

TRUST IN EXPERTISE – SOME THEORETICAL REFLECTIONS

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The paper proposes a two-dimensional taxonomy of ‘trust in experts’ based on classifications of 1) the object of trust (persons, roles, groups, institution, procedures, systems) and 2) types of expectations (instrumental, axiological, fiduciary). Furthermore, the paper suggest that a functional perspective on trust will allow for a more positive evaluation of ‘organised’ distrust, and may broaden evaluations of measures taken to remedy ‘distrust in expertise’.

Introduction

In contemporary discussions on the relation between lay people and experts, on controversies over new technologies and on expertise and democracy the issue of trust seems to be of growing importance. It is often claimed that the lack of acceptance of new technologies, for instance GM food, at least in part is caused by the fact that ordinary people do not *trust* promoters and regulators. Furthermore, it seems that increased trust is often seen as a ‘cure’ of low acceptance, whether this is to be achieved through increased public knowledge (the deficit model), through increased accountability of experts or through more public participation in regulation. I will, however, argue that the concept of trust is not always particularly well conceptualised, which exposes the attempt to understand how trustful relationships are best nurtured to the risk of arbitrariness. The aim of this paper is therefore to suggest some conceptual tools for sociological investigations on trust in expertise. I shall do so by introducing two distinct, but complementary perspectives on trust; a phenomenological and a functional approach, i.e. proposing answers to the questions ‘what is trust (in experts)?’ and ‘what functions do trust (in experts) perform, and what functional equivalents does it have?’ This is not meant to be an exhaustive analysis of the problem of trust in expertise, but rather conceptual reflections, which hopefully will provide guidance of empirical studies of an interpretive character.

Background: Theoretical Deficits and Cognitive Biases

In much contemporary sociological literature concerning the social and political dimensions of the management of what I, for the sake of brevity, shall call ‘risky tech-

nologies', trust appears to have come in vogue. This takes different forms. From approaches based on the deficit model one can more or less implicitly read the message that even if people do not understand the scientific and technological innovation it is important that they trust the experts in charge of innovation and regulation. From more interpretive (and 'critical') approaches it is often stated that more openness, dialogue and public participation is a necessary prerequisite for enhancing trust in new technologies and expertise (see, amongst many, Funtowicz & Ravetz 1993; Hennen 1994; Nowotny, Scott, & Gibbons 2001; Renn, Webler, & Wiedemann 1995). It seems that *trust* is conceived of as something positive that needs to be furthered, independently of whether the 'roots' of current lack of trust is ascribed to lay people, experts or regulatory institutions.

Despite the fact that risk and trust arguably are intimately connected and both themes get still more attention in the sociological literature, the two concepts somehow seem insufficiently related. Writings on the social management of risky technologies often emphasize the importance of trust, but has little to say about what trust actually is and only vague and general ideas of how it comes about. Correspondingly, the issue of trust has received quite some attention in contemporary sociological theory and political sociology. These approaches, however, are seldom specifically interested in technological risks or scientific expertise (or at least make little empirical effort to grasp what is particular about it), but are more occupied with trust as a general quality of social relations or specifically with trust in political institutions. Hence, a theoretical deficit remains in bringing the issues of technological risks and trust in experts closer together, especially in order to understand what is specific about trust in the knowledge claims of experts, and how the social position of experts influences trust or distrust vested in their knowledge claims.

Parallel to this theoretical deficit a certain cognitive bias can be detected in the empirical research on trust in experts. Much of the research is performed with concepts inspired from the psychometric approach. In the psychometric approach (survey or experimentally) measured levels of stated trust are related to various factors, which are then said to 'determine' levels of trust. These factors can be either socio-economic characteristics of the public, institutional affiliation of the trustees or track records of the institutions to be trusted. It seems to be established facts that generally NGO's score higher on trust-scales than do governments or industry, that men and higher

educated tend to be more trustful toward experts and that institutions that have performed well in the past are more likely to be trusted (Frewer 1999; Slovic 1999).

I shall not go into the various advantages and disadvantages of such measurements, but as I shall try to show in the following, there are some important social aspects of trust, which are inherently difficult to measure by scaleable survey question.¹

Basically, psychometric measures conceive of trust (or distrust) as a cognitive state of mind. This means that trust is conceived as being a ‘disposition’ or ‘state’ in the minds of individuals, which is influenced by a number of external stimuli such as the persons ascriptive features, biography and place in the social structure, institutional set up, etc. However, it seems difficult to differentiate between (and therefore analyse thoroughly the effects of) such influences on the cognitive level. Therefore, I will suggest that the psychometric approach needs to be supplemented by a more sociological understanding of trust. For that end I shall draw inspiration from some more general sociological perspectives that consider trust as a quality of social relations. Thereby I hope to establish some more nuanced concepts to help investigations in trust between experts and lay people. It should, however, be noted that what follows are preliminary theoretical considerations, which are still to be tested on empirical material.

Towards a Phenomenology of Trust in Expertise: Basic Definitions

As an everyday concept, trust is a complicated matter for sociologists, since, on the one hand, everyone has experiences with what it is like to trust or distrust someone, be it a spouse, a colleague or a member of government. Trust is a familiar social phenomenon. On the other hand it seems quite difficult to pin down exactly how to delineate the concept of trust for analytical purposes (not to speak of measurement problems). This will not be an attempt of an ontological grounding of a concept of trust. Rather, I shall draw upon some existing general sociological discussions on trust and ask how they can be applied to the particular problem of trust in expertise, especially the works of Piotr Sztompka and Niklas Luhmann.

¹ This is implicitly visible in the much linguistic ingenuity put into developing proxies for trust in such investigations. For instance in the EuroBarometer on biotechnology it is not asked who people trust but who they think ‘does a good job for society’, etc., which is then seen as a proxy for trust (Gaskell et al 2002).

Sztompka defines trust as “*a bet about the future contingent actions of others*” (Sztompka 1999; 25). This seems to be a very elegant definition of trust, since it entails several features central to my discussion. Basically, it indicates that the problem of trust arises out of the freedom of action of others. Hence, trust is always an interpersonal matter, there can be no trust in technological artefacts as such. Trust will always be in the people producing and operating them (what I here refer to as ‘experts’). Furthermore, the analogy of a bet indicates that in order for trust to be relevant something must be at stake – a loss of some kind must be likely if the trustee fails to meet expectations. And in distinction to the cognitive measurements of trust this definition stresses that to trust is something one does, not (solely) a cognitive state one ‘is in’. One holds *expectations* about future actions of others, which cannot be tested at the time one is granting trust, but influences how one *acts*.² The definition also leaves open on whether trust is established on emotional, calculative or historical grounds.

Sztompka defines a symmetric ‘opposite’ to trust, *distrust*, which he defines as a negative bet (the anticipation that someone will behave in a way, which is negative from ones perspective). Luhmann also emphasizes this distinction in that he claims that as an act trust is something, which can be chosen. Hence, there must be alternatives to choose from, otherwise there would be no choice.³ The obvious alternative is distrust, which in an abstract sense forms a functional equivalent to trust. I shall come back to that later.

A further definitional move is the distinction between confidence and trust. This is a point I expect is sometimes overlooked in the research on trust, perhaps because it is likely to cause substantial measurement problems for psychometric investigations. By confidence is understood the basic, habitual knowledge of and familiarity we all have with the world, and without which one could not leave ones bed in the morning. In

² In order to explicate the expectations involved when people trust experts, two elements seem necessary. First, an analysis of the elements involved in trusting and, second, a discussion of what is meant by experts and expertise. In this paper, however, I shall discuss only the first, and leave the ‘expert’ category undeveloped here.

³ The investigations of expert-lay interactions undertaken by Wynne indicate that sometimes situations arise where there actually is no choice – relations between experts and lay people take on the character of dependency, rather than trust. However, this dependency is blurred by a façade of ‘as-if’ trust, which serves to cover deeper rooted mistrust (based on ‘epistemic’ differences) and re-install an illusion of agency on the part of the lay people (Wynne 1996). In the concepts of Hirschman one may interpret this as a situation where neither ‘exit’ nor ‘voice’ are viable options. Hence a sort of forced ‘loyalty’ is all that remains. Hence, maybe it should be questioned if trust is really the appropriate concept to apply in such situations.

that sense confidence in someone or something is not conscious, and will only be made the object of cognition if it is disturbed. Trust, or distrust, on the contrary is a more active evaluation of situations, even if it is not necessarily the object of explicit decision making with clear alternatives, as rational choice theory try to stylise it. The distinction between confidence and trust can seem subtle, but I will suggest that it provides some analytical possibilities, which are absent if we only work with degrees of trust (or a trust/distrust dichotomy). One can say that a horizon of confidence in most things is what allows for active evaluations of whom to trust and distrust. Of course, once confidence is disturbed, things one was confident about can be made object of active evaluation – and things one used to be concerned about can be pushed into the domain of confidence. The important thing to notice is that it must be expected that there is a qualitative difference between confidence and trust regulated by ‘thresholds’ rather than a continuum in the direction from confidence to trust (i.e. the movement of a certain topic from the taken for granted to craving attention in interaction has the character of a jump), whereas confidence is built up in many small steps of routinization, which takes time.

This points to the fact that as a social mechanism, trust is marked by some asymmetries, which may be worth giving some consideration. As is well known, trust is easier turned into distrust than the other way round. This makes trust a fragile resource, rather than a ‘medium’ like money, justice or truth. It takes time to build up trust, but once it is there, it gives some credit, which provides freedom of action for the trustee and can absorb certain temporary disappointments. Distrust, on the other hand, allows for a lot less freedom of action on the side of the (dis)trustee, who will be monitored more closely.

Furthermore, for the object of trust or distrust (persons or organisation) these expectations are likely to involve different interpretations. If people trust you, it is likely that you will see that as a result of you being trustworthy. On the other hand, if you are distrusted, it is less likely that you will conceive of this as the result of you not being trustworthy (depending, of course, on prior events, infidelity, etc.). If somebody distrust you, it is more likely that it will be experienced as the result of misinterpretations

or insufficient communication. Neither persons nor systems are likely to see themselves as untrustworthy.⁴

In addition to these general asymmetries, there is a third type of asymmetry related in particular to the type of trust discussed here, namely regarding the benefit of trust and distrust. For experts as promoters and regulators of technologies, the trust of lay people is preferable independent of whether this trust is prudent or not. For lay people trust as a device to reduce complexity and direct their attention against something else is preferable only if the experts actually are trustworthy, i.e. fulfil lay peoples expectations. Because of this asymmetry in the benefits of trust, it is to be expected that easily readable, symbolic indications of trustworthiness are necessary in the actions and words of the experts (once a basic confidence is broken).

But even if communication is required in order for trust to be extended, trustworthiness as such cannot itself be directly communicated. If a person or an organisation explicitly claims to be trustworthy this is likely to have the opposite effect. Rather, trustworthiness is something that must be demonstrated in interaction (Luhmann 2000[1968]; 80). This is probably why communication, interaction, participation and the like have come into fashion in order to resolve deficits in trust. It is considered a way to signal trustworthiness through interaction.⁵

In his discussion of the 'ontological' determination of trust, Sztompka suggest three answers to the question of where trust is located. These are complementary rather than competing, but calls for different means of investigations. Trust can either be seen as the quality of a relationship, as a personality disposition or as a cultural rule (Sztompka 1999; 60). The aim of this investigation will be to focus on trust under the perspective of the quality of expert-lay interactions. In that process personality dispositions will not be considered. Trust as a 'cultural rule' I think can be translated into contextual settings or political culture in which expert lay interactions are taking place.⁶

⁴ However, when trust becomes reflexive like this, persons and systems can reflect upon the observation that others do not trust in them, e.g. scientist can wonder why it is that their expertise and advice are not trusted by lay people.

⁵ Whereby it may be overlooked that 'acceptance problems' may be rooted in a number of factors, which are not necessarily pertaining to experts.

⁶ This usually provides a common frame of reference (basic democratic values, rule of law, civil liberties, in short, constitutional issues), which is rarely touched upon in organised technological controversies (Daele 2002; Daele 2001). In protest based activities these more fundamental issues are more likely to be addressed, for instance in the anti-capitalistic themes of the anti-globalisation movement.

From here on my discussion will follow two relatively distinct tracks. First I shall try to outline a taxonomy of various aspects of trust in experts. Following that I shall discuss how a functional perspective on trust might contribute to the understanding of expert lay interactions.

Suggestions for a Taxonomy of Trust in Expertise

If one wants to study ‘trust in expertise’ empirically some idea of what to look for is indispensable. The purpose of this section is to outline a taxonomy of the various kinds of expectations that may be involved in the formation of trust in experts, which can be applied to more interpretive investigations of expert-lay interactions.⁷

Trust can be vested in different types of actors or systems. Sztompka differentiates between six targets of trust relevant for the current discussion: persons, social roles, social groups, institutions, procedures and technological systems (Sztompka 1999; 41-44). It seems quite obvious that one can place trust in persons, both persons one knows personally or through the mass media. However, one can also trust persons qua their social roles. For instance, doctors, judges, policemen, etc. are all expected to behave in certain trustworthy ways due to the role they incumbent, not due to their personality.⁸ It is also possible to assign trust or distrust on the basis of group membership, even if one does not know the members personally. Obviously, all sorts of stereotypes can be involved here. Institutions are specific collective or aggregated actors, in which trust is vested as units. One can, for instance, trust that a specific Ministry of Agriculture can secure the expected level of food safety. Procedural trust is not vested directly in actors, but rather in action systems or institutions in the more abstract sense, for instance trust in the independency and fairness of courts or trust in scientific procedures as the best way to achieve valid knowledge. Finally, one can also place trust in (technological) ‘systems’ (airlines, nuclear power plants, but also ‘science’ or ‘the market’). Often this is done without reflection and the issues of trust only arise when things do not behave as they are expected to. However, it is important to notice that the trust placed in procedures and technological systems or ‘expert sys-

⁷ This is meant as a preparation a discourse analysis of what claims (explicit or implicit) surfaces in processes of public participation in the regulation of biotechnology. As such it is to serve as a classificatory scheme of potential arguments, which hopefully allows to relate arguments to certain sociological categories.

⁸ And when some do not live up to expectations, distrust may afflict whole professional groups.

tems' is not tied to the technological artefacts, but always relies on trust in competence and good will of the actors operating or producing the technological systems. In this way also what on the face of it seems as trust in the working of technological systems will entail normative expectations toward the people operating them. This is probably why it is important to find the 'responsible' when something goes wrong, even if this entails a causal simplification not warranted by the events (Bonß 1995; 55, further Douglas 1992).

In addition to primary targets of trust, one can also speak of secondary targets of trust, i.e. agencies ensuring the reliability of primary trust. The prime example in this context is of course the trust in experts claiming that primary targets of trust, for instance technological systems, are trustworthy, but also various agencies established to monitor experts (ethical councils, participatory procedures etc.). Sztompka talks about 'pyramids of trust' (Sztompka 1999; 47), and these are often dependent on various agencies of accountability, i.e. some sort of control mechanism like the right of public access to administrative decisions, scientific peer review etc. These must of course be trustworthy themselves to fulfil their functions – and in that sense trust becomes reflexive, i.e. the principle of exhibiting or withdrawing trust becomes applicable to itself. For instance: 'Can we trust in trust to regulate the relationship between citizens/consumers and GMO producers, or are other mechanism required?'

Sztompka notices that the various types of trust are not mutually independent. There are interactions between personal and positional trust, and there furthermore appears to be a spill over effect between different social institutions. This is for instance seen in the case of the BSE scandal on the confidence expressed in other experts making claims about the safety of GMOs (Gaskell et al. 2002; 77).

The types of expectations involved in trust relationships vary according to context. Sztompka discusses three analytically distinct types of expectations involved in 'bets' of trust; instrumental, axiological and fiduciary. Instrumental trust involves expectations of regularity of conduct, reasonableness, efficiency and competence. Axiological trust entails responses like kindness/civility, truthfulness/authentic behaviour and fair/just treatment. Fiduciary trust entails disinterestedness, representative actions (actions on behalf of others) and generosity. In a sense this classification is describing something that is increasingly demanding on the trustee. However, it is important to

realize that “(e)xpectations involved in trust are congruent or incongruent with the nature of objects toward which trust is directed. Specific expectations fit to specific objects, and do not fit to others.” (Sztompka 1999; 55). I suppose this is to say that the expectations involved in various formations of trust follow the functional differentiation of society. This means that a general formula of trust takes the form of ‘A trust B to do X’ (Sztompka 1999; 55). Different expectations are directed against family-members, bank advisors and scientists, i.e. they are role-specific and institution-specific, which, as I see it, is an important reason why cognitive investigations of trust-building mechanisms cannot provide adequate explanations of why some experts are trusted and others not without giving the investigation a historical and socio-structural index.

On the basis of these general considerations on trust taken from Sztompka, I will suggest a two-dimensional taxonomy of the elements to be taken into considerations when studying what expectations influence whether lay people or ‘the public’ chooses to trust experts. As said, this is a first step towards concrete empirical investigations. As such it does not tell us much about how trust is actually formed and substantiated, but at least the typology indicates that more conceptual work is required than is often present in the investigations on trust in experts.

Types of expectations

Target of trust/distrust	Instrumental	Axiological	Fiduciary
Persons	Knowledgeable	Sincerity in advice	Admittance of limits to knowledge/ Moral competencies extending beyond cognitive capacities
Roles	Competence	Integrity	Disinterestedness
Groups	Competence	Peer surveillance	Non-privileging of colleagues
Institutions	Vigilance Flexibility in meeting new challenges	Independence of ‘other’ interests	Transparency
Procedures	Adequacy Robustness	Value neutral	Openness to other concerns than the ones specified in procedures, e.g. moral concerns.
Systems	Reliability Ability to correct errors	No hidden purposes, e.g. social control, surveillance etc.	Responsive to social needs and public concerns

The *sine qua none* level of expectations concerns the instrumental capabilities of experts. As persons we expect of experts that they are knowledgeable within their field of expertise – otherwise they should not pose as experts. However, from the experts performing roles and experts as groups of professional communities I think it is more appropriate to say that competence is expected, i.e. the ability to perform certain tasks, not the possession of knowledge as such. One might say that the first question concerns who qualifies to function as an expert,⁹ the second what kind of behaviour is expected for experts (both as roles and as communities). Expert-institutions can be expected to produce and apply adequate knowledge and be able to change according to new challenges. Trust in procedures and systems are of course closely related to the persons, groups and institutions in charge of executing procedures and running systems. But analytically there is a difference, in the sense that the evaluations of performance and performers do not need to be alike. Even the best of experts cannot guard against risks if the procedures they work according to are not adequate (or if, for instance, critical observations are suppressed in order to enhance political or economic performance, etc.) or the system they are operating is immune to intervention or consist of run down installations. Probably all expectations must be met for trust to be extended continually, but it may be withdrawn on the basis of just one dimension turning into distrust.

The fulfilment of instrumental expectations must indeed be considered necessary if trust in experts is to be formed and maintained. However, they are obviously not sufficient. Where instrumental expectations concern what is traditionally conceived to be the core field of (neutral) experts working with scientific theories and methods, the axiological expectations concern the ‘moral’ component of expertise. It concerns expectations that, when not fulfilled, are sanctioned with normative reproach (or legal sanctions). This includes expectations directed at single experts that they provide advice to the best of their knowledge, that they perform their tasks in truly independent ways, both as single experts and institutional actors, and that they as a group police their field of expertise properly. Axiological expectations towards procedures and systems may entail that they are neutral and do not have hidden agendas.¹⁰

⁹ Which of course is related to the question of what kind of ‘expertise’ is required to evaluate a given technology. Do we need biochemist, ecologists or medical doctors to assess GM food? Or ethicist or sociologists?

¹⁰ As for instance when the suspicion is raised that a (too) liberal regulation of GM crops make GM and organic crops inseparable in order to prevent labelling and further the marketability of GM food.

Fiduciary expectations involve situations where the trustee observes duties to place others' interests before their own (Sztompka 1999; 54). Fiduciary expectations are probably most important in close interpersonal relationships, but there may be instances where they may also hold for trust in experts. Applied to experts fiduciary expectations could entail the expectation of admittance of limits to knowledge, that experts will be willing to abstain from activities that would further their own career or organisation in order to further more general social goals. Institutions may be expected to be transparent. Especially in regard to procedures and systems fiduciary expectations may take the form of a wish to allow for moral or social reservations against certain developments to be taken into consideration (social responsiveness). It goes without saying that this catalogue of expectations is built on analytical distinctions. Whether they prove useful for the empirical analysis of the formation of trust and distrust in experts remain to be investigated. The basic point is, however, that in order to understand the granting or withdrawal of trust, it is necessary to be able to differentiate between both a number of expectations and targets of expectations, as they all provide signals about the overall trustworthiness of the 'expertise' in charge of the technologies that potentially could expose us to risk. Furthermore, spill over effects between trust and distrust in various agents need to be examined.

Functions of Trust and Distrust

So far I have tried to outline some of the expectations that presumably are involved in the formation and maintenance of trustful relationships between experts and lay people. Hopefully, this can accommodate a better understanding of the dimensions of trust and potential reasons for mistrust. A different way of providing an supplement to the cognitive investigations of trust in expertise is to look at the functions trust serves in the expert lay relations – and what equivalents to trust there might be, when trust is not present.¹¹

At a very abstract level one can say with Luhmann that trust is a way to reduce social complexity. Trust enables us to act in the present despite the fact that we do not know

¹¹ To discuss functional aspects of trust is not to make functionalistic claims that if trust is functional it will evolve, or that the existence of trust can be explained with reference to its functionality. Rather it is a search for 'functional equivalents' in order to see what trust does – and how this can be done differently.

how others will act in the future.¹² In this sense trust substitutes for knowledge – if one has full knowledge or the actions of others are completely predictable, no trust is required. To trust is to act as if one knows the future (actions of someone). This basically means to act on the basis of an exaggeration of available information (Luhmann 2000).¹³

With Luhmann we can depict the act of trust in experts as a transformation of external dangers to internal risks, which are easier to live with and act upon for both individuals and social systems. In a sense, to trust is to trade in one type of risk for another. It is easier to evaluate whether an expert (or institution) claiming that GM food is safe is trustworthy, than evaluating all the evidence you self – but one must live with the risk that the expert (or institution) does not fulfil the expectations entailed in granting him or her trust. To trust experts means that we can rely on technologies that we do not understand and have little or no knowledge about, which allows us to direct our attention against other things.

Parallel, however, distrust can also serve to reduce social complexity, in the sense that negative expectations towards someone allows one to act, despite the fact that one has no idea about how others are going to act. However, distrust is both more psychologically demanding and does not allow for more complex chains of interaction to arise, since one need to be ‘present’ (either in person or through representatives) in interaction. Basically, less social complexity can be managed with distrust compared to trust.

It therefore seems that in most writings trust is preferred over distrust, that it is inherently good, that people are trustful. This may be the case on a very general societal level. More mutually beneficial cooperation is possible if people are generally trustful. However, as a direction for action trustfulness cannot be recommended as such. It is obvious that trust cannot rationally be extended unconditionally, hence there must be mechanisms by which distrust can be switched in – we could call them points of control or accountability.¹⁴ It must be expected that trust is easier extended when a number of organized checks are in place.

¹² Or how they have acted in circumstances we can only know about later.

¹³ Which should make it clear that information alone is unlikely to solve the problem of trust. One crucial issue is, of course, what kind of information must be available for such exaggerations to take place.

¹⁴ An obvious example is security personnel at airports, whose job function is to distrust people systematically, in principle independent of what impression people give. This allows other personnel and passengers to focus on other things.

Basically, this is what is sought for in the means devised to 'restore' trust in expertise. In the final section I shall briefly indicate how a functional perspective on trust may help understand various strategies devised for helping a perceived 'lack of trust' in experts and ascribe a more constructive role to the (organised) distrust than is usually the case.

Why a Functional Perspective on Trust?

On a general level it can be said that trust more likely to occur when there are:

- Control-mechanism, i.e. organised distrust at certain points
- Possibilities of withdrawal of trust, i.e. possibilities for meaningful action when trust is absent, e.g. purchase of organic rather than GM food
- Sanctions in case the trust is breached, i.e. visible, rational motives for trustees to act according to expectations.

Since the observation of a lack of trust in experts has been made (and made into a problem) various ways of either regaining or substituting trust have been devised.

The suggestion here is, that the functional perspective on trust allows evaluation of how well alternatives to direct trust in experts perform in regard to the dimensions of the classifications of expectations suggested above. Especially because it allows to see trust and distrust as functionally equivalent solutions to the same type of problems. It enables a discussion of when and how distrust serves constructive purposes, rather than just seeing distrust as problem.

Of course this cannot be done in general, but must be related to concrete measures. However, I shall briefly exemplify what that means for various mechanisms.

Calls for public education (or increased 'public understanding of science', as it is often called) implicitly points to a substitution of trust with knowledge, or indicate that more knowledge makes the 'bet' on experts more likely. This may work in some cases. However, as a general proposition it is hardly convincing, since more knowledge may equally well result in more doubt.

The calls for larger accountability of experts can be seen as an attempt to substitute trust with control by the installation of points of surveillance and, hence, 'discipline' or organise distrust in specific forums, rather than have 'wild' distrust resulting in acts

of protest and blockades. This raises secondary problems of visibility and credibility of such measures.

Finally, calls for public participation can be seen as a redirection of trust on to other agents, whose claims to be trustworthy is based not their cognitive, but rather moral competences, for example lay people in consensus conferences. The same redirection is happening when 'control activities' are delegated to (institutions led by) public figures with high personal credibility.

In distinction to the cognitive perspective on trust, the functional one allows to see the problem of trust/distrust in expertise in a somewhat broader context. Attempts to involve the public in decision making about technologies does not need to be evaluated (solely) according to whether they 'restore' public trust, but rather if they are able to institutionalise control mechanisms – what I have termed organised distrust – at appropriate points. This leads to a cascade of new question, because such control mechanisms must, of course, also be trustworthy.

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