How do We Learn to Trust? A Confirmatory Tetrad Analysis of the Sources of Generalized Trust

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ABSTRACT

How do people decide whether others are generally trustworthy or untrustworthy? In this paper we ask whether individuals decide that people are trustworthy by extrapolating from their experiences in interactions with others or whether a general predisposition drives trust. These two contrasting theoretical perspectives on generalized trust can be tested using a statistical technique called confirmatory tetrad analysis. Our findings, based on two nationally representative samples and one urban sample, suggest that people develop trust based on their experiences with different groups of people.
INTRODUCTION

How do people decide whether others are generally trustworthy or untrustworthy? We investigate whether individuals generalize from trust experiences in local interactions or whether a more fixed, internal predisposition to trust drives assessments of trustworthiness. The question is important because trust figures prominently in current discussions of cooperation (Cook 2005), democratic governance (Paxton 2002; Putnam 2000), and economic development (Fukuyama 1995). Trust is also an essential component of social capital (Paxton 1999; Putnam 2000), which is the latest refinement of classic sociological ideas such as *gemeinschaft* (Tönnies [1887] 1957), civil society (Calhoun 1993), and civic culture (Almond and Verba 1963).

Trust, or the expectation of good will in others, can apply to specific persons, such as friends or neighbors. Trustors also form a “standard estimate” of the trustworthiness of the average person – someone who is not a friend, not even an acquaintance (Robinson and Jackson 2001). Yamagishi and Yamagishi (1994:139) call this type of trust “general trust”, as it reflects “a belief in the benevolence of human nature in general.” We focus on generalized trust because trust in one’s particular group, or in only a segment of the population, is inadequate to explain many of the aggregate benefits of trust. As an example, generalized trust is important in democratic systems because individuals must be willing to place political power in the hands of “the people” (Paxton 2002). Altogether, trust is seen as foundational to understanding cooperative behavior of many types. Trust can act both alongside formal methods of enforcing cooperation, such as contracts or laws, and in the absence of such methods.

The central question of this paper is whether trust in particular groups of people is important to the development of generalized trust. Put another way, does the trust developed in local groups, such as family, neighborhoods, and voluntary associations contribute to generalized
trust? An alternative perspective argues that generalized trust, indeed all types of trust, comes from an internal psychological propensity, likely formed in early childhood.

In light of research that suggests that generalized trust is declining in the United States. (Paxton 1999; Robinson and Jackson 2001), it is important to understand how trust can be enhanced. Is trust malleable and dependent on the social environment or is it rigid and resistant to change? If the propensity to trust is cemented during childhood, educating parents on how to socialize their children would be an appropriate prescription. However, if ongoing experiences in adulthood shape trust, rebuilding trust might occur in neighborhoods, voluntary associations, etc. If we find support for the latter perspective, our results will also speak to which social spheres have the greatest influence on trust. The paper therefore helps to address a fundamental question in research on cooperative behavior: what are the sources of trust?

THEORIES ABOUT TRUST

Trust can be described as an expectation that people will behave with good will, that they intend to honor their commitments and avoid harming others (Barber 1983). Two major perspectives on trust dominate the literature. One perspective views trust of all types as driven by a highly stable psychological propensity, unlikely to be appreciably modified by commonplace experiences. This perspective sees trust as a psychological predisposition, a propensity to trust other people that is innate or formulated early in life (e.g., Becker 1996; Jones 1996; Uslaner 1999, 2002; Wrightsman 1992). This predisposition influences all trust decisions. So an assessment of whether people are trustworthy in general relies upon the same propensity to trust as an assessment of a specific actor.

Arguments for a psychological propensity to trust arise as two main variants: (1) trust as a psychological trait and (2) trust as developmentally learned. As a psychological trait, trust can
be viewed as an innate characteristic or general disposition of an individual (Costa and McCrae 1992; Couch and Jones 1997). For example, Uslaner argues across different writings that trust is linked either to optimism or morality. In either case, it is “a world view, not a summation of life experiences” (Uslaner 1999:138). Another variant of this theme views generalized trust as a predisposition developed by individuals early in life. In this perspective, a generally positive or negative outlook on others is fashioned early and forms the foundation for assessments of trustworthiness later (Bowlby 1969; Uslaner 1999). As one piece of personality development, the capacity for trust is cemented in infancy (Bowlby 1969; Erikson 1964). Indeed, learning to trust the caregiver is seen as the initial task of human development. For example, Wrightsman (1992) argues that beliefs regarding whether human beings are inherently trustworthy, moral, and responsible stem from the childhood environment and from personality. Even later in life, these formative experiences drive adult propensities to trust others.

The two variant views of trust as a psychological predisposition lead to the same conclusion: a general propensity to trust, either innate or learned early in life, influences all contemporary trust decisions. Individuals rely on this background propensity to make every trust decision. Further, the perspective implies that the disposition to trust is largely unwavering—current experience does not play a large role in whether an individual trusts people in general. In summarizing this “personality trait approach,” Couch and Jones (1997:322) explain that it “assumes that individuals vary in trust more-or-less independent of their contemporary interpersonal experience.”

In contrast to the psychological propensity perspective, a second theory of trust, the social learning perspective, suggests that people extrapolate from localized experiences to produce their estimates of generalized trust (Hardin 2002; Rotter 1971; Burns and Kinder 2000;
Yosano and Hayashi 2005). In this perspective “each individual encounters a variety of others who treat him positively or negatively, who keep their promises or do not. Each person generalizes from these past experiences in the process of developing expectancies about how the next person will treat him” (Stack 1978:563). People make their “skeptical judgment largely by generalization from past encounters with other people” (Hardin 2002:113).

A fundamental assumption of the social learning perspective is that individuals develop different levels of trust across different domains of interaction. For instance, Burns and Kinder argue “The trust people invest in family members is not likely to be the same as the trust they place in people at work” (2000:3). This is because individuals have different types of experiences in different localized settings. Interactions and opportunities for trust differ across families and workplaces, for example. Individuals may also bring different standards to bear across different localized settings, so that the same experience in two different settings produces different trust outcomes.

The social learning perspective suggests that individuals rely upon the trust developed with particular groups of people, such as family, neighbors, and fellow voluntary association members in the formation of a more generalized sense of trust. Thus, generalized trust is the result of a wide-ranging summation of past experience in more localized domains (Burns, Kinder, and Rahn 2003; Rotter 1971). Based on their trust of different groups of people in different settings and circumstances, individuals gradually develop a generalized expectation of what others, on average, are like (Rotter 1971).

DEVELOPING TESTABLE MODELS OF THE PERSPECTIVES

The psychological propensity and social learning perspectives can be translated into two testable models. Figures 1a and 1b are path diagrams that summarize the differential predictions
made by the two perspectives. Both perspectives are consistent with the idea that, as an abstract theoretical concept, generalized trust, cannot be perfectly captured by any one, imperfect measure and is best considered a latent variable. Latent variables are unobserved factors that represent our theoretical concepts. They are not directly measured but instead either influence, or are influenced by, our observed measures, or indicators. In path diagrams, latent variables are represented by ovals; their observed indicators are represented by boxes. We divide the indicators of trust between indicators of localized trust in family members, neighbors, coworkers, church members, and persons who work in stores, and indicators of trust in more generalized domains.

Note: In structural equation models, the exogenous variables are usually allowed to intercorrelate, which is indicated in the path diagram for the social learning model by the straight bar with arrows pointing to each of the trust domain variables. The shorter arrows pointing to the boxes represent the measurement errors for the observed variables and the short arrow pointing to the latent variable in the social learning model indicates the error term for its equation.
As illustrated by Figures 1a and 1b, a key difference between the perspectives is in the direction of the arrows between the latent variable and trust in particular domains, such as family. The psychological propensity perspective argues that a propensity to trust drives both trust in people in general (“people can be trusted”) and trust in more localized domains. An individual’s overall high or low generalized trust influences that individual’s perceptions of the trustworthiness of different groups of people, including imagined ones. Therefore in Figure 1a, the direction of influence runs from generalized trust to all types of trust. In contrast, the social learning perspective predicts that high trust in various domains produces greater generalized trust. Thus, in this model trust in neighbors, family, and so on is shown to influence one’s general sense of trust. Therefore, in Figure 1b the arrows run from localized trust to generalized trust. Put in structural equation modeling terms, the difference in direction of the arrows between the two models is a difference between effect and causal indicators of latent variables (Bollen and Lennox 1991). Effect indicators are observed, measured variables that are influenced by the latent variable. The psychological propensity model views trust in the domains of family, neighbors, co-members of voluntary associations, etc. as effect indicators. The social learning model views trust in these domains as causal indicators of generalized trust.

Fortunately, the disagreement between these two models can be evaluated empirically. Using a recently developed technique in structural equation modeling, confirmatory tetrad analysis (CTA) (Bollen and Ting 1993; 2000; Hipp, Bauer, and Bollen 2005), we can evaluate which of these theoretical models is most consistent with empirical data. CTA tests whether a group of indicators should be considered causal or effect indicators. Thus, CTA can test whether localized trust items are best treated as causal or effect indicators of generalized trust. The
answer will shed light on which of the two theoretical perspectives, social learning or psychological propensity, is more plausible.

DATA

We use data from the Social Trust Survey (STS) (Pew Research Center 1998) and the national component of the Social Capital Benchmark Survey (SCBS) (Roper Center for Public Opinion Research 2000). These data sources provide a unique opportunity to address our question, because they contain multiple indicators of localized trust and also measures of generalized trust. The STS consists of two separate samples: the Greater Philadelphia Social Trust Survey of 2,517 adults from Philadelphia and four adjoining counties and the Social Trust Survey National Component of 1,003 adults nationwide. The national component of SCBS surveyed 3,003 adults. We test our models on all three samples to demonstrate replication across disparate samples and validity across spatially dissimilar survey sites.

In the Social Trust Survey, three questions measure an individual’s generalized trust in others: “would you say that most of the time people try to be helpful, or that they are mostly just looking out for themselves?” (HELPFUL); “do you think most people would try to take advantage of you if they got the chance, or would they try to be fair?” (FAIR); and “generally speaking, would you say that most people can be trusted or that you can’t be too careful in dealing with people?” (TRUST). Although only one of the variables uses the word “trust,” all three reflect an individual’s assessment of the general trustworthiness or integrity of others. In the Social Capital Benchmark Survey, TRUST is the only available measure of generalized trust.

In the Social Trust Survey, six questions measure an individual’s level of trust in more localized domains. On a four-category scale (1 = a lot to 4 = not at all), respondents were asked

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1 We divide the Philadelphia sample into two subsamples because half of the respondents were asked the HELPFUL item, but not the FAIR item, while the other half were asked the FAIR item but not the HELPFUL item.
how much they trust “people in your immediate family,” “people in your neighborhood,”
“people you work with,” “people in your church or place of worship,” “people in the same clubs
or activities as you,” and “people who work in the stores where you shop.” Although the referent
for the localized trust questions is still ‘people,’ the setting is specified. Respondents must now
consider fellow church members, family members, or neighbors. Exactly the same measures for
trust in neighbors, coworkers, church members, and store workers are available in Social Capital
Benchmark Survey.

RESULTS

Testing the Models of Trust

The first panel of Table 1 evaluates whether the psychological propensity model is
consistent with the data. A statistically significant $\chi^2$ indicates a lack of consistency between the
model and the data and therefore doubt casts on the validity of a model. In all but one sample
(Philadelphia Sample 1), the $\chi^2$ is statistically significant for the psychological propensity model.
Thus, the confirmatory tetrad analyses suggest that fit of this model is poor, and that the model is
not consistent with the empirical data. The second panel of Table 1 summarizes the fit for the
social learning model across the samples. In contrast to the psychological propensity model,
none of the $\chi^2$s for the social learning model are statistically significant. Therefore we can
conclude that this model is consistent with the data.
The psychological propensity and social learning models can also be tested against each other directly to assess whether the fit of the psychological propensity model is in fact significantly worse than the fit of the social learning model. The third panel of Table 1 summarizes these results. In these “nested tests” a statistically significant $\chi^2$ means that the psychological propensity model is less consistent with the data than the social learning model. With only one exception, the nested test is statistically significant. Thus, the social learning model is more consistent with the data than is the psychological propensity model, suggesting that the social learning model is more appropriate than the psychological propensity model. The psychological propensity perspective’s assumption that localized trust in family, neighbors, church members, club members, and store workers does not influence generalized trust is incorrect. Instead, the confirmatory tetrad analysis results indicate that trust in neighbors and in other localized interactions drives an individual’s sense of whether people in general are
trustworthy. We next examine more closely which specific trust opportunity structures generate greater generalized trust.

*Effects of Domain Trust on Generalized Trust*

Table 2 presents the estimates for the effects of the localized trust settings on generalized trust for the four samples. We included controls for education, income, race, and gender in additional analyses and found that controlling for these sociodemographic factors does not appreciably alter the conclusions regarding the influences of trust in the various domains. Before turning to the coefficients themselves, it is worth pointing out that across all of the samples, trust in the domains included in our models explains about half of the variation in generalized trust. Thus, positive trust experiences in localized settings have a powerful influence on generalized trust. These results therefore support the confirmatory tetrad analysis in suggesting that individuals generalize from experiences in particular domains in formulating their assessments of the trustworthiness of people in general.

Trust in neighbors and store workers stand out as the two domains that consistently have statistically significant positive influences on generalized trust across all of the samples. Not only is the positive influence of neighbor trust consistent across all of the samples, but it has the largest influence in the Philadelphia samples. These results suggest that trust experiences in neighborhoods are particularly important in the formation of generalized trust. Positive interactions with neighbors are a way of increasing generalized trust, while negative interactions with neighbors could undermine generalized trust (Yosano and Hayishi 2005). Experiences with store workers also appear to significantly influence generalized trust. For many people, shopping might provide greater opportunities to interact with a wider public than most other aspects of their routines. Experiences in a more public sphere are more likely to provide contact with
persons from different social backgrounds than encounters with one’s family, neighbors, and friends. Encounters with persons who do not share one’s sociodemographic characteristics could be particularly important in gauging how much to trust people in general. Indeed, the results suggest that persons whose trust encounters in this public realm have been negative express a lower level of generalized trust, net of the values of the other trust settings in the model. As Table 2 reveals, the predicted effects of trust in family, coworkers, members of one’s place of worship, and members of clubs vary across the samples. Further research is required to understand the conditions under which trust in these domains extends to greater generalized trust.

CONCLUSION

In this paper, we tested empirical models corresponding to two theoretical perspectives on the sources of trust. The psychological propensity model views generalized trust as one part of an overall syndrome of trust, likely developed in early childhood and relatively unaffected by current events. In contrast, the social learning model posits that generalized trust is influenced by contemporary, more localized trust experiences. We tested the two models across multiple datasets using confirmatory tetrad analysis. In addition, we examined which localized domains have an impact on the creation of generalized trust.

Our results support the utility of the social learning model of generalized trust over the psychological propensity model. We confirmed this finding across two separate datasets, in two nationally representative samples, and in an urban sample. Trust is therefore more malleable than the psychological propensity model suggests. Trust can be affected by changes in the social environment and is not determined wholly by past socialization or innate characteristics. Ongoing experiences in adulthood shape trust. Specifically, just as small groups can stimulate
civic engagement (Fine and Harrington 2004), our results suggest that they can also foster generalized trust.

Demonstrating that generalized trust is a function of trust in more localized domains allowed further testing. We estimated the differential impact of trust in the localized domains of family, neighbors, voluntary associations, church, work, and stores on the development of generalized trust. Trust in neighbors had the largest impact and trust in store workers also enhanced generalized trust. The other domains we examined did not have uniform influences on generalized trust across all of the samples. It is likely that, under some conditions, trust in these domains is more or less likely to extend to generalized trust. Consider trust in members of one’s church or place of worship, for example. The teachings of some religious denominations, conservative Protestantism in particular, express a more pessimistic view of human nature than others (Welch et al. 2004). Accordingly, adherents socialized under these conditions may be unlikely to extend trust in fellow congregants to people in general. Future research will need to establish whether certain denominations, or even congregations, enhance or inhibit the creation of generalized trust (e.g., Beyerlein and Hipp 2006). In a similar manner, specific characteristics of other settings such as the workplace and voluntary associations may also condition the likelihood of domain specific trust extending to generalized trust.

It is important to note that none of the specific trust domains we examined had a significant negative influence on generalized trust. This is in contrast to the perspective that strong in-group trust hinders the creation of trust outside the group (Yamagishi 1998 as cited in Yosano and Hayashi 2005). For example, Stolle (2001) finds that members of organizations characterized by high ingroup trust express lower levels of generalized trust. In contrast, our results suggest that when an individual has a high level of trust in fellow club members, this trust
does not diminish generalized trust. We do not therefore find that strong trust in any one domain hinders the establishment of more generalized trust; in fact, it may bolster it.

While confirmatory tetrad analysis allows us to test for causal and effect indicators, our measures were taken at a single time point. It is possible that the two theoretical perspectives are reconcilable over time. That is, it may be that over time, in the absence of new information from localized interactions, individuals move back toward some baseline propensity to trust. For example, Lahno (1995:453) claims that over time, in the absence of new information, assessments of actors who have been designated as untrustworthy in the past will revert toward some general level of trustworthiness: “Good as well as bad behavior tends to become forgotten in the course of time and reputation will approach its neutral value, that is, will become arbitrarily close to that of a player whose past record is an empty slate.” Such a scenario, while not testable here, would provide more evidence for the psychological propensity model. Even so, we have shown here that ongoing, adult experiences do influence trust. Thus, whether longitudinal assessments might provide more support for the alternative perspective, the importance of the social learning perspective would remain.
REFERENCES


