what is given. The data is both a very powerful tool for analysis, a detailed analysis, and each element of data must be treated for itself in its relations with others, as something unique, according to a logic of differentiation. Each element of data is unique, but unique within a whole, as compared to the rest.

This tension is permanent in the epistemology of data. There are only singularities in relation to other data. The isolated individual is not singular, every element is treated in relation to other elements. And the more elements, the more opportunities to identify its uniqueness, and therefore also to anticipate future behavior within a set. The largest mass goes along with the greatest differentiation

B. Politics

From the perspective of power relations, the world of data is given with a number of features that, too, may seem paradoxical. On the one hand, they appear as major instruments of power, as the elements of a super-power, with enhanced surveillance, reminiscent of *Big Brother*, with the ability to monitor, anticipate, identify everyone's behaviors under conditions that totalitarian powers would have dreamed of; but on the other side, the same world, the same techniques, and the same data do not come to fruition as part of the strengthening of state power, but in strengthening an unprecedented takeover of individuals and citizens of the state.

Let us give some characteristics, which we will have to return to:

First is the massive privatization of knowledge. Data, in the sense of “Big Data”, is essentially private. On the one hand, the major public operators of data production are somewhat outdated, limited by the constraints of their institutions; on the other, we see that states are forced to open their own data, making it accessible to produce new services, which generate their own new relationships between state and citizens.

Power relations in the world of data take on the shape of services: services of knowledge (for instance on one’s own health, from the mapping of the genome), monitoring services (on the side of the state), consumer services, protective services. “Public services” are immersed in a wide range of services.

The power relations that organize these services obey a logic of differentiation. For example, medical service is no longer about informing you about the illness that ailed you, but about your genetic profile, which is your own and which sets you apart. Consumer services will go through the logic of differentiation, the idea being to treat everyone according to his or her profile and style: it is about giving “privilege” to everyone. As for police surveillance, it is based on the idea of a differential management of populations, the identification and screening, not of people, but of dangerous individuals.

The most notable is perhaps that these forms of power relations do not take the form of domination, coercion, or subjugation. Instead they require the agents' return to particular forms of subjectivation. Given the data available, each person makes choices, builds relationships with others, shapes his own self, and adopts a personality. The world of data abolishes old hierarchies. It is not a world of coercion, but of freedom, of high activity on the part of those who are supposed to be under the domination of those who occupied old positions of authority. It is not to say that power relations disappear, but they do not follow the old hierarchical forms, they give rise to new strategic reports, with very interesting inversions of power.

The world of data heralds a new form of government, a new way to link the whole and its parts, to answer the question of the collective and of each and everyone, which does not fit in any of the models developed in the West: the Christian pastorate (with the idea that the last sheep is as important if not more, as the first and the whole herd), the administrative police accompanying the development of the state, or the interdependent democracy of the modern state.

II. POWER AND DANGERS

The extremely fast rise of the data device, and the fact that it does not mix with existing power-knowledge devices, results in each of its advancements being experienced through conflict. We see what is threatened, we fear for its survival. Innovations are seen as dangers.

A. Economy of knowledge

In this area, digital technology advances through three main quarrels:

The quarrel over the *privatization of knowledge* illustrated by the debate in France on the “googlization” of the National Library

The quarrel of property rights regarding the issue of *patents* (Who owns the data? Is it a common good?)

The quarrel of copyright through the issue of *free access* to digitized data (Hadopi web law in France)

B. Economy of power

The data device arouses great emotion because of the intensification of power relations that it would allow. It would give the states and private operators who process data, instruments that appear to question certain fundamental rights, especially regarding the protection of privacy. Without really knowing it and without any particular intention, with a carelessness that we may come to regret, we provide private operators with information on our identity and privacy, not to mention new capabilities for monitoring and control now granted to states. Digital power is both insidious and “intrusive”. It now accompanies everyone’s lives in the most mundane acts, without anyone being really aware. It justifies this shadowing through the provision of new services. But at the same time, it puts us at risk that the free flow of collected information should result in uses that we cannot fathom, and that could pose a threat to freedom. In addition, since it has the ability to follow us in the most mundane and banal acts, digital

shadowing reaches into everyone's privacy to an extent that was hardly imaginable when these devices did not exist.

Added to this is the fact that the recording and processing of personal data is not done initially to gain scientific knowledge about society: its primary purpose is to improve marketing services. Data processing intends to gather and build a differentiated knowledge of customers, generally those to whom services are offered. The problem is one of individualization, differentiation, and singling out that can be found in the notion of a "profile". Era of differential, segmented, selective treatments. Era of research in services that would be most appropriate to each, and best adjusted to one's needs. One could speak of an era of legal gaps to the extent that the law works in terms of general categories. The threats are no longer general (such as respect for private life) but specific: threats of selection, discrimination, and stigmatization in accessing certain goods according to your profile (access to employment, insurance, healthcare). These latest threats that may have wider effects in that they could introduce the idea that we are all so different that there would be little sense in aligning us, in identifying us all in such general categories as "Man" or "Humanity". Do our differences outweigh what we have in common? For example, doesn't genetics teach us that our fates are no longer common in so far as we do not run the same risks? The threat here is not eugenics (it is not about selecting some as better than others), it is about the coherence of concepts like "human rights".³

The knowledge-power device shatters digital frames, offers new services, and carries the threat of new risks. It is essentially caused by private operators. It calls for its own regulation, just

like in the formation of modern states. According to what the information gathered reveals about everyone, the collection of data on both individuals and social facts has led to the construction of data ethics that large statistical private operators have been pleased to develop and implement.⁴

C. Regulations

Digital power-knowledge is the subject of many regulations, at all levels: international, European, national. Some concern data economics, others relate to legal and ethical aspects. From this second point of view, two aspects are particularly worthy of study: the first one pertains to the role of the CNIL (French National Commission for Information Technology and Civil Liberties), which is destined to become one of the major regulators of economic life, as it becomes more and more digitalized; the second one concerns the regulation of information found in decoding the human genome.

1. The CNIL is an independent administrative authority created in 1978. It is the type of institution that must deal with the contradiction between the old and new. Reading the account of its first president, Alex Türk, is very interesting regarding the expression of dismay at a world that seems both uncontrollable, dangerous, a threat to basic freedoms, and yet impossible to contain.⁵

The philosophy of the CNIL is thus to pose as a rampart, as a device that introduces complications, restraints, reflection, walls and barriers within processes whose logic is to break down barriers and limits. It is about having values prevail, even if the cost must be offset in terms of service delivery.

How does it work? First, certain basic rules concerning the consent of individuals, the right to know, the right to correct, the right to forget, must be complied with. But beyond that, the CNIL has introduced a system of control that can override individual consent, and which follows a very interesting logic of proportionality. The question is to know whether or not the information that a private operator requests access to is excessive in relation to its aims. Car insurance, for instance, requests permission to process data based on observation of the driver's behavior. CNIL refused permission even though the insurer guarantees the insured's consent, arguing that in doing so, it means to use data deemed redundant in terms of what is necessary to transact automobile insurance. Two items are noteworthy here: data control can be public in nature, it is not just a private agreement between agents. The regulator is entitled to prohibit certain uses of someone's own data. The test of proportionality, on the other hand, is interesting because it controls the end result. It is a control that requires that an institution must be organized according to its social purpose.

2. Gene regulation, probably one of the first regulations concerning the use of social data, is one of the best models.⁶

Scanning the genome — the project of decoding the human genome, with all the fantasies, promises and threats that go along with it — has been accompanied by an ethical debate at the national, European and international level (UNESCO, UN), hinging on the assumption that it was necessary to promote research and medical applications, and prevent its social consequences. In this area, it was less about protecting privacy, since the consent of individuals is still required, than about the

“right not to know”. And on the other hand, it is about a willingness to prevent as much as possible data being used to screen in both the workplace and the insurance business.

Two types of regulation will be adopted, depending on the country: prohibition provisions, and provisions for conditional authorization. Prohibition provisions: it has been the case in France since 1994, but also in Belgium and Austria. The argument is that some data should not be used in some operations to the extent that it could lead to discriminatory practices, or prevent people from accessing assets held as fundamental. This has fearsome consequences in terms of insurance: this means that from now on, the regulator grants himself the right to determine, among the information available, what is considered relevant to the insurance business. This means that the insured risks are no longer “objective” risks, but the result of information made available by the regulator. In other words, genetic evidence suggests that equating someone’s life expectancy to what can be calculated at an average age is wrong. But the regulator refuses to amend the calculation. It is therefore a change in the philosophy of risk, as well as in the nature of the insurance contract, because now the insured is no longer forced to provide a complete statement of information available about the risk he wants to insure. The control of data leads to an unexpected socialization of the insurance contract.

Let us now turn to provisions for conditional authorization, such as in the UK. They are also very interesting, the regulator imposes several requirements: first, a requirement of objectivity, accuracy or truth. The genetic data can be used only insofar as it is certain, reliable, accurate. Already, this severely limits the use of information, which more often than not pro-

vides indications rather than certainty. But this is not the only condition set by the British regulator to the use of genetic data by the insurer; they must also be relevant in view of the insurance transaction under consideration, as well as appropriate and proportionate in view of the aim pursued. This is, in a roundabout way, the doctrine developed by the CNIL. In reality, these regulations are so stringent that one wonders if they will not turn against the interests of insurers who are obligated to make the whole process of risk underwriting both public and transparent. They lose their freedom to accept or decline a risk. They are forced to examine this process in light of discrimination law. We see here a kind of reversal of power, which we later find more broadly. It was thought that genetic data would give insurers a super-power. The outcome is rather that of a loss of power that benefits the regulator and the insured.

These regulations, obstacles, and barriers allegedly set up to respect certain fundamental values conflict with the logic of offering better service and other equally fundamental values. Google can be prevented from scanning the collection of the National Library for reasons of national sovereignty, but the general public is likewise deprived of easy and free access to its treasures. Insurers can be prohibited from accessing certain data, but they are forbidden to provide new services to policyholders. Exchange of medical data can be slowed down, on behalf of the protection of “sensitive data”, but we are likewise prevented from having a true assessment of medication and medical practice. We stop short of identifying the side effects of a treatment, thus disregarding the safety and protection of patients. Judicial administration or prison may withhold the use of certain data about a sex offender at the risk of authorizing

measures that will let him commit further offenses without the victims being able to protect themselves. These value conflicts receive a radically different treatment in other contexts, like when it comes to protecting air transport against terrorism.

The irruption of the data world (probably like all brand new knowledge) destabilizes the play of existing values and generates new conflicts. Their treatment comes within ethical debates because it does not come within binary evaluations (allowed vs. forbidden), but promotes research for good practice in a contradictory sphere. In these debates, nothing is gained in stigmatizing some players against others (the general public against the private sector, the ICT operator against the individual). Handling them requires a clear and comprehensive vision of what they are about.

III. POLITICAL ANATOMY

This vision seems to be missing today. Many regulations are adopted, but piecemeal; case by case, sector by sector, or so it seems. One day, they deal with economic data, although only in some sectors, and another, in other sectors, they deal with ethical issues. Where is the big picture, which is essential to introduce necessary coherence? Perhaps it is too early? Perhaps the subject, proliferating as it is, is too new? Either way, one of the keys to having a global vision is to adopt a method that places the subject at its core. This is precisely what Foucault's power-knowledge relationship allows (among other things). Take the question of data as a new form of power-knowledge relations. Let us try to draw up its "political anatomy".⁷

The world of data proceeds from a specific epistemology. It may be perceived as similar to the probabilistic revolution in

the nineteenth century, as described by Lorenz Krüger and his coauthors in *The Probabilistic Revolution*. Patterns of knowledge associated with the data revolution will give rise to new objects for knowledge acquisition, setting the framework for scientific discovery. This applies to the field of natural science as much as to the field of humanities.

I would like to dwell a little on the political dimension, the dimension of power, the forms of power relations generated or associated with this revolution. In this area, people are changing their minds. We started with an imaginative vision of monitoring, control, filing and marking, an imaginative vision with totalitarian foreshadowing, as though new technologies were only capable of reinforcing the old forms of state power, with the totalitarian excesses that the twentieth century has experienced. The first political reading of digitization techniques has been a safe reading. It was necessary to protect individuals. And in order to do that, the new forms of *Leviathan* had to be opposed.

When you look at it today, the landscape of power relations generated by digital technology appears to be very different than had been anticipated. Democratic states have not plunged into a new form of totalitarianism, although the police and supervisory institutions have new instruments to ensure safety. On the contrary, the development of digital technologies, and their appropriation by the citizens have led to reversals of power that had hardly been anticipated. Moreover, in countries with a regime of terror, ICTs have proved to be very effective weapons of communication between citizens, the instruments of collective struggle that led to their victory. This is what has been observed recently in China as in the Middle

East, during the “Arab Spring”. Monitoring techniques have proved to be instruments of freedom.⁸

I would limit myself to what can be seen in western states. The digital revolution does not lead to an overall strengthening of the state, but rather the opposite according to several mechanisms: challenging public expertise, undermining of state secrets and monopolies on information (open data), new procedures for participatory democracy (open government). The extension of new information technologies, the supply of private services addressed to each and everyone, their appropriation by the people all lead to knowledge being made available. Instead of strengthening its defenses like a supreme fortress, thereby imposing its standards on the basis of a knowledge of which it would be the only legitimate custodian, the state is forced to open its treasures (open data), and to make them available to all at no charge, so that data may then be transformed into services for everyone. In the age of data, “state secrets” no longer exist. Surrounded on all sides, the walls of public fortresses are falling, and the state is forced to submit to transparency mechanisms that reverse the power relationship in favor of the citizen. In the end the state is no longer the one to monitor (except perhaps in particular functions), but it is forced to be accountable as to how it provides services that it has been entrusted with. Thus, naturally, open data procedures lead to open government practices already enforced in countries like the United States (where open government is an official program of the Obama administration) or UK. The idea is that the final decision becomes that of every citizen, who must therefore be in a situation of having the most complete information possible. To describe this reversal, some authors pro-

pose that we no longer speak of “monitoring”, or “surveillance” (with the overhanging dimension it presupposes) but of “sousveillance”.⁹ By means of the digital revolution, new forms of citizenship are established, which are linked to services and control (accountability), regarding how they are exercised. Digital Democracy is naturally participative. It is a process found everywhere, both in the practice of expertise in scientific and technological choices, and in the way that “public services” are offered.¹⁰

This does not mean that digital power would not be power, nor that supervisory relationships disappear. Digital power is power: it is the instrument of domination and resistance to domination, but its economy must be described in new categories. Digital technology opens the possibility of new power relations, which were probably not possible in previous state of knowledge. The supervisory relationship does not disappear. But they do not assume a hierarchical form where the supervisor oversees an inferior, who is deprived of information. They become lateral, mutual. Jean-Gabriel Ganascia suggests we speak of “catopticon” where Bentham had theorized “panopticon”. This monitoring of each side over the other is no less restrictive than the previous one. It forces everyone to reveal themselves. It makes and breaks “reputations” that become the principle of a new mode of identity.

Thus, a new geography of power that embraces the notion of network, centered so to say on each point in the network without the need for a core, comes into being. Data can be formed by aggregation; they are redistributed at each point of the network in the form of services of all kinds. The dream would be to ensure that all data is constantly available at each

point of the network. So we have a *singulatim and omnes* relation that takes on two forms: on the one hand, the “one to one” (one to one, peer to peer), and “everything for everyone” on the other hand. There is no longer a core because there is nothing but cores, singularities. Digital geography is that of greater decentralization, which requires new forms of association, of aggregation through the concept of “friends”, through social networks. The individual is not isolated, as Robinson in Defoe’s tale about natural law; he is an individual, who knows that he is different, differentiated, singled out, but in an infinite relation with everyone else.

Digital technology does not isolate, it approximates based on everyone’s peculiarities. It does so in a space whose territory coincides with the digital network itself. It is the principle of an extreme deterritorialization as Gilles Deleuze would have dreamed it. Except that each point is located in a constantly unique here and now.

The strangest thing is that, in this economy of knowledge-power, each point only exists through its own activity and its own initiatives. Digital technology does not generate passivity, trusteeship, or subjugation; it produces its own forms of subjectivation and appropriation. Those who seem to occupy dominant positions require the active participation of those observed, and on whom information is collected. Digital power produces its own forms of subjectivation, while it requires people to behave actively, as a subject.¹¹

All this has destructive effects on the authority of experts in the fields of science and technology, in the relation to knowledge and “knowledgeable parties”, in that of medicine, and in

relation to the state. All this does not make governing our societies any easier. In reality, many separate phenomena tied to conducting business, especially when interactive, take on new meaning in recent times once they are interpreted as supporting the promotion of this new mode of knowledge and power relations. The knowledge-power relation generated by data technology can only transform the governance of human groups in all sectors: family, business, and state.

CONCLUSION: THREE CONSEQUENCES ON INSURANCE AND RISK MANAGEMENT.

There are three types of conclusions: the first one refers to the question of mutuality in the new context: death or resurrection? The second has to do with health: what to expect from the digital revolution in terms of health, production, and vision of the future of medicine. The third deals with insurance in general.

A. Mutuality.

The experiment is threefold: knowledge that allows individuals to recognize themselves as sharing with others the same fate or the same needs; a willingness to partner up, and share according to the laws of reciprocity (I am willing to do for you what you are willing to do to me); for a purpose that is mostly one of protection in case of unfortunate events, and twists of fate.

Classic mutualism uses data provided a) by belonging to a trade that requires a relatively homogeneous population in terms of style, aspirations, needs, behaviors, or by living in one place (at a time of low or uncommon mobility), b) by the loca-

tion that offers immediate knowledge of the behavior of one's neighbors, c) by both: the Rive de Giers miners' mutual company, for instance. Why were mutual companies built on these two main principles? Because they provided the necessary data at a time when there was hardly any substitute for data production. Profession, like location, provides a data packet, which has not necessarily been clarified, but which is very rich and allows association and the control of associations. The problem is that, based on such data, mutual companies are necessarily limited in size. They can unite, form associations, but always on the basis of small cells. This is a problem of knowledge, a data problem. This is one explanation for the proliferation of mutual companies.¹² Likewise, when mutual companies become too large, they risk losing their souls.

What can the data revolution bring to the mutualist world? Two contradictory trends: on one hand, the world of data will speed the ongoing phenomena of delocalization, by way of which one does not necessarily identify with others through a job or place of residence anymore. There is concern that the mutualist state of mind, mutualist commitments, mutualist ethics may fade even more. But on the other hand, the world of data appears to offer new opportunities for new pooling according to the peer-to-peer model, the principle of social networking, or the network of friends.

What is the difference with the first mutual companies? The mindset is probably close enough, except that the original mutual companies were limited to the professional or territorial world, because it was the only way to obtain the data needed for pooling. But mutualism, the mutualist will or mindset, is not tied to these limited forms of knowledge. From this per-

spective, we can say that the world of data appears instead as an opportunity for mutualism. Deterritorialized mutual companies, based on affinity or matching, novel and unexpected mutual companies can now be conceived. But these new principles of pooling must now be revealed to the agents. A suitable treatment of the data is again necessary. This is what Facebook, like other operators, does.

Therefore, the mutualist world should see data technology not so much as a threat but as an opportunity, not as a conviction, but as an opportunity to rethink mutualism, to build a mutualist offer on a new basis. Will it be capable of taking the opportunity? ¹³

B. Health in the age of “data”

The operation of data— converting the living into data — is paired with a new medical style, i.e. a medicine that seeks to meet the health needs of individuals, in what makes them unique. The medicine of diseases is a medicine that brings people together, one that reveals our own fate through that of others, a medicinal mercy (as Jean-Jacques Rousseau meant it) and sympathy, a medicine that calls for and encourages solidarity insofar the cost of healthcare cannot be supported by individuals, therefore also a medicine that requires collective responsibility. On the contrary, “predictive” medicine, which focuses on health, is a medicine that highlights difference and singularities: I want to know how to behave when I am not like the others, since I am different from the others. It is not a two-tier medicine, but two medical styles, two circuits.

But traditional medicine is itself transformed by its translation into the world of data. It takes the form of evaluation, of

a medicine based on scientific evidence, based on solid evidence — i.e. evidence-based medicine - where the evidence is linked to statistical work on data provided by the medical system itself. The consequence of these techniques is that the medical decision is no longer the result of the doctor's intuition, who, in his sovereign wisdom, reduces the ambiguity of signs and symptoms. The medical decision requires evidence. This first leads to a standardized, normalized medicine that allows financiers to demand compliance with standardized procedures for each disease. This compliance would thus guarantee quality medicine service.¹⁴ Any form of economics in medicine and medical liability, in so far as evidence based medicine will enable the physician to protect his liability to the extent that he has complied with the procedure.

But this standard medicine subsequently appears as a medicine that tolerates, and even generates errors. Assessments reflect the average calculations, and assimilate cases where treatment was successful with cases where it failed. Hence the idea that errors in assessment now ought to be reduced by tailoring treatments, and by providing the means to identify those for whom a given treatment will be beneficial or harmful. This shows a tendency toward the individualization and differentiation of medicine. We are entering a time when a patient may not only ask whether the treatment offered to him is more beneficial than harmful, but also what is its value in his own case. We are entering a new age in patient information.

We can thus follow three stages in the history of patient information. When the decision stems from the sovereign intuition of the "boss" or the "V.I.P", from a knowledge where whatever little data available can only be interpreted by the

wisdom of the great doctor, the patient must have complete trust. This matches this idea of “conscience in agreement with trust”. The doctor does not have much to say to his patient other than: “Put your trust in me”. Then came the era of risk information, made possible by the collective management of treatments, and the production of data according to healthcare systems; information then consists in having the doctor explain to the patient the statistics for a standard treatment, — and in assuring him that he promises to give it to him in its standard form. The physician is no longer led by intuition, but by a system that guarantees itself.¹⁵ Finally, the patient is going to ask for twice individualized information: he will want to know how the doctor he is going to see is different from others, how he is better or worse. In a word, what is his score? He will also want to be informed as to the treatment’s success rate as far as he himself is concerned. We then see that the world of data is only going to activate the logics of the Kouchner law (2002), where the patient is supposed to decide on his treatment (with the help of a doctor, who owes him the most complete information). This rule makes little sense in the first, or in the second stage of a medical decision. Better yet: it is likely that future patients, in addition to their physician, will seek to turn to medical data managers who are capable of informing their decision (something far different from “informed consent”).

Here we find an excellent example of this subjectivity, led by the world of data and its individualization, through the transfer of power from physician to patient. But this means that the center of gravity of care medicine moves from management system to differential treatment of individuals, and to processing an application that cannot be standardized.

The classification of health data as “sensitive data” hinders processes of assessment and information. If the desire to protect patients from discrimination can be understood, the fact that such protection is done at the cost of information, quality of care and safety is not as easy to grasp. The healthcare world will not avoid the process of open data, which is becoming more conventional.

C. Insurance

The relationship between insurance and the world of data appears somewhat paradoxical. Insurance is an information science, a data processing science, but using data that predates the world of data. There is a kind of epistemic heterogeneity between the insurance world and the world of data, which leads to tensions and difficulties.

In recent times, for instance, this is what the history of genetics shows. There is a kind of misalignment between the purpose of insurance, which is to organize offsets within a portfolio of homogeneous risks, and use of data, which is part of a logic of differentiation. The regulator has felt it necessary to intervene to preserve the function of insurance compensation, by prohibiting the use of genetic data. This does not doom insurance, on the contrary, because techniques of risk adjustment are highly valuable and often irreplaceable, but it raises questions about the amount of data needed for these mechanisms to be most effective.

This has implications for both risk theory and the theory of insurance: for risk theory, since it appears that risks are socially constructed (according to available data) rather than an objective description of natural events; for the theory of insur-

ance, which is highly socialized through that data that it is allowed to use.

One may wonder whether the current abundance of data is not going to serve to distinguish according to its uses, depending on the services that can be associated with it: namely, uses for compensation, but also for information (preventive and protective purposes, for example), as though the practice of risk management were to open up.

One may also wonder if entering the world of data will not change the relationship of the insurer and the insured. Traditionally, it has been a very unbalanced relationship, where the insurer on behalf of the company, asks for freedom in subscribing. The availability of risk data may lead the insured to pay attention to the way their risks are treated and assessed. The movement has already begun as part of the underwriting of so-called “aggravated” risks. It could become generalized.

In other words, it is likely that the extension of the world of data will lead insurers, like many other professions, to think about new practices in a trade born in another information era. This leads in two directions: how can one do a better job as a risk compensator, according to existing social values? How might one invent new risk management services?

NOTES

This article was translated from the French by Mireille Dobrzynski. Special thanks to Chris Berk for editing.

- 1 This is the reason why economic liberalism is hostile to natural law.
- 2 Its name is precisely *Omnes et singulatim*.
- 3 This is Marx's nominalist argument to discredit human rights: there is no such thing as man in general, only single individuals. Let us also remember John Rawls' image of the "veil of ignorance" to think about justice. In reality, only a small portion of data singles out one over the other, the essential being common to all.
- 4 One of its components was secrecy, non-disclosure, anonymity.
- 5 lex Türk, *La Vie privée en péril, Des citoyens sous contrôle*, Odile Jacob, 2011.
- 6 It should have been under the jurisdiction of the CNIL. Yet at the time the measures were adopted, during the 1990s, few were aware that this was ICT "data".
- 7 Gilles Deleuze would have said "cartography".
- 8 I do not forget that when "Arab Spring" fighters used new technologies to free themselves, private operators were offering their services to dictators in distress.
- 9 Jean-Gabriel Ganascia, *Voir et pouvoir : qui nous surveille*, Le Pommier, 2009
- 10 Augustin Landier, David Thesmar, *La Société translucide, Pour en finir avec le mythe de l'Etat bienveillant*, Fayard, 2010
- 11 These forms of subjectivation seem to have been present when the Internet was born. See Dominique Cardon, *La Démocratie Internet, Promesses et limites*, Seuil, 2010.
- 12 Except for large mutual companies for civil servants, which again assume the existence of homogeneous bodies and lifestyles. Mutualization can in turn produce homogenization: Maif, Camif, and Mgen are all organizations that have promoted teachers' self-awareness as being a "body".

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- 13 We can also see that the spirit of partnership, sharing, and solidarity is far from disappearing. The success of the Téléthon (televised charity event) is very interesting: it shows generosity at work in supporting research for the treatment of diseases that the donors do not have.
- 14 Understandably, psychoanalysis , the medicine of the soul, may rebel against these practices that dispossess it, where it has no place. See the battles of Lacanians against “assessment”.
- 15 This is how Swedish legislation on medical liability was organized.