Science and Public Trust

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I – A definition of trust may be taken from the German sociologist and philosopher Georg Simmel (*Soziologie. Untersuchungen über die Formen der Vergesellschaftung*, Leipzig, Duncker und Humblot, 1908, p. 346-347) : trust is considered as an intermediary state between knowledge and lack of knowledge The one who knows everything about a person doesn't even need to trust him, the one who doesn't know anything should not, reasonably, trust him. The exact proportion of knowledge and ignorance which is supposedly needed to take a decision about trust varies according to the epoch, the subject, the individual person.

The semantic fields of the terms used in our different European languages to designate trust are somehow different. It is likely that this semantic fuzziness influences the numerous theoretical debates on trust.

Trust is a feeling. It is recognised as fundamental for social life. It is a variety of belief. The one who trusts somebody puts himself in a state of dependency and risk. At this point it is necessary to introduce the ideas of distrust or mistrust. Distrust means the lack of trust. Mistrust means bad feeling. Then a question arises : which is first, trust or distrust-mistrust ? Comparative anthropological studies between cultures and within the same culture at different times confirm Simmel's judgment about variety, and reveal the difficulty of defining this concept of trust within disciplinary boundaries.

The anthropologist Paula Haas, in her paper « Trusting the Untrustworthy. A Mongolian Challenge to Western Notions of Trust » (in Vigdis Broch-Due and Margit Ystanis (eds), *Trust and its Tribulations. Interdisciplinary Engagements with Intimacy, Sociality and Trust*, New-York, Berghahn Books, 2016) studied the evolution of trust in recent years in an ethnic group of Inner Mongolia in China. Deng Xiaoping's economic reforms from collective to private property of land did produce deep

changes in the lifestyle of this population, creating increasing tensions and many claims concerning the right division of property among people. But surprisingly enough, the mental attitude of mutual trust which was basic in the ancient social order remained even in the mind of people who were deprived of their rights. Paula Haas suggests that, I quote, « the cognitive, emotional and behavioural processes subsumed under the Western notion of « trust » may be mapped out differently in diverse sociocultural and historical contexts ». In Inner Mongolia, trust remains in spite of corruption. There is a strong resistance of old values, creating a « cognitive dissonance » in the mind of people who continue to trust the untrustworthy.

In Western thinking trust is generally associated with risk and calculation, at least this is one possible way of theorizing trust, developed by some theorists like Russell Hardin. Perhaps a more universal dimension of this fuzzy notion of trust is faith, hope, and expectancy. So that trusting the untrustworthy might be a way for the person to reduce her anxiety about the future, to keep confidence about what is going to happen. So that trust might be a basic mechanism of our consciousness and obviously of our complex brain to try to keep some control over a complex situation. According to the Bielefelder sociologist Niklas Luhmann in his famous book *Vertrauen. Ein Mechanismus der Reduktion sozialer Komplexität* (Stuttgart, Lucius & Lucius Verlagsgesellschaft, 1968), trust is a reduction mechanism of social complexity. Its function is to increase stability in the social realm.

Social complexity means that the other person in front of me might be considered as another self (*alter ego*), endowed with a fundamentally different experience of the world than mine, so that he or she is able to destabilise me. This level of social complexity adding itself to physical and biological complexity levels needs a specific mechanism of complexity reduction, like the mechanisms which do exist at the previous levels.

On the one hand, social complexity necessarily increases, and on the other hand, at the same time, in some way, it decreases. It does that because it needs to do that. And since everything has a temporal aspect, trust may be seen as an attempt at representing the future in the present, as a way of grounding a present future on a present to come, which is a rather complex idea, and thus as a mechanism of re-assurance in a world of

ever-increasing complexity. Trust transfers the information which it owns from the past, and risks a determination of the future. The one who acts trustfully binds himself, as if he would consider only definite possibilities in the future. Trust is a bet. We need trust in order to reduce a future whose complexity remains undetermined. Trusting means trying to influence a future which is still contingent in its very essence.

Now what's about the difference between the fundamentally reciprocal Mongolian conception versus the non-reciprocal Western conception. In the reciprocal version of trust, there is an equivalence between putting his trust in one person and for this person being effectively trustworthy. As Paula Haas puts it, « trustworthiness produces trust as much as trust can produce trustworthiness ». So that these roles can be completely reversed. This is not the case, generally speaking, in the Western conception : putting one's trust in another person is a risk, it doesn't mean that this person becomes automatically trustworthy due to the trust one puts on him. On the whole in the oriental case, trust is basic for social harmony, trust and trustworthiness are socially *a priori*. Trust is endowed with a power of its own, a kind of agentivity. Being a moral person can have only good effects. In the Western context trust has at least three different components : 1/ the assessment of trustworthiness ; 2/ the reflection of the cognitive assessment at an emotional level ; 3/ the action of trusting as a result of these previous steps. It is apparent that stage one does not exist as a mental dimension in the oriental case, since trust is an *a priori*.

These comparative studies show different attitudes regarding the primacy of trust versus mistrust or distrust. Trust first or mistrust first ? As a matter of fact, trust is the subject of much more studies than mistrust. But it seems that mistrust is an increasingly relevant topics in our societies. Regarding our topics on science and public trust, I will argue that we are facing a crisis in public trust in science not because there would be a basic mistrust in science but mainly because of current changes in science production in the public and private sectors, and moreover in the worldwide information and diffusion management which creates a general feeling of mistrust and universal suspicion. We do live in such a world, and science, how independent, autonomous and elitist it might be, is not free from this environment in

which information is the realm of general and political manipulation of emotions and moves.

Very recently, the American Academy of Arts and Sciences launched a three-years project entitled The Public Face of Science, whose preliminary results are found on its internet site. The aim of this study is, I quote, « to explore the evolving relationships between scientists and the public ». Already available results concerning the US show that : 1/ lower income levels are associated with lower confidence in the scientific community but higher confidence in education ; 2/ lower levels of education are associated with lower confidence in the scientific community ; 3/ democrats show higher confidence than republicans. On the whole, these American data indicate that a majority of the public has confidence in the scientific community and believes that science has a positive impact on society. Now the question is : why this confidence is not general ? This is perhaps because science is not that easy to grasp. Its methods, the very notion of its progress, its relation to truth are very difficult to understand for less educated people.

Regarding the highly sensitive issue of health and science, the US National Institutes of Health launched a collaborative internet forum about Science, Health and Public Trust which is just beginning. All these moves indicate that the basic, general trust in science begins to diminish. That's not only because science is more and more specialized, and is difficult to put into a global unified picture and to communicate, but also for other reasons. According to the French sociologist Gerald Bronner of the university Paris-Diderot, among other authors, the growth of science has as a paradoxical consequence to broaden the field of belief rather than knowledge – the field of belief within the scientific community as well as between the scientific community and the general public. Due also to the fact that communication is mostly indirect, belief and faith are much less a matter of personal contact and much more difficult to check, thus more subject to risk, Moreover, the general public becomes increasingly sensitive to risk, be it a proven or an unproven risk.

In such matters, you have to consider the difference between direct and indirect trust. Niklas Luhmann pointed out that trust between persons is different from trust in institutions, institutions of whatever kind, intermediaries etc. In a way institutions act

as normative guardians, as guarantees. So that, wen you deal with this subject, public trust in science, you deal with very abstract and indirect things, and in the end with institutions. Sociologists try to make these things more concrete and more particular in their polls and surveys. But trust remains in these cases essentially indirect. It pertains to institutions, bigger or smaller, big research institutions, universities, labs. What happens within these institutions remains far from public eyes. But they are still respected. Well, you can always put your trust in the self-regulatory, methodologically normative character of science which is embodied in these institutions. For instance, you can trust the work of referees who control the publication process. But as a matter of fact there are several well-known limiting factors which tend to diminish the quality control : the pressure for rapid publication, the career evaluation based on quantity, the growing influence of private funding, the role of the media, be it scientific or general, favouring the sensational, and certainly many other factors.

All these factors may influence the quality of research and the quality of control procedures. In the end, we are put in a world of fierce competition, very far from the values of objective knowledge and disinterested science. How to remedy this dangerous state of affairs ? First by disclosing it, second by strengthening the control procedures, by preventing conflicts of interest, which is done in principle, by writing charters on scientific integrity, a timely subject again, by teaching the ethics of science at the higher levels of science education, which is made sometimes, and finally, according to a AAAS recommendation, to create more bridges between science, humanities and social sciences at universities. Indeed, universities seem to be the most appropriate level for action. These are well-known ways to counter effectively the present general state of increased mistrust, suspicion and manipulation which characterizes our society, in order to recreate a society based on mutual trust, endowed with institutions able to guarantee safety. When mistrust is growing, how to reestablish trust is a very difficult challenge. So we badly need studies on mistrust. To mention Niklas Luhmann again, trust is much more difficult to restore than to loose. Mistrust has a natural tendency to grow in social relations. Is education a solution ? I am not that sure, because it tends to overlook the strength of irrationality in the minds of people, the strength of the inner link between a person and his beliefs, so that, when a belief is lost, the person is deeply disturbed. Is education enough to solve that

problem ? How to convince people who are not ready to be convinced by rational arguments ? How to restore trust in science and confidence in the value of scientific truth ?