CHAPTER 4

Uncertainty and the Economic Need for Trust

Bart Nooteboom

1 Introduction

By way of introduction I start with some known features of trust that are relevant to the present chapter.

Trust pricks up its ears when expectations are disappointed. That may be due to an accident that is no-one's fault. Expectations can be broken due to inattention, lack of commitment, lack of competence or outright cheating.

One does not automatically know which cause of broken expectations is at play. There is causal ambiguity, and this is part of the uncertainty or risk of trust. Especially the cheating opportunist will claim some mishap. This implies the crucial importance of openness for trust. If something is about to go wrong, one should not hide it but inform the partner of the imminent problem, pledge help to minimize the damage, and to come up with proposals, for after the crisis, of how one will prevent such problems from occurring in the future. That is trustworthy conduct. Openness is also a crucial part of dealing with risk and uncertainty.

Such openness by the trustee concerning his errors must be earned by the trustor, in extending the benefit of the doubt when something goes wrong, and give the trustee the opportunity to explain and make amends. It is also wise for the trustor to be sufficiently open about what one fears, in a relationship, to give the partner the opportunity to take measures that eliminate the fear, give assurances.

I want to note in passing that I have little confidence in surveys of generalized trust, in comparison between cultures. Trust is too diverse for that. Among other things, there is the well-known distinction between competence trust and intentional trust. The first concerns the competence to act according to agreement or expectations, intentional trust concerns the intention and commitment to do so to the best of one's competence. I give an example. Many years ago I was involved in an investigation into the trust of Dutch citizens in the police. The outcome was that they have considerable intentional trust, here trust in the integrity, incorruptibility of the police, but much less competence trust, here the competence of catching criminals. Count your blessings.
That is much better than the reverse: a police that is highly competent in its corruption. One prefers enemies not to be competent.

A second differentiation concerns different levels of trust: on the level of systems (democracy, for example), organizations (parliament, ministry), and individuals (politicians). A recent survey in the Netherlands showed that people still have trust in the institution of democracy but trust in politicians has declined.

Something or someone may be reliable in one thing and not another, under some conditions and not others. People may have several obligations of loyalty, and conditions can arise where they have to choose between them: family, friends, customers, suppliers, employees, and shareholders. Trust requires the practical wisdom to take contexts and conditions into account. People may be entangled in webs of interests, roles, and positions, where they cannot afford to follow their ethical or moral sense. I call that system tragedy. In sum, trust is a four-place predicate: the trustor trusts the trustee (or not), in some respects (intention, competence), under certain conditions.

Trust is interactive, and when the context of interaction is not given, what does it mean? There is also the important distinction between reliance on the basis of control, and on the basis of trust that goes beyond control, and it should be clear which is intended.

If with all this it is not clear to respondents in a survey which trust is intended, they will pick what happens to come to mind, based on recent experience, perhaps, and on the phrasing of the interview question, or even the tone of it.

I take a process view of trust. It is not something given but something developed, or broken down, in interaction. It is both the basis and the outcome of a relationship. People infer trustworthiness, rationally or emotionally, on the basis of signals given off in actions and utterances.

2 Risk and Uncertainty

It is well accepted that trust entails risk. I define trust as being vulnerable to actions of another, yet expecting that ‘things will be all right’. That can go wrong, and there lies the risk. If one knew for certain what will happen, trust is not at issue. Are we dealing here with risk or with uncertainty? With risk, one does not know what will happen but one does know what can happen, and then one can append probabilities to possible outcomes, to calculate, in particular, optimal expected outcome. With uncertainty one does not know all that can happen. Under uncertainty, trust becomes a leap of faith. The more one does know, the more uncertainty can approach risk.
How to deal with uncertainty? One method is to use scenarios. One does not know all that can happen, but one can imagine some possible futures, and see what one could do in each of them. One cannot calculate optimal conduct across all futures, since one does not know them all, but one can see how robust certain courses of action would be in the futures one can imagine: what action yields a reasonable outcome across those futures? Here, attention shifts from optimality, as illustrated in Figure 4.1a, to robustness, as illustrated in Figure 4.1b. In the former one can crash into an abyss when the future deviates from what was expected, in the latter the outcome may be lower but is less sensitive to a difference in conditions from those expected. One may surrender a chance of profit but gains less vulnerability.

Another measure one can take is to develop flexibility, reserve competence and resources, to respond to unexpected conditions, or to develop resilience, the ability to absorb unpleasant outcomes. One form for that is to maintain a buffer to absorb shocks. From a traditional economic perspective such reserves may seem like a waste of resources lying idle, but from the perspective of uncertainty it is prudent.

It is said that there is an overall decline of trust, in societies. Is this due to a real decline of trustworthiness, on the part of the trustee, or to an increase of fear, of risk-aversion, on the part of the trustor? Or to lack of flexibility and resilience? There seems to be a rising demand for security, elimination of all...
risk. That is leading to an excess of monitoring and control that is suffocating professional work.

3 Intentional Trust

Here, I first focus on intentional trust, and I will consider competence trust later. Trust has an important emotional and intuitive dimension, since it deals with vulnerability and uncertainty. Yet one can also be rational about trust, analysing the conditions where and why people may be reliable or not. For rational trust, one should consider the presence or absence of trustworthiness. So the question becomes: why would people be trustworthy in their intentions, commit to agreements?

For the analysis I use a tool that I developed in earlier work (Nooteboom 2002), which can be used for diagnosing trustworthiness and for building it. It is summarized in Table 4.1. There, I make a distinction, vertically, along the two columns, between factors outside the relationship, based on institutions, along the left column, and factors within the relationship, based on the relationship itself, where trust is both the basis and the outcome of the relationship, along the right column.

Horizontally, along the two rows, I make use of the notion of reliance, which can be based on control or on trust, beyond control.

Along the upper row we have control, based on calculative self-interest; it is the world of the economist. One form of control is to manage room for action, expanding or reducing the options the trustee can choose from. When agreements

<table>
<thead>
<tr>
<th></th>
<th>Outside Institution based</th>
<th>Inside the relationship Relation based</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Calculative self-interest</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Room for action</td>
<td>contract, law</td>
<td>hierarchy, mutual dependence,</td>
</tr>
<tr>
<td>Incentives</td>
<td>reputation, go-between</td>
<td>hostage, rewards, punishments</td>
</tr>
<tr>
<td><strong>Trust</strong></td>
<td>ethics, morality</td>
<td>routinization, empathy,</td>
</tr>
<tr>
<td>Beyond self-interest</td>
<td>generalized trust, go-between</td>
<td>identification, loyalty, friendship,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>familiarity</td>
</tr>
</tbody>
</table>
are not met, room for action can be reduced. Another form of control is to influence the choice made from the repertoire of options, by means of incentives, punishments or rewards. Outside the relationship one can make use of the institution of the law, using legal contracts, which constrains actions. Or one can use a reputation mechanism. That is a matter of self-interest: one behaves well in order not to lose fruitful opportunities for future actions. One can also make use of go-betweens to assist in control, in mediation or arbitration.

Within the relationship control can take the form of hierarchy that directs and constrains action, or gives incentives of reward or punishment, including career prospects. Inside control also includes hostages (as a notion taken from Transaction Cost Economics). This may require some explanation. A hostage has value for the hostage giver but not to the hostage taker, in order for the latter to not have any qualms about killing the hostage when the hostage giver defaults on commitments. It is an old instrument, used by Kings in treaties among each other, with the hostage taken from royal family or nobility at the court. In economics it can be sensitive information, such as information that would cause harm when divulged to competitors of the hostage giver, which is kept secret as long as the hostage giver is loyal to agreements. It can also take the form of a package of shares that can be sold to a party that wants to engage in a hostile take-over of the hostage giver. Particularly in family business hostages can also arise in intermarriage between families, where care for spouses and children become part of the guarantee of loyalty.

Along the lower row we have the basis for trustworthiness, going beyond control. Outside the relationship that is the area of generalized trust, based on shared ethics, morality or custom, in a culture. Here we also find the possibility of using a go-between, here not for control, but to assist in the process of trust building and avoiding collapse, by preventing or eliminating misunderstandings, reducing the uncertainty of causal ambiguity, helping to find a path for building and preserving trust.

Inside the relationship it is the build-up of loyalty, habit, familiarity, empathy, friendship, love, or identification. In empathy one understands ‘what makes the other tick’, in identification ‘one ticks in the same way’ or has a sense of shared destiny. Empathy is crucial, indeed indispensable for trust, but identification can go too far, yielding blindness to outside opportunity, turning the relationship into a prison.

4 Conditions

Each of the factors in Table 4.1 has its conditions. A contract makes no sense if compliance with it cannot be monitored. A contract can be counterproductive,
restricting space for action too much. Both conditions apply, in particular, when the purpose of collaboration is innovation. Next, a detailed contract can easily be interpreted as a sign of distrust, with distrust as a likely response, yielding an escalation of distrust. However, sometimes a contract is detailed not to prevent cheating, but for reasons of technical complexity, more a matter of competence trust than of intentional trust.

For reputation one needs a reputation mechanism, with someone or some organization serving to separate gossip and slander from legitimate complaint, and to broadcast reputation. This can be informal, as at a golf-club, or formal, in some public office (governmental), or private associate (bank, bookkeeper, consultant).

Both contracts and hierarchical control have their limits in modern professional work. One employs people or suppliers because they offer a specialized competence one lacks oneself, and then it is odd to pretend that one can tell people what, precisely, to do, and how to do it. That uncertainty calls for forms of control that include suggestions for control given by the one to be controlled, called horizontal control, which calls for trust.

Extrinsic reward, in remuneration or bonus may diminish intrinsic rewards of job satisfaction, appreciation, and the exercise of one’s own responsibility and judgement.

Concerning the sources of trust, shared ethics and morality may not be in place, or may be weak, and varies between cultures. For example, in the literature much has been made of the Confucian ethic in Asia, versus the more individualistic stance in the West. I will turn to such comparison in the following paragraph.

Concerning factors within the relationship, empathy requires relevant mentality, skill and experience, and time, to build familiarity. Empathy and familiarity require time to develop. The practice or ethic of maximum flexibility of relationships will block this. There should be optimal, not maximum flexibility: enough not to get bogged down in rigidity, but not so much as to prevent familiarity and empathy to develop, to block the process of trust.

Important also is external pressure. It may lead to an unravelling of trust, with everyone trying to save his neck, if necessary at the expense of others. On the other hand, if there is no alternative to the relationship, one will simply have to make do with each other, accept sacrifices and build trust.

5 Japan

The matrix of factors underlying intentional trustworthiness, in Table 4.1, can be applied to individual relationships, industries or countries. The present
chapter was a contribution to a conference on trust in Japan, and I thought it appropriate to apply the analysis there.

Concerning trust in Japan, a puzzle presents itself. Fukuyama (1996: 150, 182) claimed that Japan is a ‘high trust society’, along with the US: ‘the society that displays perhaps the greatest degree of spontaneous sociability among contemporary nations’, where that sociability is defined as: ‘the ability to come together and cohere in new groups, and to thrive in innovative organizational settings’. According to the ‘World Values Survey’ (2005), Japan had among the highest score on ‘most people can be trusted’.

I noted above that I do not have much appreciation for the comparison ‘between cultures’ in surveys of generalized trust.

Yamagishi and Yamagishi (1994), on the contrary, claimed the opposite: trust in people in general is much lower in Japan than in the US: ‘Most of the time people try to be helpful’, 47% agreed in the US vs. 26% in Japan. Instead, as a compensation, Japanese employ stable relationships, in tight networks of family and long term ‘insider relationships’, based on loyalty, a sense of connectedness, and internal monitoring and sanctioning. In Table 4.1, according to the Yamagishis the US would be positioned along the left column of the matrix, and Japan along the right column.

The Yamagishis had a negative view on the Japanese mode: Japan is in danger of locking itself up in too tight and enduring relationships, foregoing novel opportunities in outside relationships. There is also a vicious circle: not stepping into outside relationships one robs oneself of the experience by which one can learn to deal with them.

Interestingly, Fukuyama did note that when Confucianism migrated from China to Japan, in the seventh century, emphasis shifted away from benevolence and filial piety to loyalty to the leader, and ‘reciprocal obligation based on exchange of services … entrenched in feudal traditions’ (Fukuyama 1996). That does seem to connect with the analysis of the Yamagishis.

The Yamagishis called the ability to judge the factors behind reliability ‘social intelligence’. Here, that would mean: knowing all the factors involved in Table 4.1, and being able to judge them and employ them.

Now my point here is that to the extent one does have that ability, this moves uncertainty in the direction of risk. It is not so much that one can calculate all the factors, and add and subtract them into an overall measure, but one does know fairly well what is at play, what can happen, in order to diagnose and improve a relationship. This requires knowledge and insight not only in the factors at work, but also in the conditions for them to apply and work, as discussed above.
6 Japan and the US

So how would I now position the US and Japan? The US does not strike Europeans as based on generalized trust, but more on the law, with conflict rapidly resulting in litigation, and on reputation, and work relationships seem more based on hierarchy than in, say, the Netherlands or Scandinavian countries. So, I would position the US along the top row of Table 4.1, as illustrated in Table 4.2: outside control on the basis of contracts and reputation, and inside control with hierarchy and incentives.

In line with the analysis of Yamagishi and Yamagishi, I would position Japan along the right-hand column: inside control with hierarchy, perhaps hostages in the family, and inside trust on the basis of loyalty, empathy, familiarity and identification.

All-round trust would employ all sources, in all four quadrants. Which sources are mobilized depends on the type of relation and on the context. Here again I emphasize that there is no single best instrument for all cases and conditions: it depends on the case and its context.

7 Multiple Selves

I wanted to know more about what lies behind all this. For that, I found the work of the Japanese psychoanalyst Takeo Doi (see Roland 1997). He recognized

<table>
<thead>
<tr>
<th>Control:</th>
<th>Outside</th>
<th>Inside the relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculative self-interest</td>
<td>Institution based</td>
<td>Relation based</td>
</tr>
<tr>
<td>Room for action</td>
<td>contract, law</td>
<td>hierarchy, mutual dependence,</td>
</tr>
<tr>
<td>Incentives</td>
<td>reputation, hostage, rewards, punishments</td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>ethics, morality</td>
<td>routinization, empathy,</td>
</tr>
<tr>
<td>Beyond self-interest</td>
<td>generalized trust, familiarity,</td>
<td>identification, loyalty, friendship</td>
</tr>
<tr>
<td></td>
<td>go-between</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.2 Intentional trust in the US and Japan
a dual self-structure. On one side one has ‘outer ego boundaries’ (omote, in Japanese): ego being more or less in touch with others, and on another side ‘inner ego boundaries’ (ura): being more or less in touch with one’s own inner feelings, fantasies, and impulses.

Now, according to Roland, in the US the outer boundaries are firm, maintaining a sharply demarcated ego. With such firm outer boundaries, they claim, there is more reliance on verbal communication. In Japan, by contrast, in the inside relationships, inside circles of family, clan, friends, familiar people, recognized by Yamagishi and Yamagishi, the outside boundaries with others in that inside crowd are vaguer, more penetrable, while they are quite firm and sharp outside the clan. With such vaguer, more diffuse boundaries, communication is more non-verbal, intuitive, in ‘empathic sensing’.

In the US, purportedly the inside boundaries, within the self, are fairly permeable, with people ‘being in touch with themselves’, while in Japan they are more firm, with a more hidden self.

8 Competence

Now I turn to competence trust. How uncertain is the competence of a partner? To what extent can one judge the content and meaning of what a partner can offer? I propose that the most fruitful relationships, in economics and personal development, are those that one cannot predict or foresee.

Here, I have been inspired by the ‘philosophy of the other’ of Emmanuel Levinas (1961), with the awe for ‘the visage of the other’. He pleaded for a radical openness to the other, which I can best explain with a metaphor: one does not simply open the door of one’s house to the other, but lets the other take part in its construction. That openness requires what Levinas called ‘passivity’, avoiding all prejudgement of the other, all ‘totalization’ where one assimilates the other into one’s established mental frameworks. One needs the other to become oneself, to form those frameworks. That fits well with the pragmatist perspective that I employ. More than that: one needs opposition from the other to have any chance of being freed from one’s own prejudices, which constitutes the highest form of freedom.

I have discussed this in a book (Nooteboom 2012). There, I tried to find a path between Nietzsche and Levinas. I value Nietzsche for his creative destruction, which connects with my earlier interest in innovation, but here it concerns the effort to transcend oneself in personal intellectual and spiritual development. Nietzsche talked of tending oneself as a garden. I disagreed with
the underlying idea that one can achieve this by oneself. The ‘will to power’ he posited was a will to overcome obstacles. Rather than seeing the other as such an obstacle to be overcome, one should cede to the obstacle, admitting it onto oneself, and transform the obstacle onto an opportunity. There, I used Levinas, with the other as the source of self-transcendence.

In the present chapter, the point is that what the other may offer is by definition uncertain: if it were predictable, foreseeable, it would no longer contribute to transcendence. So, in conclusion, it seems that competence, what the other may offer in a relationship, is at its best uncertain. Here, trust remains a leap of faith.

However, like trust, competence also is not a given but something to be developed and maintained, including the effort to make a match between what the one partner can offer to the other, and can absorb from the other. Several insights are relevant here.

9 Cognitive Distance and Discovery

In earlier work (Nooteboom 2000), I investigated what I call cognitive distance: difference in thought, both intellectual or technical, and moral, concerning relationships. The higher the distance the more difficult it is to collaborate. On the other hand, larger distance yields more potential for novelty, in the ‘novel combinations’ of innovation. So, one should aim for optimal distance: large enough for the potential of novelty, but not so large that there is insufficient ability to understand, agree and collaborate.

The ability to understand, absorb what another is saying and doing is called absorptive capacity. That is a function of knowledge one has built up, and experience gained in collaborating with others who think differently. However, there is another side to it, of communicative, expressive capacity: to help the other understand what one says and does.

That requires empathy: the ability to know how the other thinks and sees things. So, that is important for intentional trust, to understand the risks and threats the partner is facing, as well as for competence trust, to match competencies. The ability to understand and clarify is also not given, but is subject to development, as a function of collecting knowledge and experience in collaboration.

In the first instance, the notion of cognitive distance applies to individuals, but it can and has been applied also to organizations. There cognitive distance was operationalized as the difference in innovation profile, built up from patent data.
There is a connection with another body of thought, concerning how invention or discovery (I treat them as being the same) works, in a ‘cycle of discovery’, as developed also in Nooteboom (2000). The basic idea is as follows.

One gets new ideas from applying what one knows and can do, which has settled down in some area of application, in novel contexts of application, subjecting it to new challenges, exposing it to new threats to survival, which I call generalization.

When such a threat arises, one will try to give some new twist, some differentiation, to the practice one is applying, tapping from memory of trials from the time the practice was developed.

When that is not enough for survival in the new environment, one will look around to see what local practices in the new environment succeed where yours fails, and to adopt some of that into your practice, making hybrids between the old and the new, in what I call reciprocation. That is an important stage, where one takes the opportunity of experimenting with novel elements without yet surrendering to a wholesale rejection of the basic logic or design of your existing practice.

That allows you to do two things. First, explore how worthwhile the novel elements are. Second, and subsequently, find out where and how the existing basic logic or design becomes dysfunctional, in two ways. One is that there arises an incoherent, messy and inefficient ‘spaghetti’ of old and new elements and their connections, with workarounds of inconsistencies to make it work. The second is that one finds out what elements of basic logic or structure obstruct the realization of the full potential of the novel elements, which gives hints as to which of those basic principles need to be replaced and by what.

That gives both a motive and an indication for experiments with more radical, architectural change in basic logic and design, in what I call accommodation. That gives rise to experimentation with old and new elements and principles, which takes time to settle into the best design that then becomes dominant.

I now claim that this logic applies also in crossing cognitive distance. You and your partner are facing the challenge to fit each other’s thought and actions each into his/her own cognitive and organizational frameworks, following the logic of generalization, differentiation, reciprocation, to yield accommodation, in shared innovation. That yields an elaboration of the Levinassian point of opening up your house in order to reconstruct it.

10 Specific Investments

The second element I now want to add is the notion of specific investments, derived from Transaction Cost Economics (TCE).
Let me add, in passing, that like other trust researchers I have criticized TCE for reducing trust to control, in calculative self-interest, and next setting that aside as either not adding anything to the enlightened self-interest already present in economics, or going beyond that and then not surviving under the competition of markets, hence as irrelevant for one reason or the other. However, I have argued that TCE also offers notions that are valid and worth preserving. The notion of specific investments is one of them.

An investment is specific to a relationship if it is worth much less or nothing outside the relationship. Having made such an investment, one then becomes vulnerable to the partner breaking up the relationship. Then the specific investment is lost and has to be made anew in a different relationship. Yet such investments are needed to achieve the special, non-standard products that are more profitable. The relationship has to last sufficiently long for the investment to be recouped. This brings me back to what I said before: relationships should not be maximally flexible, but optimally so, here to evoke the specific investments that yield high quality and specialty, by giving them time to be recouped.

To reduce the risk involved, one can demand that the ownership of the investment, and hence vulnerability, is shared. But that may not be necessary. Precisely because of the investment being specific one may offer something unique that makes the partner dependent as well. This shows that vulnerability is not necessarily a bad thing, as long as there is a balance of dependence. Mutual dependence can be the basis for an upward spiral of quality and novelty. I recall that mutual dependence was one of the factors of reliability in its control mode, in Table 4.1.

Specific investments can be of different kinds: in dedicated installations, machinery, instruments, locations of facilities, and knowledge. The building of trust also is of that kind: it is specific to the person or organization one has a relationship with.

Risk has two sides: the size of possible loss and the probability that the loss will occur. The size of possible loss lies, in particular, in the size of any specific investments. The probability of loss depends, in particular, on the degree of trustworthiness analysed in Table 4.1.

11 Conclusion

For the present chapter, the main point now is this. For intentional trust I argued that uncertainty may be reduced in the direction of risk by getting to know what factors lie behind intentional trustworthiness, how they depend on circumstances, and how they can be used to assess risk, in ‘social intelligence’ and ‘practical wisdom’.
Concerning competence, I argued that one should be ready to accept uncertainty concerning what the other can offer. However, in crossing cognitive distance and engaging in joint discovery one can learn what the other has to offer, and contribute to its development, in joint innovation. So, there also, uncertainty can be reduced in the process of collaboration.

And then there is a possibility that cognitive distance is reduced too much, in mutual familiarization, reducing uncertainty but also the innovative potential of the relationship. Then, new uncertainty may need to be injected, as follows. A relationship can remain innovative when both sides also have non-overlapping relationships with others, that continually refresh knowledge and competence of both sides of the relationship. This is illustrated in Figure 4.2.

That shows that one should resist looking only at two sides of a relationship, ignoring the relationships that the two have with others, and positions in networks. Georg Simmel showed the fundamental transition from two to three and more. That has consequences for both intentional and competence trust. Figure 4.2 shows some of the competence side.

Another feature concerning the competence side is that in networks sensitive knowledge can ‘leak’ or ‘spill over’ from a partner to other parties who may be one’s competitors. That raises the question how that risk may be controlled. A customary measure is to demand exclusiveness: in the area concerned, the partner is not allowed to collaborate with one’s competitors. One pays a price for that, locking the partner up in the relationship with you, thus missing out on other sources of knowledge and competence, which also reduces his value to you. Here, one should go beyond the question whether sensitive knowledge reaches your competitors. The question is whether that competitor then will have the absorptive capacity to understand and implement that knowledge, and whether by that time, that knowledge has already become obsolete.
On the intentional side, in networks there arise possibilities of coalitions of two or more against one. One's perspectives and risks depend on the structure of the network and one's position in it. Having many direct contacts can yield access to outside resources, but those contacts can also constrain your actions. However, that is too large a subject to include in the present chapter.

Let it suffice here to say that with networks uncertainty increases again. They can both enable and constrain activities, extend and reduce the value of a partner, and jeopardize his position. What, for example, when your partner gets taken over by your competitor?

So, next to relational uncertainty, discussed in this chapter, and institutional uncertainty, as in the economy, or in politics, there is an intermediate level of network uncertainty. For a treatise on collaboration that includes network effects, see Nooteboom (2004).

**References**


