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The Street-Level Epistemology of Trust*

Abstract: Rational choice and other accounts of trust base it in objective assessments of the risks and benefits of trusting. But rational subjects must choose in the light of what knowledge they have, and that knowledge determines their capacities for trust. This is an epistemological issue, but not at the usual level of the philosophy of knowledge. Rather, it is an issue of pragmatic rationality for a given actor. It is commonly argued that trust is inherently embedded in iterated, thick relationships. But such relationships are merely one source of relevant knowledge in a street-level epistemological account. Early experience may heavily influence later capacity for trust. For example, bad experience may lead to lower levels of trust and therefore fewer opportunities for mutual gain.

1. Trust as Encapsulated Interest

A widely held view is that trust and distrust are essentially rational. For example, James Coleman (1990, chap. 5) bases his account of trust on complex rational expectations. There are two central elements in applying a rational choice account of trust: incentives of the trusted to fulfill the trust and knowledge to allow the truster to trust (or to recommend distrust). The knowledge at issue, of course, is that of the potential truster, not that of the theorist or social scientist who observes or analyzes trust. Hence, we require an account of the epistemology of individual knowledge or belief, of street-level epistemology, to complete the rational theory of trust.

A full statement of the rational theory, including the incentive and knowledge effects, would be roughly as follows. First, you trust someone if you have ade-

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quate reason to believe it will be in that person's interest to be trustworthy in the relevant way at the relevant time (Hardin 1991a). One's trust turns not on one's own interests but on the interests of the trusted. It is encapsulated in one's judgment of those interests. Some accounts do not specifically include reference to the trusted's interest in being trustworthy but merely require an expectation that the trusted will fulfill (Barber 1983; Gambetta 1988, 217-8; Dasgupta 1988). Adequate reason for such an expectation will typically turn on past experience to a large extent and on likely future incentives. Annette Baier is concerned with the trusted's motivation toward the truster, but it is unclear whether she would equate that to the incentive of the trusted to fulfill on the trust (Baier 1986). Coleman implicitly includes the trusted's incentives when he notes that a reciprocal trusting relationship is mutually reinforcing for each truster (Coleman 1990, 177-180). Why? Because each person now has additional incentive to be trustworthy. I trust you because it is in your interest to do what I trust you to do. If there is some residue beyond rational expectations in one way trust, there is less role for that residue in this straight, likely self-interested exchange.

The encapsulated interest account backs up a step from a simpler expectations account to inquire into the reasons for the relevant expectations. Perhaps the prototypical case at the individual-level involves an interaction that is part of a long sequence of interactions between the same parties. Each exchange is simply the resolution of a prisoner's dilemma (Hardin 1982). A sequence of exchanges is therefore an iterated prisoner's dilemma with, perhaps, variation in the stakes at each exchange. Hence, the incentive that one faces in a particular exchange in which one is trusted by the other is the potential benefit from continuing the series of interactions. As discussed further below, this is the usual model of the thick relationship in which the parties know one another well and have strong incentives for trustworthiness from their relationship itself. But we may also have incentives to be trustworthy that are grounded in other than a thick relationship directly with the person whose trust we fulfill.

Baier thinks the prisoner's dilemma is overemphasized in discussions of moral philosophy, and that this is especially a mistake for discussion of trust. But she has a formal view of the prisoner's dilemma as inherently fitted to contracts and fixed payoffs (Baier 1986, 252). It is because many relations have the prisoner's dilemma structure that trust is at issue in them. Moreover, the prisoner's dilemma need not represent anything vaguely approaching equality of the parties. Baier says trust is quite different from promise keeping "in part because of the very indefiniteness of what we are counting on them to do or not to do". She holds that contracts are at one extreme of trust, infant trust at the other extreme. "Trust in fellow contractors is a limit case of trust, in which fewer risks are taken, for the sake of lesser goods." (251)

Luhmann seemingly opposes the encapsulated interest account. "It must not be that the trusted will toe the line on her own account, in the light of her interests", he writes (Luhmann 1979, 42; also Hertzberg 1988). This unexplicated

obiter dictum runs counter to his own general account, according to which the overriding consideration is that the two parties in a trust relation are typically going to meet again (Luhmann 1979, 37) - presumably in an iterated prisoner's dilemma in which a strong reason for trustworthiness is one's interest in keeping the iteration going.

Trust is a three-part relation: A trusts B to do x (Baier 1986, 236; Luhmann 1979, 27). Typically, I trust you to do certain kinds of things. I might distrust you with respect to some other things and I may merely be skeptical or unsure with respect to still other things. To say "I trust you" seems almost always to be elliptical, as though we can assume some such phrase as "to do X" or "in matters Y". Only a small child, a lover, Abraham speaking to god, or a rabid follower of a charismatic leader might be able to say "I trust you" without implicit modifier. Even in their cases we are apt to think they mistake both themselves and the objects of their trust.

As virtually all writers on trust agree, trust involves giving discretion to another to affect one's interests. This move is inherently subject to the risk that the other will abuse the power of discretion. As Hume (1978, 497) said, "Tis impossible to separate the chance of good from the risk of ill". Also, most writers at least implicitly suppose that potentially trust is *by far the more productive option*. Distrust leads to forgone opportunities, trust can lead to successful and mutually beneficial interactions. More generally, it leads to greater variance in piecemeal outcomes because it offers both greater potential gains and greater potential losses. Coleman says misplaced trust entails a large loss, while forgone trust entails only a small loss (Coleman 1990, 101). But forgone trust entails enormous losses if it blocks establishing a longer term relationship (Erikson 1963, 247-251). Distrust produces an aggregate of lost opportunities, each one regular and predictable. Trust leads to an aggregate of some real losses plus some real gains. In the aggregate, the gains may far outweigh the losses, so that the gains from trust far outweigh the savings from distrust.

2. The Epistemology of Trust

The philosophy of knowledge and belief is a highly developed inquiry. Much of it focus on particular beliefs or types of belief and the criteria for truth or justified true belief. For the understanding of trust (and other behaviors as well) we require not a philosophically general epistemology of knowledge, but a street-level epistemology. The economic theory of belief focuses on the individual believer, not on the matter of belief (e.g., the height of Mont Blanc), on the costs and benefits to the individual in coming to have various beliefs (Hardin forthcoming). In such a theory we cannot speak of the justification of belief X tout court; rather we must speak of the justification of belief X by person A. For this we require a theory that focuses on the individual and on the ways the indi-

vidual comes to know or believe relevant things, such as how trustworthy another person is.

In addition, we require a theory of how to act on relevant street-level knowledge. I will presume that this theory of decision is roughly a common sense version of Bayesianism, perhaps an instinctive Bayesianism. You may start with such limited information about me that you can only estimate the likelihood that the typical person in my position would be trustworthy with respect to what you might entrust to me. You might even have such limited information about me that you can only assess from your past experience whether trust paid off in similar circumstances. Suppose it did and now you trust me. (This is not to say you *choose* to trust me. Rather, gambling on me seems to you the rational thing to do. That simply means you trust me to some extent.) You either gain or lose from your trust, and this experience is added to your Bayesian evidence on trustworthiness for future occasions. If I am somehow a new kind of person in your experience, your initial estimate may be very unstable and my behavior might tilt your Bayesian assessment heavily for or against my kind in future encounters.

If we wish to understand trust for real people, what we will have to understand are the capacities for commitment and trust, which must largely be learned. Hence, we must understand trust from the commonsense epistemology of the individual in a position to trust or distrust. One cannot simply start trusting people as of tomorrow unless the people one deals with are suddenly and credibly different in relevant ways as of tomorrow. When I meet someone new with whom I wish or have to deal, I may start with considerable skepticism. But my skepticism will not primarily be directed at the new person in particular. I may not yet know enough about her to judge her trustworthiness or her rationality in being trustworthy. I make my skeptical judgment largely by generalization from past encounters with other people. In that sense, my degree of trust in the new person has been learned.

My prior experiences with trust may have been so charmed that I optimistically trust this new person. Or they may have been so disastrous that I pessimistically distrust her. She is no different in the two cases; my alternative experiences, unrelated to her, are the source of difference. Experience molds the psychology of trust. If my past experience too heavily represented good grounds for trust or poor grounds, it may now take a long run of contrary experience to correct my assessments and, therefore, my actual psychological capacities. Those capacities will reflect a commonsense but likely unarticulated Bayesianism. My capacity is constrained by the weight of past experience with all of the Bayesian reassessment and updating that this experience has stimulated. Trust has to be learned, just like any other kind of generalization (Luhmann 1979, 27). Insofar as my trust is a generalization in the face of new persons, this merely means that the capacity to trust, the optimistic Bayesian estimate of trustworthiness, is learned from perhaps long experience.

Raymond Chandler's cynical, distrusting movie mogul ruefully says, "I'm going to find myself doing business with a man I can trust and I'm going to be just too goddamn smart to trust him" (Coleman 1990, 100). In his milieu, unfortunately, he is probably as smart as he ought to be and part of the cost of being so smart is the occasional error on the side of failing to cooperate. The dumber person who would cooperate with the trustworthy man would, alas, also cooperate with some others who were not trustworthy. Perhaps the movie mogul trusted at the optimal level. Epistemologically one can do no better.

Because a high capacity for trust - that is, general optimism about the trustworthiness of others - enables us to enter mutually beneficial relations, we might readily conclude that a utilitarian should encourage trust. It does not follow that the utilitarian should be more trusting, however, because a person's degree of trust is determined by the street-level epistemology of trust. All that the utilitarian should do is encourage pessimistic distrusters to trust up to the level that the utilitarian thinks is justified in the relevant population. In the model discussed below (figure 1, p.167), one might go somewhat further and say that the utilitarian should encourage people to trust more than what the utilitarian, on present expectations, thinks correct, because the more trusting person will have greater opportunity to learn from experience than the less trusting person. Hence, erring on the optimistic side is more readily corrected than erring on the pessimistic side.

Note the nature of the beliefs one must have about another to trust that other. In the encapsulated interest account, one must know something about the incentives the other has to fulfill the trust. Consider an oddly important but simple case. During the recently ended cold war, rabid anti-communists in the United States proclaimed, "You can trust the communists". What did this mean? It did not mean you could trust them to follow their clear incentives. It meant you could trust them to act from their more or less malevolent ideology. Why would anyone follow such an ideology? Those who thought you could trust the Communists could only answer this question with "I don't know, it's crazy that anyone would follow that ideology, which is contrary to human interests, and which certainly violates the interest structure of Smithian economic and social theory". These trusters had to be true-believers about the true-believership of the Communists, that is, they had to be true-believers in what they took to be the continuing stupidity of the Communists. That is an odd stance. One might well wonder how their beliefs were established.

Many market economists long asserted that eventually the people of the eastern nations would give up on communist command economics. Interests must eventually trump an ideology that ran counter to interests. Market economists and rabid anti-communists agree that the ideology was counter to interests. But the economists had better (more generally applicable) grounds for trusting citizens of communist states than did the American far right. Their conclusions were grounded in expectations of rationality, not expectations of irrationality.

3. Thick-Relationship Theory of Trust

Bernard Williams tends to view the issue of my trusting political leaders as though it were an exact analog of the more familiar problem. I may know my relations, close friends, and a small number of coworkers and others I regularly deal with well enough to know the limits of their trustworthiness. Among these people I therefore know whom I can trust for what. We may call this the thick-relationship theory of trust. On this theory, since I cannot plausibly know enough about the typical political leader to trust her, trust cannot handle this relationship in general (Williams 1988; also see Hawthorn 1988). But this conclusion is partly wrong: What I can know reasonably well is that the incentives someone in office faces are in the right direction. For my close relations, I may think their incentives are to give various supports to me in particular, so that I can trust them for that reason. The political office holder has no particular interest in me, need not even know about me, but may have a strong interest in supporting people in my position in relevant ways. On Williams's account, as well as Geoffrey Hawthorn's (1988) and sometimes Luhmann's, it is virtually a matter of the logic of large numbers and the impossibility of thick relations with very many people that political leaders cannot be trusted. Luhmann (1988, 102) says trust is still vital in personal relations, but participation in functional systems such as the economy or politics is no longer a matter of personal relations. It requires confidence, but not trust.¹ As an anthropological observer of very small societies, F. G. Bailey speaks of trust in political leaders, achieved through devices of familial style plus unique capacities (Bailey 1988, 85-6), such as intuition (91).

Against the view of Williams, Hawthorn, Luhmann at times, perhaps Bailey, and others, the correct way to see the role of thick relationships is as *one possible source of knowledge* for the truster about the trustworthiness of another and *one possible source of incentives to the trusted* to be trustworthy. The first of these is essentially an epistemological role. But, obviously, thick relationships yield only a part of the knowledge we have of others. They are one among many possible epistemological considerations. Why should our theory stop with only the thick relationship class of epistemological considerations? In practice, this class may often have priority among our sources in our face-to-face interactions. But this descriptive fact does not give it conceptual or theoretical priority. A fully articulated theory will include this class as a part, not as the whole story, of the epistemology of trust. There is unlikely to be any quarrel with the view that

¹ As noted below, Luhmann earlier wrote of "system-trust", which must transcend interpersonal (thick) relations, cf. 1979, 22 and 30.

knowledge of another's trustworthiness can come from many sources other than thick relationships.

Similarly, a thick relationship with another is only one of many possible ways to give that other the incentive to be trustworthy. A thick relationship with the truster gives the trusted incentives to be trustworthy through the workings of an iterated prisoner's dilemma of reciprocal cooperation, and this must be a very important effect on trustworthiness among familiar relations (Hardin 1991a). But one may also have incentive to attend to reputational effects, institutional rewards and sanctions, other third party effects (Coleman 1990, 180-185), and other considerations.

In sum, if we have a general incentive-to-be-trustworthy theory of trust, the thick-relationship theory must be merely a special case of it. In particular, the thick-relationship theory is wholly subsumed by the encapsulated-interest theory.

Related to the thick-relationship theory of trust is the quick blurring of individual and institutional problems, which is one of the most common mistakes in all of the writing on trust. It may be more common in the writings of philosophers, least in those of sociologists. But writers in all disciplines occasionally succumb to the easy analogy from individual to institutional issues that abstracts from the institutional constraints. For some theories of trust and how it can work, Williams's conclusion that trust cannot generalize beyond the small scale may well follow. For other theories, it may be easy to see how individual-level and institutional-level trust are conceptually related even though different kinds of data or evidence might go into functional variables in applications at different levels. In any theory, the restriction to small-scale thick relationships must follow from other principles. Going back to those principles is a first step in generalizing the theory.

Oddly, Williams is writing meta-theory. He does not present a theory of trust or criticize any actual theories. He tries simply to outline some constraints on any theory of trust. But his meta-theoretical claims are muddled by an implicit theory of trust - the thick-relationship theory. But, again, that theory, which is based on a thick relationship between the truster and the trusted may be merely a special case of some larger theories. Partha Dasgupta's (1988) example of the bravery of the Gurkhas is a compelling instance of the possibility of my trusting someone without my having any relationship at all with that person. Why might I trust a Gurkha to do certain things? On the epistemological side, perhaps I know an enormous lot about their behavior on various occasions and that behavior was consistent. On the incentive side, perhaps I trust the effectiveness of the social constraints on the behavior of the typical Gurkha.

John Dunn and others clearly wish to speak of trust even in large-number contexts, as in politics. Although Luhmann (1988) seems to agree with Williams that trust tends to apply only to small-number contexts, on the model of cooperation in iterated prisoner's dilemma, in his earlier, greater contribution on trust he explicated what he called system trust (Luhmann 1979, 22 and 30). Locke was

concerned with trust in those who govern. The more complex and the more economically differentiated the society in question, the more likely he thought trust was to be absent (Dunn 1988, 83). Much of his view seems to imply need for something like face-to-face interactions, which implies small society only. A central appeal of the Anti-Federalist vision during the constitutional era in the United States was to representation by one's own kind. Why? They can be trusted to share one's interests on various legislative matters. In this respect, today's communitarians agree with the Anti-Federalists and Dunn's Locke. Bailey similarly argues that people are more inclined to like those whom they see as like themselves (Bailey 1988, 85). This may depend on nothing more than that we are merely better at predicting the behavior of those most like ourselves.

4. Trust and Trustworthiness

Many discussions of trust run trust and trustworthiness together, with claims about trust that might well apply to trustworthiness but that seem off the mark for trust. In particular, writers often transfer to trust the moral approbation that might be thought applicable to trustworthiness. Independently of whether there is something moral about being trustworthy or untrustworthy, however, trust might be fully explicable as a capability or as a product of rational expectation without any moral residue. I treat trust as an unmoralized notion, as Coleman and many others commonly do. Most of the argument would have some force even in a moralized account of trust in which the potential truster is held morally accountable for a failure to trust. The argument would be of special interest in the moralized account insofar as it is about constraints on the capacity to anticipate trustworthiness.

Surprisingly much of the literature on trust hardly mentions trustworthiness even though much of it is primarily about trustworthiness, not about trust. Under the guise of discussing trust, Williams (1988) gives an account of the possibilities of general trustworthiness, from which trust is merely inferred. Similarly, Roland McKean (1975) ostensibly addresses the economics of trust, but his actual problem is that of trustworthiness. It is not trust per se that is the collective good in his account, but trustworthiness. Creating institutions that help secure trustworthiness thus helps to support or induce trust.

Where there is trust that is justified there are increased possibilities for experience and action. Luhmann says trust constitutes a more effective form of complexity reduction (Luhmann 1979, 8). This seems to be a very elliptical claim. Trust by itself constitutes nothing. Presumably Luhmann is saying that we cannot handle enormous complexity without others acting *de facto* on our behalf. But if we cannot count on their acting in our interest, we may therefore be reluctant to empower them or to follow their advice. Hence, whatever can secure their trustworthiness enough for us to trust them will help us manage complexity. That is to say, again, the focal problem is trustworthiness, not trust.

In his novel *The Remains of the Day* Kazuo Ishiguro portrays Mr. Stevens, an aging butler rethinking his life with his late master. In an imagined debate with another servant Stevens says, "the likes of you and I will never be in a position to comprehend the great affairs of today's world, and our best course will always be to put our trust in an employer we judge to be wise and honourable, and to devote our energies to the task of serving him to the best of our ability" (Ishiguro 1990, 201). He slowly revalues his master in the light of the views of others, who detested the Lord's reprehensible and foolish politics. Stevens says, "at least he had the privilege of being able to say at the end of his life that he made his own mistakes. I cannot even claim that. You see, I *trusted*. I trusted in his lordship's wisdom. All those years I served him, I trusted I was doing something worthwhile. I can't even say I made my own mistakes. Really - one has to ask oneself - what dignity is there in that?" (243) Trust can finally be stupid and even culpable. Merely trusting per se obviously need not help in managing complexity well - it could lead to dismal results, including quick destruction. Again, the core of Luhmann's account of the role of trust must be an account of the importance of trustworthiness. If it really commends trust, it elevates Stevens's culpable stupidity. Trust led Stevens not to manage complexity so much as to fall victim to it.

5. The Learned Capacity to Trust

Some writers speak of the greater ability to trust. Typically they run the likely state of the world - whether those who are trusted will prove trustworthy - into this 'ability'. But there is a genuine problem in whether I can trust that is independent of the outside world I now face, that depends only on my capacities as developed up to this moment. Suppose there is a reasonable degree of trustworthiness in my present community. Now, if I have an adequate capacity to trust, I will benefit. Someone who lacks such capacity will be a relative loser. More generally, we can give a literal meaning to McKean's claim: "Greater ability to trust each other to stick with agreed upon rules would save many costs and make life much pleasanter" (McKean 1975, 29).² Or as Dasgupta says, trust is important because "its presence or absence can have a strong bearing on what we choose to do and in many cases what we *can* do" (Dasgupta 1988, 51, also 64; Akerlof 1970; Arrow 1963).

The best condition for humans is an environment in which they are fortunate enough to have well founded confidence (Dunn 1988, 84). This is not an individual-level problem, but is a collective problem. For me to rely on not locking up my home or shop would require that I have trust in almost everyone. The

² In context, this seems to be a claim about the trustworthiness of those we might trust.

individual-level problem here is to judge rightly what the collective behavior on trustworthiness is.

Being an optimistic trustor opens up the opportunity of great loss and of great gain, neither of which might be possible without risking trust. If optimistic trusting does lead to good returns on average, then trust contributes value. Indeed, an individual might gain more from increased trusting than from increased trustworthiness, and the external effects of greater trusting might outweigh the external effects of greater trustworthiness. There is no a priori reason to suppose that either trust or trustworthiness is the dominant consideration in general. Teaching our children to be trustworthy is likely to be good for them. But teaching them to trust - for example, by being trustworthy and supportive of their trust in our dealings with them and giving them many opportunities to test our trustworthiness - may be even better for them. In this sense, trust is, as Gambetta says, a result rather than a precondition of cooperation (Gambetta 1988, 225), although of course it is both a result of past cooperation and typically the condition for attempting future cooperation. In a Hobbesian view, trust must be a precondition of cooperation and trust is underwritten by a strong government to enforce contracts and to punish theft. Without such a government, cooperation would be nearly impossible and trust would be irrational.

If the rough account of infant 'trust' and the later capacity to be optimistically trusting is right (Baier 1986; Hardin 1991a), two plausibly large groups are at a cruel disadvantage: those whose early years are spent in fractured conditions of caprice and neglect, as in the case of many children of American innercity communities wrecked by poverty, drugs, and broken families; and those, perhaps especially women, who have suffered substantial abuse in their early years from the very persons who might have provided the first experience of trustworthiness.

The sense that the upper middle class have tremendous social advantages over others may have some of its grounding in the greater propensity of their children to trust, to risk relations that could be beneficial to them. This propensity may have been learned from the apparently justified trusting of family, friends, and others while infants and children. The terrible vision of a permanent under class in American city ghettos may have its grounding in the lesson that the children of the ghetto are taught all too successfully: that they cannot trust others, especially not outsiders or strangers but also not even closer associates. Providing opportunities of educational and economic mobility does not equalize prospects for the ingrained distruster, who cannot optimistically trust enough to take full advantage of opportunities that entail risks of betrayal.

Similarly, the many adults who were abused as very young children, often by parents and other very close relations, may have been deprived of the normal evidence that trust is justified. For them, it too often was not. Their incapacity to enter relations with others - as the woman who was sexually abused as a child may find it hard to be sexually at ease or even close to anyone as an adult - is

merely a well learned distrust. That ingrained distrust may exact a severe additional cost of the earlier abuse if the distrust is no longer justified by the conditions of the world she has grown into.³ Substantial additional experience would be required to update the Bayesian assessment of general untrustworthiness.

On this account, in some societies trust must be a benefit - or rather, it must lead to benefits. It would be in one's interest therefore to cultivate it. And it would be in the interests of one's children for one to teach them optimistic trust. Trust cannot be produced at will (Gambetta 1988, 230), although it can be willfully instilled, as in children. Moreover, as-if trust can be willed (232) repeatedly so that one may slowly develop optimistic trust, just as Pascal said one may willfully set about following religious practices in order to come to believe. In many potentially iterated prisoner's dilemma interactions, one should open with a cooperative move in the hope of engaging the other also to be cooperative. This is not merely a moral injunction. It is a rational claim of self interest (Hardin 1991a, 187-188). One should open with cooperation when the expected long-run benefits of iterated cooperation outweigh the short-term risk of loss.

But optimistic trust can be beneficial only if the general social conditions the optimistic truster faces are relatively favorable, so that statistically the acts of trust will be rewarded by trustworthiness. The huge genre of post-apocalypse films and novels of our time portray conditions in which trust is generally not justified. Life is impoverished beyond measure, with the demands of survival and struggle preempting almost all else. To have optimistic trust in these conditions might be to risk suicide. A central issue for optimistic trust is how well past experience corresponds to future opportunities.

In his account of the so-called state of nature, Hobbes portrays a situation in which trusting to any significant extent would be self destructive and even suicidal. Hobbes's actual view may be relatively modest despite his violent vision of the state of nature. He supposes that, without enforcement, the *few* who would take adverse advantage of others would finally drive others to be too defensive to enter into beneficial relations that they could readily have sustained without the threat of the few. In essence, his argument is that the potential costs of misplaced trust overwhelm the potential advantages of well-placed trust if there is no politi-

³ The incidence of severe post-traumatic stress disorder (PTSD) may be extremely high among those abused at very young ages. A recent Dutch study found that 62 percent of women who were victims of childhood incest suffered PTSD. A control group of women with "ordinary negative life events" in childhood suffered no PTSD (Albach/Everaerd 1992). PTSD, first well studied in soldiers with grim combat experiences, now seems likely to afflict abused children and women even more heavily. For example, multiple personality disorder is thought to be a severe form of post-traumatic stress disorder after childhood abuse. A central problem of effective therapy is establishing trust with patients who do not readily trust (Post-traumatic Stress: Part II [March 1991]).

cal order to secure reliability of certain kinds. Hence, trust is virtually irrational in a Hobbesian state of nature.

The psychological development of a propensity to trust involves extensive 'investment', *especially by others, such as parents*. If there has been little investment during early years, far greater investment may be required in later years to compensate. As in Robert Frank's (1990) understanding of the role of the emotions in such actions as trusting, I may now find it very hard to act as if I trust when I do not. Early trust may be rewarded enough to stimulate its further development and reinforcement. Because relevant investments were made in my development, I may have optimistically trusted enough times to begin to learn fairly well when trust is warranted and when not, so that I use trust very well. If relevant investments were not made, I may have so pessimistically distrusted or at best been so wary that I have little or no learning of the value of trust. I may seldom have put it to test. The failure of early investment by my parents need not correlate with the untrustworthiness of my associates in later life. But it might. The very fact that I have a hard time trusting even those who would turn out to be trustworthy may mean I fail to establish ongoing cooperative relations with such people and therefore disproportionately face short term relations with people who, on average, are less trustworthy, thus reinforcing my attitude of distrust or wariness. Trusters and the trustworthy may interact chiefly with each other, leaving distrusters and the untrustworthy with reduced opportunities for successful interactions.

A behavioral learning account of development, such as that of Erik Erikson, supplies an essential part of an economic or rational account of trust. It is about how particular expectations develop from experience. Such expectations are, of course, central to the rational account. "The firm establishment of enduring patterns for the solution of the nuclear conflict of basic trust versus basic mistrust in mere existence is the first task of the ego, and thus first of all a task of maternal care." What is needed is not simply quantities of food, etc., but the quality of the maternal relationship. "Mothers create a sense of trust in their children by that kind of administration which in its quality combines sensitive care of the baby's individual needs and a firm sense of personal trustworthiness." (Erikson 1963, 249)⁴

If trust is learned from experience, there is little sense in the claim of some that trust is a more or less consciously chosen policy for handling the freedom of other human agents or agencies (Dunn 1988, 73, 80; Luhmann 1979, 19). I just do or do not trust; I do not, in an immediate instance, *choose* to trust. Trusting need not be purposive (Baier 1986, 235). I do not trust you in order to gain from

⁴ John Bowlby and his co-workers have assumed that the child faces ethological constraints during development. For example, if language is not learned before a certain young age, it cannot be learned thereafter. So too there might be developmental stages in attachment (Bretherton 1992, 762) and trusting.

interacting with you. But, because I do trust you, I can expect to gain from interacting with you if a relevant opportunity arises. That is all it means to say I trust you. I might choose to take a risk on someone that goes beyond what I would trust of that person. But my level of trust is defined, either fairly accurately from experience with that person or vaguely by Bayesian generalization from my, perhaps very limited, experience of others.

On a reasonable view of the epistemology of trust, it also follows that common claims that trust is a gamble or risky investment are at least elliptical and perhaps confused. Baier (1985, 61) says trusting someone is always a risk "given the partial opaqueness to us of the reasoning and motivation of those we trust and with whom we cooperate" (also see Gambetta 1988, 235). Trust is not a risk or a gamble. It is, of course, risky to put myself in a position to be harmed or benefited by another. But I do not calculate the risk and then additionally decide to trust you; my estimation of the risk is my degree of trust in you. Again, I do not typically *choose to trust* and therefore act; rather, I do trust and therefore *choose to act*. The degree of trust I have for you just is the expected probability of the dependency working out well. On Luhmann's general account, trust is a way of dealing with the risks inherent in complexity. To say, on top of this, as he does (Luhmann 1979, 24) that trust is itself a risk is to compound the single risk at stake.

6. Low and High Capacity for Trust

On a Bayesian learning account, those who start life badly are disadvantaged by the continuing loss of welfare in forgone opportunities from low capacity for trust. The disadvantage must continue until they have enough experience to update their estimates of the general trustworthiness. Consider how devastating the early abuse and development of low trust is in the Bayesian account. Suppose that, in our society, trust at reasonable levels usually pays off. If I was so heavily abused as a very young child that I now expect almost no interaction to pay off, I will enter into very few of the potential interactions I face. I will suffer from what former President Jimmy Carter calls "hopelessness based on sound judgment".⁵ I am objectively wrong in my assessments, but my assessments make eminently rational sense given the perverse experience I have had.

As a common-sense Bayesian, I may eventually correct my earlier assessment of how poor the prospects are. To do so, I would have to have many interactions that typically paid off well, so that my aggregate experience, from early to recent, begins to approach the average experience. But, because I have such low expectations, I am willing to test very few interactions. If you had a generally

⁵ Jimmy Carter's remarks at the Russell Sage Foundation, New York, 24 September 1992, during a brief account of an Atlanta project to reach the very poor.

good experience of the benefits from trusting, you would readily enter into far more of these interactions. It therefore would take me longer to gain data to recommend changing my pessimistic assessments. All the while, I also enter fewer interactions and therefore benefit less than you do as you enter many, which, on average, pay off well. If we start with similar levels of welfare, you soon outdistance me.

Suppose on the other hand that I started life with such a charmed existence that I now am too optimistic about trusting others, so that I often overdo it and get burned. Because I am trusting, I enter into many interactions and I collect data for updating my Bayesian estimates very quickly. My aggregate experience soon approaches the aggregate average and I reach an optimal level of trust that pays off well in most of my interactions, more than enough to make up for the occasions when I mistakenly overrate the trustworthiness of another. Oddly, therefore, if parents are to err on one side or the other in instilling a belief that others are trustworthy, a strictly Bayesian account suggests that they should err on the side of instilling greater optimism in others than they think is objectively warranted.

Modeling Bayesian trust. The alternative conditions of high and low capacity for trust may be modeled simply as in the model in figure 1 (p. 167). To simplify the problem, make the following assumptions. (1) Suppose the objective world that we now face is one in which the distribution of trustworthiness is linear from 0 percent to 100 percent trustworthy. (2) We are all competent to assess the *relative* trustworthiness of people, but we may have different mean estimates of how trustworthy they are *absolutely*. That is, you and I would both rank the same kinds of people as most trustworthy and the same kinds as most untrustworthy. But you might optimistically expect all people to be more likely trustworthy than not, while I pessimistically expect all to be more likely untrustworthy than trustworthy. (3) There is a net, positive payoff from trusting someone who fulfills the trust and a loss from trusting someone who defaults on the trust. (4) The objective value of the potential loss and gain is the same for all potential partners to interaction, but the probability of getting the gain ranges from 0% to 100%. Hence, the (objective) expected payoff will be lower for trusting the (objectively) less trustworthy than for trusting the more trustworthy.

There is an objective break-even point at which the average return from trusting a person of that degree of trustworthiness is neither gain nor loss. The difference between a very optimistic truster and a very pessimistic distruster is that the latter supposes this break-even point is reached only for interactions with (objectively) very trustworthy people, while the former supposes it is reached already at significantly lower levels of (objective) trustworthiness. One who trusts at the optimal level for this population supposes the break-even point is where it is objectively.

For the person of low trust in figure 1, the break-even point occurs (in the subjective estimate of the low truster) at L, or about 85% objective trust-

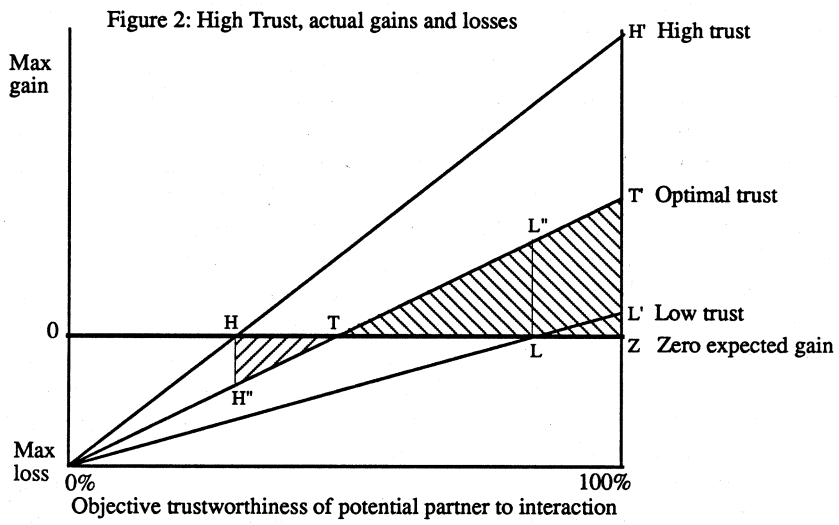
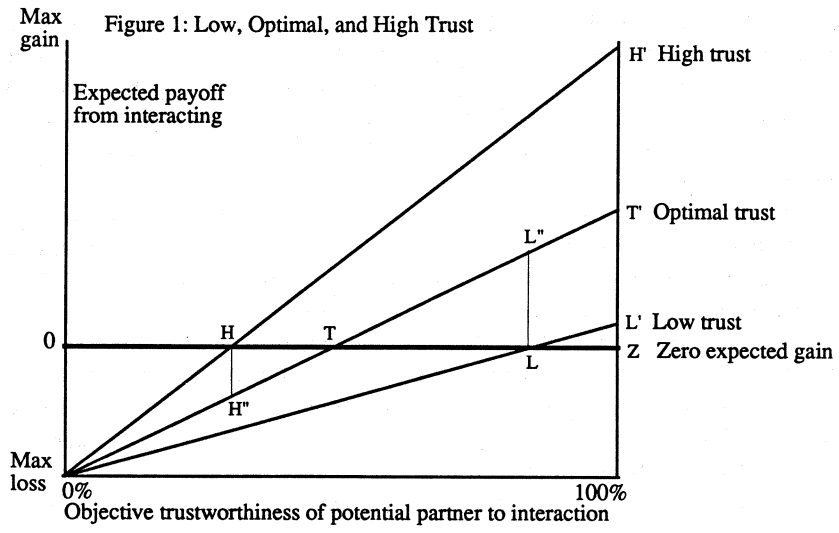
worthiness. For the optimal truster it occurs at T, or about 50%, and for the high truster at H, or about 30% trustworthiness. All three will trust only above the respective break-even point and will not trust below it. The distruster will therefore trust relatively seldom, only in the range L to Z. The excessively optimistic truster will trust very often, but will lose in the range from H to T. These losses will be offset by gains from trusting in the range T to Z. The optimal truster will trust in the range T to Z and will have an expected net gain throughout that range.

The optimal truster will have the largest actual payoff from risking trust, as represented by the large triangle TZT' (the right hand cross hatched triangle in figure 2). The distruster has the much smaller expected payoff represented by the small triangle LZL', but the larger actual payoff represented by the trapezoidal area LZT'L" under the optimal trust line to the right of L. The high truster has an expected payoff of the very large triangle HZH', but the smaller actual payoff that is the optimal trust payoff less the loss represented by the small triangle HTH" (the left hand cross hatched triangle in figure 2). The latter triangular area represents the losses from too optimistically trusting those who are too unlikely to be trustworthy. The difference in payoffs for the three conditions of trust could be enormous, with the optimal truster several times better off than the distruster. For the values given in figure 1, the optimal truster's payoff is somewhat larger than that of the high truster and about two and a half times that of the low truster.

Finally, note that the excessive truster will enter far more interactions than will the distruster and will therefore have many more direct opportunities to correct her judgment of the break-even point and the actual distribution of trustworthiness. The distruster will have far fewer direct opportunities to correct his judgment and will lose even in comparison to someone who entered the society as an idealized Bayesian who guesses that the average person would cooperate at, say, the 50 percent level.

Great distrust essentially implies an expected loss from most interactions, as represented by the large triangle defined by the segment OL and the point at the lower left. The area of this triangle is very much larger than the expected gain, area LZL', for the low truster. Total distrust would seemingly lead to no interactions, resulting in zero payoff with neither gains nor losses. As Dunn artfully remarks, "Determination to avoid being a sucker, if generalized to the human race, would subvert human sociality more or less in its entirety" (Dunn 1988, 85; also see Luhmann 1979, 88). It would be worse than that: it would utterly subvert individual existence as well. With a complete absence of trust, one must be catatonic, one could not even get up in the morning (Luhmann 1979, 4).

Luhmann says that neither trust nor distrust is feasible as a universal attitude (Luhmann 1979, 72). This follows as an analytical claim for distrust. For trust,



however, the claim is empirical and wrong. Trust as a universal attitude could pay off for someone in a very benign world in which the level of trustworthiness is quite high. There have surely been such worlds, although Luhmann's claim is likely true for most people in modern industrial states. Even in only modestly supportive worlds, however, adopting an attitude of optimism toward trusting others may be beneficial. It is risky, but the gains might outweigh the losses. Or perhaps one should speak not of adopting an attitude of optimism but of adopting the behavior of an optimistic truster. That behavior opens up the possibility of discovering the trustworthy.

Great trust implies expected gain from most interactions, as in the triangle HZH'. If the optimal trust line crosses break even at 50%, then never trusting and always trusting have the same net payoff of no gain or loss. But the 100% truster has many interactions from which to learn better about the world; the 0% truster has none. The high truster does the equivalent of as-if testing; the distrustor does not. Suppose we wish to correct the deficiencies with which low trusters face the world. *Simply providing equal opportunity will not accomplish this end.* In figure 1 and throughout this discussion, the various trusters are assumed to face identical opportunities as of the time of their current interactions. The low truster nevertheless loses ground and suffers severe relative welfare losses. An equal opportunity program cannot stop that morose trend.⁶ The losses are not merely of opportunities but of the capacity to capitalize on opportunities.

There may be other correlates of high and low capacities for trust from early learning. For example, one may develop a capacity for spontaneity from being able to trust people not to react badly, even to react positively, to one's odd experiments or ways. Narcissists are also characteristically spontaneous - yet they do not get that way from a supportive experience. Indeed, the source of narcissistic personality disorder is thought to be severe neglect rather than abuse. If parents and other caretakers are neglectful, perhaps because of alcoholism or severe illness, during the first year or two of a child's life, the child may learn not to take others into account, neither to trust nor to distrust.⁷

Shortcomings of the model. There are many complications that are not captured in the model of figure 1. These include the stated simplifying assumptions, such as, for example, the linearity of distribution of objective and expected trustworthiness. In addition, note the following.

First, the model ignores the relative size of loss and gain at risk. If the downside of risking an interaction is extremely bad compared to the benefit of a successful interaction, one will require much higher probability of gain to offset

⁶ Perhaps this is the sense of Luhmann's (1979, 74) claim that distrust is self-reinforcing: It does not generate enough information for the distruster to correct her view of possibilities.

⁷ This may be another ethological constraint on development (see fn. 4 above).

the occasional losses. The break-even point would move to the right in figure 1. In experiments on the iterated prisoner's dilemma, as the sucker's payoff (the loss from cooperating with another player who defects) increases, rates of cooperative play decrease and eventually there is no cooperation. This shortcoming can easily enough be accommodated in the model.

Second, in a point that is related to the first limit of the model, the model ignores the possibility of varied weights of potential interactions. Such variety is implicit in the claim that trust is a three-part relation: A trusts B to do x. In one interaction I might merely trust you to put a quarter in my parking meter while in another I might hope to be able to trust you to take care of my small child. I might loan you a dollar or a thousand dollars. If there were no correlation between the scale of what is to be trusted with the likelihood of any person's trustworthiness in fulfilling the trust, this issue would not matter. But it seems generally implausible that there is no such correlation. Everyone is likely to be a lower truster for high stakes than for low stakes.

Third, the model ignores strategic effects such as as-if trust behavior to test the trustworthiness of people of a particular kind and, more generally, the incentive effects of iterated interaction with the same person. It seems likely that one will tend initially to trust a new person only in limited ways and will trust on more important matters only after building up to them.⁸ Swinth (1967, 343) found as-if testing less important than one might think in his experimental tests.

Fourth, the model has the shortcoming of Cournot models of economic processes in that it assumes strategic calculation by the potential truster of whether to enter into interactions but does not attribute any sophistication to the potentially trusted person. The model is only half strategic.

Fifth, the model ignores the complexity of possible ways of learning. One might learn indirectly from others' experiences as well as directly from one's own experiences. In the light of the second problem of the model noted above, we may note that learning might be quite cheap with minor risks and grievously expensive with major risks. And there is greater value from learning in contexts of likely iteration of interactions.

Sixth, the model may not accommodate complex skews in trusting people, such as the trust many automatically put in a managerial or professional person even in matters outside their professional competence (Coleman 1990, 180-185, discusses various intermediary effects). This shortcoming may, however, be easily addressed within the simplified Bayesian model.

The worst of these shortcomings for an account of trust as encapsulated interest are the failures to accommodate strategic considerations, especially incentive effects in iteration (either directly or through reputational effects). Some of the other problems may be easily addressed in the more general encapsulated interest

⁸ This is a common theme in the trust literature, especially the social psychological literature. For example, see Swinth 1967.

account of trust. And some may be easily fitted into the model of figure 1. Even with its shortcomings, the simple model implies most of Julian Rotter's (1980) standard conclusions about interpersonal trust. Rotter finds that high trusters are more likely to give others a second chance (this sounds almost definitional), and they are less likely to be unhappy and more likely to be liked by others. If they are in an environment in which trust leads more, on balance, to gains than to losses, they should be less unhappy. And their openness to trusting others should lead others to select them as partners in various activities.

7. Further Implications of Bayesian Trust

Note some other important implications of the Bayesian account of learned trust. First, a newcomer to a community may similarly be disadvantaged in ways that are perversely reinforcing. Second, enforcement and sanctions may have a strong positive effect on capacity for trust in contexts well outside the coverage of the sanctions. Finally, the Bayesian learning account undercuts conceptual claims that trust is a form of human capital.⁹

The outsider. Consider the condition of an outsider or new immigrant to a community. The outsider may initially seem untrustworthy to others in the community. This could follow merely from a Bayesian guess, a judgment of that person as less likely to be trustworthy than those who are long well known. Until more knowledge of her trustworthiness is generated, she is given fewer opportunities to demonstrate trustworthiness. Hence, it may take depressingly long for her to become trusted. Since, again, the combination of trusting and being trusted conveys benefits in various kinds of exchange and mutual aid, the outsider faces greater difficulties getting ahead and may begin to seem less able and worthy. Superficially, we might suppose a group that held off from trusting an outsider for a long time was prejudiced in a racist or related sense. But the rational prejudice of the Bayesian might be sufficient to explain the community's attitude.

Alejandro Portes and Julia Sensenbrenner (1993) describe an informal financial system in the Cuban immigrant community in Miami in the 1960's after Fidel Castro came to power. Newly arrived immigrants with no collateral could obtain so-called "character loans" based on the entrepreneurial reputations they had in Cuba. Reputedly, these loans, ranging from \$10,000 to \$30,000 were invariably repaid and their recipients often went on to great prosperity.

These loans involved trust by the Latin bankers who made them. Portes and Sensenbrenner call that trust enforceable. Why? Because the Cuban exiles were virtually trapped. They could prosper in this transplanted Cuban community only if they proved reliable in repaying their loans. But there was nowhere else for

⁹ Other learning accounts might have similar implications.

them to go where they could prosper. They could not return to Cuba and there was no welcoming community elsewhere. There was no other community of people who had natural access to their reputations and who could have trusted them in the sense of having good reason to believe that their incentive to be trustworthy was compelling, even overpowering. They were an unusual case: outsiders with almost insider status in one exclusive community on which they were fully dependent. The availability of that status was brief. By 1973, character loans ended, because the newly arriving Cubans were no longer known to the local banking community, and they might also have had little or no entrepreneurial success in Cuba on which to ground a reputation.

Many of us, of course, might start by trusting newly encountered people or people in newly undertaken areas. Even then we would not trust in very important matters without a substantial prior history of trustworthiness. If we were outsiders, we might be open to as-if trust in order to get started. But if we were fully outsiders or if we had other communities to turn to, we might readily prove to be untrustworthy in the face of large burdens. Hence we could not be trusted as readily as the 1960's Cubans in Miami.

Sanctions and trust. Sociologists writing on trust are generally concerned with social mechanisms that generate trust (e.g., Luhmann 1988, 95). Luhmann supposes that the structure of trust relations requires that calculation of risk remain latent. Yet contractual relations may require such calculation to be overt and present and may therefore introduce an atmosphere unfavorable to trust. When such interdependence already exists, so that the risks are openly known to all without need of specific present discussion, mutual understanding and trust may be enhanced (Luhmann 1979, 36). This merely means that the transition from informal to formal regulation of relations may be uneasy, as the street-level Bayesian should expect. New conditions that have ill defined prior expected probabilities attached generally introduce initial instability. But the results of successfully completing that transition may be to enhance trust.

Coleman (1990, 114) says development of norms with sanctions enhances cooperation. This is also Hobbes's theory: Creation of strong sanctions to protect each makes all better off. In Hobbes's account of the need for a powerful state, what is mainly needed for most people is merely enough security to be able to enter into exchange relations with others without fear of being killed for what one has or merely preemptively (Hardin 1991b). Without the background of police protection I may be wary of you altogether. With police protection I may readily engage with you in varied activities for mutual benefit. If I no longer need distrust you for possibly having very violent motives against me, I can begin to trust your minor motivations to gain from mutual interaction.

At the more mundane level of daily life, we may note, with Bernard Barber (1983, 170), that trust can be enhanced by making distrust and devices for social control more effective. How can trust be enhanced by enforceable contract (or by audits with the threat of sanction)? The contract or audit may protect a relation-

ship against the worst of all risks it might entail, thereby enabling the parties to cooperate on less risky matters. Without the threat of sanctions, they might have been able to do none of these. Recall the problem of prisoner's dilemma games with large sucker's payoffs, as mentioned above. If you and I can arrange to have the worst possible payoffs blocked - by legal sanction if necessary - we can go on to cooperate to our mutual advantage. McKean thinks we value enforcement mechanisms partly because we recognize "how costly life would be without trust, even if the basis has to be created in part by such enforcement mechanisms" (McKean 1975, 31).

Consider a particularly interesting case. Under foreign (Habsburg) rule, Sicilians and southern Italians were able to trust neither the fairness nor the protection of the law (Pagden 1988; Gambetta 1988, 162). Theirs was not a fully Hobbesian state of nature, but it had Hobbesian tendencies. In such conditions as theirs, distrust plausibly breeds distrust and today, long after the Habsburgs have left the stage, distrust continues. Not being able to trust the state leads to not being able to trust other individuals (Gambetta 1988, 163). People do not cooperate when it would be mutually beneficial; they compete in harmful ways; they refrain from competing in those instances in which they could all gain from competition (158). They engage in the promotion and selective exploitation of distrust (159).¹⁰ A stronger regime capable of coercively overriding the influence of the mafia could enhance the grounds for trust. Most Sicilians would not be coerced by law that coerced the mafia. Rather, they would be freed of coercion by the mafia if such law worked.

Sanctions need not come from legal authorities, of course. They commonly are built in from iteration and expectation of continued gain that outweighs momentary gain from defection. The incentive to cooperate (or to fulfill a trust) and the sanction not to do so are one and the same. They are the benefits of future interaction that ride on present trustworthiness. For an apparently extreme case, Coleman discusses a £200,000 spot loan from the Hambros merchant bank in London to a foreign shipper, negotiated almost instantly over the telephone and delivered immediately. He says the loan was made with nothing more substantial than the ship owner's intention to repay and the Hambros man's belief in both the ship owner's honesty and his ability to repay (Coleman 1990, 92). It seems unlikely that this was really true. There was some threat (surely left unstated) of suit and court enforcement. Even if enforcement was not guaranteed, suit could be initiated and, once undertaken, was likely to have reputational consequences that would have been costly to the ship owner in the future. But even this sanction is largely informal.

¹⁰ There are other factors that further burden Sicilian society. For example, economic backwardness produces little opportunity for advancement. A standard way to advance is to prevail over others in one's own society - hence, advancement is a positional good (Gambetta 1988, 163).

To fully judge the Hambros loan, we must back off from the instant case and consider the question whether it is in the interest of such bankers to do what Hambros did. The answer seems likely to be yes if a sufficiently high degree of trustworthiness can be assured through legal, reputational, or other incentives. Trusting opens up opportunities for doing business.

Trust as capital. One might speak of trust or the capacity for trust as a form of human capital. But it is an odd form. For much of what is called human capital, we assume direct investment in its creation in the face of opportunity costs of other things not done. The capacity for trust could come about through the deliberate investment of someone in the development of a child. Much of the time, however, the capacity for trust must seem more nearly like an accidental by-product of activities that give the child experience of rewarded trust but that were not undertaken for that purpose. Trust must be learned, but the most important learning is apt to be inadvertent. Hence, high capacity for trust is a by-product of fortunate experience. As in the joke about life more generally, trust or distrust is what happens to us while we're making other plans. Yet Luhmann, Dasgupta, and others refer to trust as a kind of human capital.¹¹ That is a misleading way to characterize it, perhaps grossly misleading.

Let us spell this out. Contrary to the wording of the previous paragraphs, 'investment' may be the wrong term altogether for what leads a typical infant and child to have a capacity for trust. The parent may do things for the child out of love or instant pleasure in the child, not out of a deliberate program to put so much time into the development of the child's capacity to trust. (A woefully misdirected Kantian or utilitarian might put in time with a child only to help it develop.) That capacity is therefore not a full analog to standard notions of human capital. A typical Olympic swimmer has great human capital from giving up inordinately many hours to train, sometimes in the water, sometimes in the weight room. A child might grow up loving to swim and spending many hours in the pool and might therefore be quite good. But the child might have sacrificed nothing to become a better swimmer, the child might have preferred swimming over every other available activity at the time. For the Olympic swimmer, swimming or weight-lifting might often have been an ordeal. Because the child enjoyed, even preferred the activity of swimming while doing it, the *de facto* training and development that came from the swimming had little or no opportunity costs. The development was just a fortuitous by-product of taking the pleasure.

¹¹ Luhmann speaks of trust as capital in a passage in which his subject seems not to be trust but, rather, trustworthiness (1979, 64). One could straightforwardly invest in becoming trustworthy or in a reputation for trustworthiness. The appearance of trustworthiness may therefore be a capital asset in some cases. But to treat trust as human capital is confusing.

Development of a capacity to trust, either in infancy or in later life, has more in common with the development of the non Olympic child's swimming capacity than with the arduous training of the Olympian. It is just a fortuitous by-product of activities undertaken in their own right. Indeed, it is even more fortuitous than that. It is very much the by-product of experiences over which the individual may have had little control, experiences which the individual did not even undertake. For example, you may have a great capacity for trust because you grew up in a wonderfully supportive family and because your later life has been in a society in which optimistic trust pays off handsomely. You are accountable for little or none of your capacity, you are merely its beneficiary. Any actual instance of your trusting someone will depend on this past experience and also, of course, on the apparent future incentives of the trusted to do what you trust her to do.

8. Concluding Remarks

In many accounts of trust, including Coleman's (1990) strictly rational account, one might suppose those who are to trust are all interchangeable in the following sense. Given the same incentives (potential objective payoffs), we would all trust to the same degree. But there is an important prior element that some might think of as psychological: We may have different capacities for trust. This issue should not be treated as psychological in the sense of irrational or not rationally justifiable but, rather, as essentially epistemological, and hence as pragmatically rational. The sometime claim (e.g., Aguilar 1984) that there is a psychological dimension of trust that is different from the cognitive or calculative or rational may be little more than nascent recognition of this epistemological problem.

A problem with the encapsulated interest account of trust is that it is inherently subjective in the following sense. *What it is sensible for a given individual to expect depends heavily on what that individual knows, both about the past and the future of the person or other party to be trusted.* Obviously assessments of the future matter for an expectations analysis. But why the past? Partly for reputational reasons. But also because the past reveals the other's capacity to trust and be trustworthy. To a very large extent, this is merely the capacity to judge the likely risks and benefits of entering trust relationships.

These retrospective and prospective views imply that there are two, perhaps causally related, kinds of knowledge about another that play a role in assessments of trustworthiness. First, there is simple inductive knowledge of the kind that goes into reputation. The American anti-communists, discussed earlier, had some inductive knowledge on which they based their conclusions. The second kind of knowledge is theoretical. Economists had theoretical knowledge about people in general and about the working of centrally determined and market determined economic outcomes. Many economists thought their theoretical knowledge must eventually trump inductive knowledge about loyalty to communist ideology.

A general problem with inductive knowledge, if it is completely atheoretical, is that it cannot justify a claim that what has always happened before must happen again. Most of us are willing to live with inferences that various things will continue to happen in the ways they always have happened so far. But we are apt to suppose there are reasons for this, merely that we do not know the reasons. The economists' theoretical knowledge about economic productivity gave an explanation (perhaps wrong) of why the trend of loyalty to communism must eventually end. A relevant answer to the economists would have to be grounded in an alternative theoretical claim. The anti-communists generally proposed no alternative theory, they merely asserted the certainty of the communists' continuing irrationality.

A full account of rational trust must be grounded in reasons for expecting another to fulfill a trust and in reasons for holding general beliefs about trustworthiness. These are addressed, respectively, by the incentive account of trustworthiness that justifies and explains trust and by the common-sense Bayesian account of learned trust. The common-sense Bayesian is little more than an inductivist who generalizes from the past to the future, as in the model of figure 1. To break the hold of a bad and misleading past, the Bayesian requires a lot of new experience or a bit of theory that runs counter to prior experience. The model of figure 1 suggests that correcting the pessimistic Bayesian estimates of trustworthiness merely by amassing better experience may be very slow, so that these misestimates produce a long string of lost opportunities. Understanding that others will be trustworthy when their incentives are right, as in the encapsulated interest account of trust, may hold greater, quicker promise for grasping those opportunities. This requires seeing the choices of others from their perspective to comprehend their incentives. Then trust becomes fully strategic. It is no longer merely induction on senseless facts.

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