Trust and Commitment through Self-Verification*

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This research examines how self-processes and trust influence the development of commitment in society, thereby making social order possible. The central thesis is that the process of self-verification leads directly and indirectly, through positive emotions and trust, to the development of committed relationships, positive emotional attachments, and a group orientation; all of these are characteristics of a stable social structure. At the same time, self-verification results in the accomplishment of the meaning structures and resource flows that define social structures. In the current study, we test the self-verification-commitment process with respect to the spousal identity for newly married couples during the first three years of their marriage. The results support the central thesis and underscore the importance of self-processes and trust in building and maintaining social structure.

Commitment has been a long-standing concern in sociology. At the heart of this concern is the nature of society and why we have a civilized society rather than a war of all against all, "where every man is enemy to every man" (Hobbes [1651] 1965:161). Although Hobbes maintained that a social contract (commitment) made social order possible (Parsons 1949), the question of what permits a social contract remains. Early theorists suggested that emotion in the form of moral sentiments played an integral role in the formulation of a social contract (Smith [1759] 1966). Emotion facilitated solidarity among social actors (Durkheim [1915] 1965); this point has been reiterated in recent theorizing (Collins 1990). Lately the issue of commitment has reemerged in the sociological literature, and the role of emotion in the commitment process has been rediscovered (Lawler and Yoon 1993, 1996; Turner 1996).

In the present research we show that not only emotion processes but also *cognitive* processes are important for commitment. We maintain that self-verification is a particularly important cognitive process which activates emotional responses as well as other cognitions. We suggest, on the one hand, that the lack of self-verification leads to negative emotional responses such as depression and distress, and that people act to prevent (or reduce) these negative emotional states by setting up (and maintaining) contexts in which self-verification occurs. On the other hand, self-verification leads to positive emotional responses, and influences people to maintain these contexts once they have been established. We suggest that the process of establishing and maintaining self-verification contexts, and the positive self-feelings that result, lead to the development of interpersonal or group cohesiveness in the form of commitment, emotional attachment, and a collective orientation.

In this process, we view trust as an important mechanism through which self-verification brings about commitment. Whereas others have examined trust and commitment using exchange theory (Blau 1964; Cook and Emerson 1978; Kollock 1994; Lawler and Yoon 1993, 1996; Yamagishi, Cook, and Watabe 1998; Yamagishi and Yamagishi 1994), we frame

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the critical role of trust for commitment within identity theory. Although identity theory and exchange theory can be viewed as possessing much in common in explaining commitment, we use identity theory because we regard it as pertinent to *all* social behavior and not as limited to exchange behavior.

When another person verifies one's self-view, the process of trust is activated. The self begins to see the other as predictable and dependable, and responds by developing trust in, and dependence on, the other. If the other responds benevolently (is trustworthy), then commitment to the relationship is fostered (Holmes and Rempel 1989). In this way self-verification has implications not only for self-feelings but also for feelings toward the other. Self-verification leads to positive self-evaluations and positive other-evaluations in the form of dyadic trust, and trust facilitates attachment to the other. This attachment should reveal itself not only in commitment to the other but also in positive feelings for the other and, we anticipate, in a collective orientation to the relationship.

THEORY

Defining Commitment and Trust

Because commitment underlies stable forms of social structure, it has been an important consideration in several areas of investigation. These include identity research (Burke and Reitzes 1991; Stryker 1980; Stryker and Serpe 1982), research on interpersonal relations (Kelley 1983; Leik and Leik 1977; Rusbult and Buunk 1993), organizational relations (Kanter 1968, 1972), and exchange relations (Cook and Emerson 1978; Lawler and Yoon 1993, 1996; Yamagishi and Yamagishi 1994). Generally, commitment is conceptualized as a binding tie between an individual and some other social entity, whether an identity, another individual, a group or organization, or an exchange relationship (Kollock 1994; Yamagishi and Yamagishi 1994).

Further, this tie of commitment is strong enough to prevent the individual from pursuing other, perhaps more advantageous interests, and thus destabilizing current structural connections. Leik and Leik (1977), for example, define commitment as *unwill-ingness* to consider alternative relationships even if the current relationship is not optimal. According to Leik and Leik, when commitment exists, alternatives cease to be monitored. Research therefore must address why actors stay in a given relationship when problems exist and when other possibilities may even be better (Lawler and Yoon 1993, 1996). We suggest that emotion plays a central role in this process.

The concept of trust that we are using must be distinguished from other, related concepts. We follow Yamagishi and Yamagishi (1994), who distinguish *trust* from *confidence* and *assurance* (see Kramer 1999). Confidence is an expectation of competence; trust is an expectation of goodwill and benign intent. As Yamagishi and Yamagishi point out, we may not have confidence in an inexperienced pilot, but we do not necessarily believe that the pilot intends to harm us. Assurance, on the other hand, is an expectation of benign behavior because of the incentive structure surrounding the relationship rather than because the other harbors goodwill toward us. Having an uncle in the Mafia may prevent others from harming us, but it does not create goodwill toward us. In contrast, trust is a belief that the other holds both goodwill and benign intent toward us.

Our location of trust in the identity model is based on the work of several others who have examined the role of interpersonal trust in stabilizing relationships. McCall and Simmons (1978), for example, consider how we come to settle on interactions with those who are viewed as dependable sources of role support. In a more extensive research program, Kollock (1994) suggests that before any commitment can arise in an exchange relationship, trust in the specific other must develop. Kollock points out that exchange theorists often neglect the element of deceit or opportunism that may occur in exchange relationships. Individuals may behave in an exploitative and selfish manner, and they may defect from an exchange relationship if it is to their advantage to do so. Because being exploited is a possibility in a relationship, commitment emerges when we restrict our transactions to those who

have shown themselves to be trustworthy (cf. Frank 1988).[1]

In light of the above, our concept of trust is different from the generalized trust in others that is explored by Yamagishi and his associates (Yamagishi et al. 1998; Yamagishi and Yamagishi 1994). They argue that this generalized trust reduces the development of commitment to specific others. We, however, deal with trust in specific others that arises from knowledge of the others' good intentions, gained through repeated interactions with those others (Boon and Holmes 1991). Following Granovetter (1985), we regard trust as more than a rational expectation and calculation; it involves social and emotional bases as well.

Identity Theory and Self-Verification

In accordance with the work of Swann and his colleagues (Swann, de la Ronde, and Hixon 1994; Swann, Hixon, and de la Ronde 1992), identity theorists view commitment as emerging from the process of *self-verification*. In identity theory, an identity is a set of meanings applied to the self in a social role or situation, defining what it means to be who one is in that role or situation (Burke and Tully 1977). This set of meanings consists of symbols and of signs deriving from interaction and resources in the situation. The set functions as a standard or reference value in an identity control system (Burke 1991). In the process of self-verification, in the identity model, people act so as to bring perceived self-relevant meanings in a situation (based in part on feedback from others and in part on direct perception of the environment) into congruency with the meanings contained in their identity standards (Burke 1991). In self-verification, individuals seek to *confirm* their self-views, often by looking at the responses and views of others (Swann 1990). In this way, self-verification and self-confirmation (Turner 1987) are the same process.

Self-verification involves the cognitive process of matching the self-relevant meanings in a situation to the meanings that define an internal identity standard and guide behavior in a situation (Burke and Reitzes 1991).[2] In the identity model, any difference between the meanings carried in the identity standard and the perceptions of corresponding self-relevant meanings in a situation causes an "error signal" to be emitted by the *comparator* (i.e., the process that compares the two sets of meanings). The error signal translates into negative subjective experiences such as depression and distress, especially as this signal increases over time (Burke 1991, 1996; Carver and Scheier 1988; Cast and Burke 1999; Higgins 1989).[3] Alternatively, reduction of the error signal results in positive feelings such as esteem, happiness, and pride. People feel efficacious and good about themselves when they are able to verify themselves (Baumgardner, Kaufman, and Levy 1989; Bohrnstedt and Felson 1983; Brown, Collins, and Schmidt 1988; Chassin and Stager 1984; Elliott 1986; Gecas and Schwalbe 1983; Moretti and Higgins 1990).

Which of the different emotions are experienced depends on the type of identity standard that is activated in the situation and on the group or role basis of the identity. With respect to the different standards involved, Higgins (1989) has shown that when *actual* perceptions are different from *ideal* standards, depression results. When perceptions are different from *"ought"* standards, however, distress is felt. We suggest that the spousal role standards include both ideal and ought standards, and that failure of self-verification should result in both distress and depressive feelings. With respect to the

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[1] Although Lawler and Yoon (1996) did not measure trust, it is possible that trust developed through the repeated rewarding exchanges that were studied.

[2] In the context of identity theory, identity processes are universal. The contents, however—that is, the meanings conveyed in the standard—vary from role to role, group to group, and culture to culture. Some standards may contain self-oriented meanings; others may contain collectively oriented meanings (see Markus and Kitayama 1991). The task of the theorist and researcher is to discover the contents that guide particular identities in particular contexts and situations.

[3] Ellestad and Stets (1998) argue that negative emotions signal a discrepancy between ideal and actual self-images. This is illustrated by an analysis of mothers' reports of *jealousy* of father-child relations when the mother identity is prominent.

different bases of the identity, Burke and Stets (1998) suggest that successful verification of a role identity increases feelings of mastery and efficacy, while successful verification of a group membership identity increases feelings of acceptance and self-esteem. Again, a spousal identity contains components of both group and role as its basis, and successful self-verification should increase both self-esteem and mastery.

The point is that emotions are a consequence of the cognitive processes producing changes in the levels of the error signal in the identity model. Depression and distress are associated with large or increasing levels due to the lack of self-verification (Schaffer, Wickrama, and Keith 1996). Self-esteem and mastery are associated with small or decreasing levels in the error signal due to the accomplishment of self-verification. Therefore the process of self-verification, a cognitive process, is tied strongly to the emotions that people experience in interaction. These emotions, in turn, help to motivate the process of self-verification.

To facilitate self-verification, individuals employ various *strategies* in interaction with others (Swann 1987). For example, individuals may engage in *selective interaction*—that is, choose to interact with others who confirm their identities and to avoid those who do not (Swann, Pelham, and Krull 1989). Alternatively, they may display *identity cues* or may lay claim to an identity by looking the part. For example, they may dress in a certain way or use a particular style of speech so that others recognize their identity and behave appropriately, thereby confirming their identity (Stone 1962). Serpe and Stryker (1987) found that newly arrived first-year college students tended to decorate their rooms in the same fashion as they had followed at home, thus reminding themselves and announcing to others who they were. When others support an identity in a situation, the intended effects of self-presentation have been successful (Goffman 1959; Schlenker 1980).

Individuals also may use *interpersonal prompts*—that is, interaction strategies that cause others to behave toward them in a manner congruent with their identity (Swann 1987). The use of prompts is similar to *altercasting* (Weinstein and Deutschberger 1963): acting to elicit reactions from others that allow one to achieve one's own goals, which in this case consists of bringing self-relevant perceptions into alignment with one's identity standards. If one receives disconfirming reactions from others, one may use interpersonal prompts to counteract this disconfirmation. Swann and Hill (1982), for example, found that persons who thought of themselves as dominant reacted in an even more dominant fashion if they received feedback indicating that they were submissive. Self-identified submissive persons acted even more submissively when they received feedback suggesting that they were dominant. Similarly, Stets and others (Stets 1997; Stets and Burke 1996) showed that lower-status partners' more negative behaviors in marriage (which signified power and control) were attempts to convince their spouses that they were powerful and worthy.

In other ways, as well, individuals manage the discrepancy between their self-views and others' views of them. Under different conditions, for example, individuals may engage in selective perception of their actions or selective interpretation of the audience's response to their actions or they may withdraw from interactions with non-supportive others. They also may switch to claims of another identity, or may disavow the relevance of their actions for the identity they are claiming (McCall and Simmons 1978).

In addition to controlling *symbolic meanings*, as discussed above, individuals also act directly to control resources in the situation, guided by the perceived signs of these resources and by the corresponding *sign meanings* held in their identity standard (Freese and Burke 1994). By keeping food on the table, leaves out of the gutters, and heat in the radiator, for example, individuals confirm the sign meanings in their provider and caretaker identities. Freese and Burke (1994) deal extensively with the nature of resources in the identity model; they take the concept of resource beyond the usual view (held in exchange theory) that resources are necessarily "valued, scarce, consumable, possessible, negotiable,

leveragable, tangible, or even cognizable" (p. 9).

The central premise of identity theory is that people seek ways to establish and maintain those social situations and relationships in which their identities are verified. These are self-verification contexts that maintain the self. At the same time, the actions (role behaviors) that change the situation and lead to new, identity-confirming perceptions manage the flows of meanings, information, and resources that build and sustain the social structure to which the identity belongs (Freese and Burke 1994). Self-verification, through the manipulation of signs and symbols, thus has consequences that simultaneously sustain the individual and the social structure in which the individual is embedded.

Interpersonal Outcomes of Self-Verification

We maintain that when a person's identity is repeatedly verified in interaction with others, several interpersonal consequences occur. These include increased trust for those others, a commitment to those others, an increased emotional attachment to those others, and a perception that one is part of a group. Exchange theory also posits many of these outcomes, though for different reasons. In exchange theory, commitment is influenced not by repeated self-verification but by repeated exchange agreements (e.g., Lawler and Yoon 1996). Such agreements, when repeated, generate an "emotional buzz" between actors in the form of satisfaction or excitement. These mild positive emotions lead to relational cohesion (the perception that the exchange unit is distinct from other exchange units in the situation), and the cohesion influences commitment.

Exchange and identity theories are not totally at odds. An agreement to exchange may be regarded as a special type of self-verification, in which perceptions of what is gained through an exchange cause a confirmation of the self as needing the thing gained. The theories differ, however, in that identity processes do not necessarily imply arriving at a definition of *exchange terms, negotiation, overt agreement, commodities, or valued possessions.* Further, in identity theory, the resources involved in an exchange are often broader than understood in the usual exchange theory models: They include all the signs, resources, and symbols (such as dress, talk, and demeanor as well as information, support, tasks, food, air, and love) that refer to the meanings in the identity standard and that function to sustain the self and the interaction (Freese and Burke 1994).

In exchange terms, value preferences guide one's behavior. We see the meanings in the identity standard as setting value; when these meanings are not matched by perceptions, feelings of deprivation ensue (Turner 1987)—or, in identity terms, negative self-feelings result, such as depression, distress, and lowered self-esteem (Burke 1991, 1996). When identity-relevant perceptions in the situation match one's identity standard, the individual has experienced positive "reinforcement." And because, in exchange terms, we seek out rewards and avoid punishment, in identity terms we should be motivated to seek self-verification.

The principles of exchange theory have much in common with those of identity theory. By using identity theory rather than exchange theory to understand commitment, however, we begin to extend our analysis to a wider range of situations and relationships than those characterized by exchange, in which these underlying processes may apply. We also avoid the problem of utilities and value because, in the identity model, the identity standard defines the relevant meanings that are sought, whether scarce, negotiable, or even tangible (Freese and Burke 1994).

We suggest that insofar as a person's identity is verified repeatedly in interaction with others, whether by intention, negotiation, or happenstance, that person will gain knowledge of the others' character and will come to trust those specific others. From that trust, commitment will develop (Kollock 1994). We are not suggesting that the development of self-verification *contexts* produces these results, but that the process of self-verification itself is the cause. Self-verification, however, is facilitated by the

development of self-verification contexts (Swann and Hill 1982).[4]

Increasing trust also should result from positive self-feelings. Because trust always entails some uncertainty and risk (Holmes and Rempel 1989), those who feel good about themselves (have high self-esteem) should be more willing to place their trust in another. And when they come from a position of strength (mastery), they should feel that they have much to gain from the benevolent actions of another, meanwhile remaining confident that they can cope with the possible costs (for example, exploitation) incurred by trusting another.

The above ideas are similar to Turner's (1987) conceptualization of interpersonal motivation. Turner points out that in interaction, we desire confirmation from others as to who we are. When such confirmation is not forthcoming, he suggests that we will experience distress and will respond by intensifying our self-presentations to sustain our self. Turner indicates, however, that maintaining the self in interaction is not only a function of a person's capacity to confirm himself or herself through self-presentations; it is also a function of the degree to which trust has been established in the situation. If trust has not been established, it is all the more difficult to sustain the self.

If one determines that another is trustworthy, this knowledge should increase commitment—that is, remaining in the relationship despite problems. Individuals may stay in a relationship because the development of trust fosters empathy, which helps to resolve problems (Holmes and Rempel 1989). Trust also generates feelings of confidence and security in the relationship such that the individuals are less vulnerable to relationship problems and to the negative consequences that these problems may render. Trust also should induce a positive emotional attachment toward the other (Holmes and Rempel 1989), especially when the trustwor-

thy person is perceived as signaling care and concern for, and connection with, the other.

Finally, we hypothesize that as the self-verification context develops and trust emerges, the persons involved should experience not only commitment to the relationship but also positive feelings for each other and a sense of unity or "we-ness" in the relationship. In the latter, the parties come to view the relationship as part of who they are, especially because "who they are" exists in and is confirmed by the relationship (Brewer and Gardner 1996; Gottman 1994; Taylor and Dubé 1986; Turner et al. 1994). The self becomes part of a larger unit; thus an orientation to the larger unit or group should develop.

Hypotheses

From the above discussion we suggest a number of hypotheses and a model, shown in Figure 1, that embeds these hypotheses. The first two hypotheses return to the earlier suggestion that self-verification is associated with small error signals in the identity model and with the experience of positive feelings.

> *Hypothesis 1:* The greater the self-verification, the less negative self-feelings (depression and distress) a person will experience.

> *Hypothesis 2:* The greater the self-verification, the more positive self-feelings (self-esteem and mastery) a person will experience.

From the above discussion, we are also led to hypothesize:

> *Hypothesis 3:* The greater the self-verification, the greater will be a person's trust for others involved in the self-verification context.

> *Hypothesis 4:* The greater the negative self-feelings, the less will be a person's trust for others involved in the self-verification context.

> *Hypothesis 5:* The greater the positive self-feelings, the greater will be a person's trust for others involved in the self-verification context.

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[4] We also suggest that these effects would be magnified insofar as the identity is salient, commitment is high, and the others involved in the verification context are significant others. In general, all of these conditions tend to be true for the spousal identity among the newly married couples that we examine in this research.
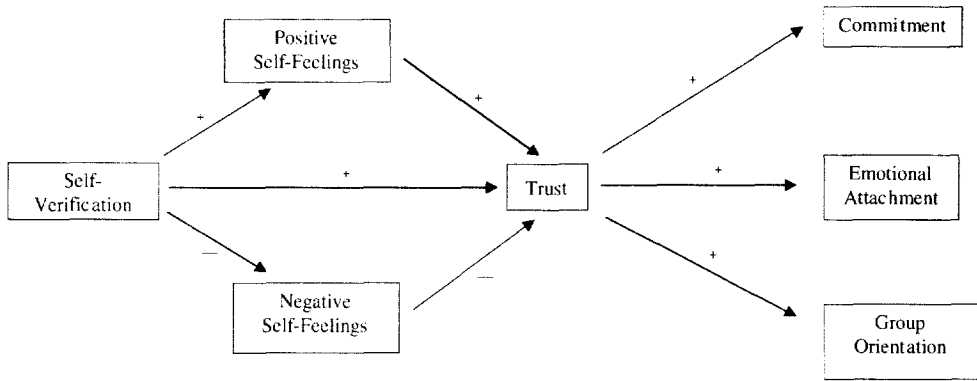
Figure 1. Model of the Self-Verification Process

With respect to the consequences of trust, we hypothesize:

Hypothesis 6: The greater the trust for others involved in the self-verification context, the greater will be the commitment to those others.

Hypothesis 7: The greater the trust for others involved in the self-verification context, the greater will be the emotional attachment to those others.

Hypothesis 8: The greater the trust for others involved in the self-verification context, the greater will be a group orientation.

The data have observations at three points in time. We are thus led to explore possible effects of all the variables on self-verification over time (with the effects spreading out from self-verification to the other variables within each time period). Because identity theory has not addressed these issues directly, our explorations of these processes are somewhat tentative. Identity theory suggests that people *change* their identity standards when they cannot change the situation so as to bring their perceptions into line with their standards (Burke 1991; Burke and Cast 1997).

This is not (necessarily) a rational choice phenomenon. Because the identity standard is the output of a higher-level control system, its level is set as a way by which the higher-level control system can achieve consistency between its perceptions and the standard. In this way, the higher-level system brings the lower-level standards into align-

ment with the lower-level perceptions. When another person's persistent actions and views cause a discrepancy between perceptions and identity standards, some compromise must be made, in which identity standards are adjusted. In the present context, *self-verification will increase* when the person changes his or her identity standards so as to agree more closely with the view held by the spouse (or when the spouse changes his or her view). Therefore, to understand changes in self-verification, we must understand how the factors under investigation may motivate a change in the identity standard by the person (or a change in the view of the person by the spouse).

Identity theory suggests that the strength of the motivation to change one's identity standard is a function of the degree to which it is not being verified (and to which one is distressed as a result). This reasoning suggests that those who receive the least verification in one year ought to experience the greatest increase of self-verification in the next year. This hypothesis can be tested by including a discrepancy-squared term in the predictions. A zero discrepancy between perception and standard—that is, zero error—would produce no incentive to change: The person's identity is verified. As the discrepancy (positive or negative) increases, there is an increasingly strong incentive to act so as to change perceptions and restore agreement between perceptions and the standard. By squaring the discrepancy, we remove the sign and focus on the magnitude. Squaring also suggests a nonlinear effect in which motivation to change

increases at an increasing rate as the discrepancy grows larger.

Although it makes theoretical sense, we do not test this aspect of the effect. We also might expect that those with greater trust, commitment, and emotional attachment to their spouse, as well as a stronger group orientation, would be more strongly motivated to receive verification of their self-views by the spouse. Under these conditions, we anticipate that the spouse will be more highly motivated to see the partner's self-view (role taking) and thus to verify the partner.

The theoretical links between the self-feeling variables and the changes in self-verification are less clear. We might expect that those with higher self-esteem or mastery would work to reduce discrepancy, but those with higher discrepancy would possess lower self-esteem and mastery, and also would be more highly motivated to reduce discrepancy. In view of these contradictory reasoning processes, we can make no predictions about the effects of the self-feeling variables on changes in self-verification over time.

PROCEDURES

Sample

The data for this research come from a longitudinal study of marital roles that investigated marital dynamics in the first three years of marriage (Tallman, Burke, and Gecas 1998). The sample for this study was drawn from marriage registration records in 1991 and 1992 in two mid-sized communities in Washington state. It consists of couples who were over age 18, who were involved in their first marriage, and who had no children living in the home. Each data-collection period included a 90-minute face-to-face interview, four one-week daily diaries kept by respondents at 10-week intervals, and a 15-minute videotaping of couples' conversations as they worked to solve areas of disagreement previously acknowledged by them (Tallman et al. 1998). The data for the current analysis are based on information from the interviews and videotapes in all three data-collection periods.

There were 574 couples applying for marriage licenses who appeared to be eligible for the sample. Of these, 286 couples completed all the data-collection in the first round. These couples do not differ significantly in important ways from couples throughout the United States who married for the first time. For example, their mean ages resemble the national mean ages of women and men marrying for the first time (24 and 26 years, respectively), and their mean education level is similar to the national level for both women and men marrying for the first time ("some college") (Vital Statistics 1987). Nationally, first-married persons are 86 percent white and 13 percent members of minorities (Vital Statistics 1987). The current sample contains 89 percent whites, 3 percent blacks (underrepresenting blacks nationwide), and 9 percent other minorities (overrepresenting Asians and Hispanics nationally). This sample reflects the racial distribution in Washington State (World Almanac 1992).

A 15 percent attrition occurred from Year 1 to Year 2, and an additional 4.2 percent attrition from Year 2 to Year 3. These figures do not include the 13 couples who were separated or divorced after Year 1, nor the 16 couples who were separated or divorced after Year 2, who were no longer included in the sampling frame. Couples who dropped out of the study after the first or second year were more likely to be young ($p < .01$), less highly educated ($p < .01$), and of lower socioeconomic status ($p < .05$).

Measures

We assess *commitment* using two scales that measure *subjective* commitment and *behavioral* commitment. The subjective commitment measure is based on the respondents' thoughts as to how they *would act*—here, whether they would end their marriage—if various negative events occurred between themselves and their spouse. These events include (for example) "I would break up my marriage if: 'I did not love my spouse,' 'my spouse was unfaithful,' or 'my spouse and I constantly quarreled.'" Response categories range from "strongly agree" to "strongly disagree" (coded 1–4).

We summed the items to form a scale in which a high score indicated high commitment or strong unwillingness to break up the

marriage for any reason. Scale scores range from 10 to 40. The average omega reliability (Heise and Bohrnstedt 1970) for the scale over the three years is .92.

Although this measure does not fully capture the degree to which persons are inclined to stay in a relationship in spite of attractive alternatives, it addresses the question from the other side: the likelihood of staying in the marriage in spite of negative features. Also, although the likelihood of staying in the marriage may be different from the eventuality of staying, one's thoughts and feelings on the negative events should correspond to how one actually would respond.

The behavioral measure of commitment is based on how respondents *act*. Do they turn to their spouse or someone else for help when suffering problems such as "being bothered and needing to talk to someone about it" or "feeling sad and needing to be cheered up"? We coded the responses as the person's spouse or someone else. The index is the proportion of relevant items in which respondents answered that they turned to their spouse. Items that were not experienced by the respondent or in which the respondent turned to no one were not included. The average omega reliability for this scale across the three years is .82.

This measure of commitment, unlike the subjective measure, shows persons turning to their spouse when other alternatives are available. In addition, it addresses what respondents do in the face of negative events rather than what they feel they would do, as in the subjective commitment measure.

We measure *emotional attachment* using the Rubin Love Scale (Rubin 1973). Respondents were asked to indicate the extent to which 13 statements reflected how they felt about their spouse, such as "I would do almost anything for (spouse)," "If I could never be with (spouse), I would feel miserable," and "One of my primary concerns is (spouse's) welfare." Responses range from "not at all true" to "definitely true" (coded 0–8). We summed the items to form a scale in which a high score reflected high levels of positive emotional attachment to the spouse. The scale ranges from 0 to 104. The average

omega reliability across the three years for the summed scale is .88.

Group orientation is assessed with a procedure successfully implemented by Gottman and his associates to measure a group orientation in research on divorce (Buehlman, Gottman, and Katz 1992; Gottman 1994). In this procedure, we count the frequency of use of the terms *we* and *I* (including contractions such as *we've* or *I'll*) in the videotaped conversations between the husband and the wife. These frequencies were combined into a "we-to-I" ratio for each of the three years.

This procedure does not measure the attractiveness of the group. A statement such as "We hate each other" still acknowledges the collective, although in such a case the group is not well integrated. We wish to measure the degree to which the group exists in the participants' minds, which is expressed, behaviorally, through the use of the term *we* rather than *I*.

This procedure also has a theoretical grounding in the social identity literature, in which it is important to distinguish the collective *we* from both *I* and *they* (e.g., Brewer and Gardner 1996; Taylor and Dubé 1986; Turner et al. 1994). The greater use of the communal reference *we* relative to the individuating reference *I* indicates a greater ingroup or communal orientation. Because the raw *we*-to-*I* ratio is skewed quite positively, we use a square root transformation in the analyses to normalize the distribution.

To measure *self-verification* we followed procedures used by Swann and his colleagues (Swann et al. 1994; Swann et al. 1992) who examined husbands' views of their wives in comparison with wives' self-views on attributes relevant to their self-concept (and vice versa). In this research, we compare each of the newlyweds' self-views of his or her spousal role with the views of his or her spousal role held by the partner. Self-verification exists insofar as the self-views are confirmed by the views that the spouse holds for the individual. Strictly, we would want to measure the individual's *perceptions* of the spouse's expectations for him or her, but we do not possess this measure; thus we use the spouse's actual expectations as a proxy for the perceptions.

Respondents rated each of 11 spousal role activities in terms of the degree to which they felt that they themselves *should* engage in that role activity (own identity standard), and the degree to which they felt that the spouse should engage in that activity (an indication of the support the spouse will perceive). The spousal role activities include "being responsible for cleaning the house," "being responsible for taking care of bills and accounts," and "being responsible for shopping for groceries." Responses range from a low of doing "none of the activity in the household" to doing "all of the activity in the household" (coded 0–4).[5]

We assess the degree of agreement between the self-rating and the spouse's rating of the self in each area by calculating the absolute difference between the two scores. Given the response categories, the maximum disagreement of 4 in an area would occur when one person reported that he or she should perform all of that activity and the spouse reported that she or he should perform none of that activity (or vice versa). We averaged the agreement scores across the 11 measured areas with a theoretical range of 0 (perfect agreement) to 4 (maximum disagreement). The final scale score, indexing self-verification, was reverse coded. Thus the self-verification scores could range from 0 (no verification or maximum disagreement) to 4 (perfect verification or maximum agreement). The actual self-verification scale scores range from 2.30 to 4. The omega reliability for the measurement of self-verification averages .88 over the three years.

Depression is measured with 12 items from the 20-item Center for Epidemiological Studies Depression Scale (CES-D) (Radloff 1977). Respondents were asked to report how many days during the past week they had experienced each of the circumstances listed. These include (for example) "You feel bothered by things that don't usually bother you," "You have trouble keeping your mind on what you are doing," and "You feel that

everything you do is an effort." Response categories range from "not at all" to "seven days a week" (coded 0–7). We summed the items; a high score represents high depression. Scale scores range from 0 to 84. The omega reliability on this scale averages .93 across the three time periods.

Distress is assessed with 14 items from the anxiety subscale of the SCL-90 (Derogatis et al. 1971). Respondents were asked how many days during the past week (coded 0–7) they had experienced each of the outcomes listed, such as "You feel your hands trembling," "You feel nervous, fidgety, and tense," and "You feel nervous or have an upset stomach." We summed the items; a high score denotes high distress. The scale ranges from 0 to 98. The average omega reliability across the three years for this scale is .91.

We measured *self-esteem* using the 10-item Rosenberg (1979) self-esteem scale. Respondents were asked how strongly they agreed that a series of statements described them, such as "I feel that I'm a person of worth, at least on an equal basis with others," "I feel that I have a number of good qualities," and "I certainly feel useless at times," (reverse coded). Response categories range from "strongly disagree" to "strongly agree" (coded 1–4). We summed the responses to form a scale with a high score indicating high self-esteem. The average omega reliability for the scale across the three years is .92. Scale scores range from 10 to 40.

Mastery is measured with a seven-item mastery scale (Pearlin et al. 1981). Respondents were asked to state how strongly they agreed that a series of statements described them, such as "I can do just about anything I really set my mind to," "There is really no way I can solve some of the problems I have," (reverse coded), and "I have little control over things that happen to me" (reverse coded). Response categories range from "strongly disagree" to strongly agree" (coded 1–4). We summed the responses; a high score represents high self-efficacy. The scale scores range from 7 to 28. The average omega reliability of the scale across the three years is .83.

Trust is measured on an eight-item dyadic trust scale (Larzelere and Huston

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[5] These spousal role behaviors are largely *instrumental* activities. Future researchers might want to examine how *emotional* activities tied to the spousal role, such as expecting a certain amount of emotional support from the spouse, are another aspect of self-verification.

1980). Respondents were asked how strongly they agreed that a series of statements reflected how they felt about their partner, such as "My partner is perfectly honest and truthful with me," "My partner is truly sincere in his/her promises," and "I feel that my partner can be counted on to help me." Response categories range from "strongly disagree" to "strongly agree" (coded 1–7). The items are summed; a high score indicates high trust. Scores range from 8 to 56. Across the three years, the omega reliability for the summed items averages .91. This scale does not measure generalized trust in others. Rather, in keeping with our theory, it focuses on trust in a specific other involved in the self-verification situation.

In about 10 percent of the cases, values were missing on one or two variables. We imputed these missing data using the remaining variables included in this study and the methods described by Little and Rubin (1987). Although this method can produce biased estimates of the missing values, generally the bias is toward zero, with a tendency to underestimate the effects of the variable. Table 1 presents the means and standard deviations on all the variables for both spouses over the three years.

Analyses

We divide the analysis into two parts, dealing first with the within-period effects, as modeled in Figure 1, and then with the over-time effects. For all of the analyses, the unit is the couple; each variable is measured for the husband and for the wife. For the within-period effects, we used cross-sectional time-series analysis procedures (Baltagi 1995; Greene 1990). These procedures provide estimates of effects based on a pooling of cross-sectional data (between-subject) and on changes in the levels of variables over time (within-subject).[6] We estimated the

over-time analysis using seemingly unrelated regressions (Felmlee and Hargens 1988; Greene 1990)[7] that included in the model the effects of all variables from the previous time period.[8]

Because the theory does not distinguish between effects for husbands and for wives, we tested the assumption that the effects were the same for both partners. To do so, we compared the covariance matrices for husbands and for wives (including the cross-spouse effects, in which, for example, the effects of one person's trust might influence the spouses' commitment). We found that the covariance matrices are not significantly different (Chi-square = 48.59, df = 49, p = ns); thus the effects for husbands are not significantly different from those for wives. In addition, because the model does not distinguish effects in Year 1 from effects in other years, we tested in a similar manner the assumption of equality of the covariances across the three years. We found no significant differences in the covariance matrices; hence the effects are the same across the three years (Chi-square = 77.50, df = 90, p = ns). The final estimates therefore were constrained to be equal for husbands and for wives at each time period.

Because of multicolinearity between depression and distress and between self-esteem and mastery, we estimated the model twice: once with depression and self-esteem included and once with distress and mastery included. The results of the former analysis are presented in Table 2; the results of the latter analysis, in Table 3. As we will see, the results of these analyses are very similar.

The cross-time model predicting self-verification includes an interaction term

results that are nearly identical to those of the cross-sectional time-series analysis.

[7] The equations for all the dependent variables are estimated simultaneously with the assumption of correlations between the disturbances in the different equations. We use the Zellner (1962) two-stage generalized least squares method. We interpret the resulting generalized lest squares estimators in the same way as ordinary least squares estimators.

[8] We also estimated these effects using structural equation models that included effects from one time period to the next. Again, the results of this analysis provide results nearly identical to those of the seemingly unrelated regressions.

[6] We also analyzed the data using a maximum-likelihood structural equation model with a three-group design (one for each year). In the measurement portion of the model, we handled the unreliability of the measures by setting the measurement error variance for each of the variables to $(1-r)$ x V, where r is the reliability of the variable (reported above) and V is its variance. The results of this analysis provide

Table 1. Means and Standard Deviations of Measures

Measure	Year	Husbands		Wives	
		Mean	sd	Mean	sd
Self-Verification	1	3.64	.20	3.63	.19
	2	3.65	.20	3.64	.20
	3	3.63	.22	3.63	.22
Depression	1	11.41	8.93	13.45	11.24
	2	10.38	9.13	13.59	11.89
	3	11.25	11.36	12.20	11.25
Distress	1	11.73	9.47	12.92	12.83
	2	9.71	9.06	11.40	10.11
	3	10.32	9.12	10.83	10.44
Self-Esteem	1	33.62	4.12	32.96	4.98
	2	33.62	4.52	33.28	5.03
	3	33.71	4.53	34.01	4.09
Mastery	1	22.80	3.25	23.21	3.01
	2	22.82	3.35	23.43	3.06
	3	23.15	3.38	23.56	3.06
Trust	1	48.45	6.28	48.93	6.48
	2	50.97	6.58	51.95	6.42
	3	48.05	6.86	47.33	7.65
Subjective	1	29.06	5.94	28.55	5.59
Commitment	2	29.14	5.86	28.06	5.76
	3	27.94	6.22	27.88	5.67
Behavioral	1	.56	.30	.57	.33
Commitment	2	.63	.29	.66	.31
	3	.66	.29	.69	.32
Emotional	1	89.01	8.75	86.15	10.43
Attachment	2	86.96	10.03	85.04	10.67
	3	85.88	10.51	81.71	11.66
Group	1	.62	.09	.63	.09
Orientation[a]	2	.63	.08	.63	.09
	3	.62	.09	.62	.09

Note: Ns (Year 1 = 286, Year 2 = 232, Year 3 = 207)
[a] Square-root transformation made to reduce skewness

Table 2. Standardized Coefficients from Cross-Sectional Time-Series Analysis Using Self-Esteem and Depression as Measures of Positive and Negative Self-Feelings

	Outcomes						
				Commitment		Emotional Attachment	Group Orientation
	Self-Esteem	Depression	Trust	Subjective	Behavioral		
Self-Verification	.06	−.11	.07	0	.08	0	.14
Self-Esteem	—[a]	—[a]	.11/0[b]	0/0[b]	0/0[b]	0/0[b]	0/0[b]
Depression	—[a]	—[a]	−.17/−.11[b]	0/0[b]	0/0[b]	0/0[b]	0/0[b]
Trust	—[a]	—[a]	—[a]	.15/.06[b]	0/.14[b]	.25/0[b]	0/0[b]
R^2	.03	.02	.12	.07	.08	.10	.05

Notes: All non-zero coefficients are significant at the .05 level. Zero denotes nonsignificant effects. N = 725 (person-years).
[a] Effect not in the model
[b] Effect from person variable/effect from spouse variable

Table 3. Standardized Coefficients from Cross-Sectional Time-Series Analysis Using Mastery and Distress as Measures of Positive and Negative Self-Feelings

| | | | | Outcomes | | | |
| | | | | Commitment | | Emo-tional | |
	Mastery	Distress	Trust	Subjec-tive	Behav-ioral	Attach-ment	Group Orien-tation
Self-Verification	.07	−.10	.07	0	.08	0	.14
Mastery	—[a]	—[a]	.22/0[b]	0/0[b]	.10/.09[b]	0/0[b]	0/0[b]
Distress	—[a]	—[a]	−.15/−.11[b]	0/0[b]	0/0[b]	0/0[b]	0/0[b]
Trust	—[a]	—[a]	—[a]	.16/.06[b]	0/.13[b]	.26/0[b]	0/0[b]
R^2	.02	.02	.16	.06	.10	.10	.05

Notes: All non-zero coefficients are significant at the .05 level. Zero denotes nonsignificant effects. $N = 725$ (person-years).
[a] Effect not in the model
[b] Effect from person variable/effect from spouse variable

(square term for discrepancy—the reverse of self-verification); thus structural equation modeling is not appropriate to provide the estimates of these effects (Bollen 1989). Instead we estimated the cross-time model using constrained, seemingly unrelated regression techniques. The equations were constrained to make husband effects equal to wife effects and Year 1-to-Year 2 effects equal to Year 2-to-Year 3 effects. The results of these analyses are displayed in Tables 4 and 5.

RESULTS

Tables 2 and 3 show that self-verification directly reduces depression and distress (Hypothesis 1) as well as enhancing feelings of self-esteem and mastery (Hypothesis 2), and it directly increases trust in one's spouse (Hypothesis 3). In addition, self-verification directly fosters a group orientation and increases behavioral commitment, neither of which we hypothesized. Further, depression and distress (both one's own and the spouse's) directly decrease trust in the

Table 4. Standardized Coefficients from Seemingly Unrelated Regressions over Time, Using Self-Esteem and Depression As Measures of Positive and Negative Self-Feelings

| | | | | Outcomes at Time $t+1$ | | | |
| | | | | | Commitment | | Emo-tional | |
Independant Varables at Time t	Self-Verifi-cation	Self-Esteem	Depres-sion	Trust	Subjec-tive	Behav-ioral	Attach-ment	Group Orien-tation
Self-Verification	.48	0	0	0	0	.06	0	0
Self-Esteem	.08	.56	0	0	0	0	0	0
Depression	0	0	.42	0	0	0	0	0
Trust	.07	0	0	.59	0	0	0	0
Subjective Commitment	0	0	0	0	.71/.15[a]	0	0	0
Behavioral Commitment	0	0	0	0	0	.34/.11[a]	0	0
Emotional Attachment	0	0	0	0	0	0	.74/.09[a]	0
Group Orientation	.13	0	0	0	0	0	0	.38
Discrepancy Squared	.12	0	0	0	0	0	0	0
R^2	.30	.45	.24	.45	.65	.25	.60	.23

Notes: All non-zero coefficients are significant at the .05 level. Zero denotes nonsignificant effects. $N = 188$ for each regression.
[a] Effect from person variable/effect from spouse variable

Table 5. Standardized Coefficients from Seemingly Unrelated Regressions over Time, Using Mastery and Distress As Measures of Positive and Negative Self-Feelings

Independent Variables at Time t	Self-Verifi-cation	Mastery	Distress	Trust	Commitment Subjective	Commitment Behavioral	Emotional Attachment	Group Orientation
Self-Verification	.50	0	0	0	0	.06	0	0
Mastery	.06	.57	0	0	0	0	0	0
Distress	0	0	.45	0	0	0	0	0
Trust	.07	0	0	.56	0	0	0	0
Subjective Commitment	0	0	0	0	.71/.15[a]	0	0	0
Behavioral Commitment	0	0	0	0	0	.34/.16[a]	0	0
Emotional Attachment	0	0	0	0	0	0	.74/.09[a]	0
Group Orientation	.13	0	0	0	0	0	0	.38
Discrepancy Squared	.13	0	0	0	0	0	0	0
R^2	.30	.40	.30	.48	.65	.25	.60	.23

Note header: Outcomes at Time $t+1$

Notes: All non-zero coefficients are significant at the .05 level. Zero denotes nonsignificant effects. $N = 188$ for each regression.

[a] Effect from person variable/effect from spouse variable

spouse (Hypothesis 4), while self-esteem and mastery directly increase trust (Hypothesis 5). Finally, trust directly increases subjective commitment, though not behavioral commitment (Hypothesis 6), and one's own trust influences emotional attachment (Hypothesis 7). Thus we found support for our hypothesis that self-verification and the various self-feelings influence trust, and, through trust, influence subjective commitment and emotional attachment.

Hypothesis 8 and part of Hypothesis 6 were not supported. A group orientation and behavioral commitment do not depend on trust, as hypothesized. Instead, both depend directly on self-verification, perhaps as part of a separate process. Trust and the more emotional self-feelings do not mediate any of this connection, as they did for emotional attachment and subjective commitment. We discuss this point further below.

The effects from one time period to the next are shown in Tables 4 and 5. In accordance with our tentative hypotheses, trust and a group orientation from the previous year influence self-verification positively in the following year, as do the positive self-feelings (self-esteem and mastery). In addition, the discrepancy (squared) from the pre-

vious year influences self-verification in the following year, an indication that those who show a greater discrepancy in one year register higher than expected levels of self-verification in the next year. Yet neither subjective nor behavioral commitment, emotional attachment, nor the negative self-feeling variables affect self-verification in the next year. Aside from self-verification, the other variables depend primarily on themselves (stability effects) over time, although in three cases (for subjective and behavioral commitment and emotional attachment) we found cross-spouse stabilizing effects. In addition, behavioral commitment in one year depends on self-verification in the previous year. Thus self-verification has both immediate and long-term effects on behavioral commitment.

Combining these over-time results with the cross-section results, we see that trust and the positive self-feelings and self-verification influence one another: Each creates conditions that allow the further development of the other. Similarly, a group orientation and self-verification influence one another over time. Together these two processes act to increase commitment, emotional attachment, and a group orientation.

We considered the possibility that our results are produced not by self-verification per se, but by that aspect of self-verification in which husbands and wives agree to divide the spousal role equally and view each other accordingly. If a husband and a wife agree to divide their tasks 50–50, they not only confirm each other's spousal identity standards, but also maintain equality in each other's eyes. Could this equality itself be the source of the effects we observe? To test this idea, we recoded the items in the self-verification scale to make each an "equality" item with a code of 1 if both the husband and the wife agreed to split the duties 50–50, and a code of 0 otherwise. Across the 11 items, the proportion of couples who registered perfect agreement on dividing duties, and also agreed on a 50–50 split, ranged from 18.8 percent (doing home repairs: Most agreed that the husband would do more) to 99.3 percent (initiating sexual activity: Most agreed to divide this equally). The mean proportion across the 11 items was 72.1 percent.

We then created the equality scale by adding the equality item scores across the 11 items. This scale showed a .66 correlation with the self-verification measure. We then reran the analysis, including both the self-verification scale and this equality scale.[9] Because of the correlation between self-verification and the equality scale, the effects of self-verification were somewhat reduced in magnitude but generally maintained their significance; they become marginally significant in only one case (direct effect on trust, $p = .09$). On the other hand, the equality variable exerted only one significant effect across the entire analysis: the effect on subjective commitment. Although this one effect could have been due to chance, it is consistent with the suggestion of Lawler and Yoon (1996) that equality contributes to commitment by enhancing the positive effects of exchange. In general, we think that the observed results were produced not merely by equality but rather by self-verification with respect to the spousal role (however that role was defined by the respondents). A stricter test of the identity model

would include not the spouse's actual views, but perceptions that the spouse sees the self in the same way as does the self. Here we simply assume that the husband or the wife perceives what the spouse is feeling.

DISCUSSION

We began with the question that is at the heart of the sociological enterprise: What makes society possible? We suggested that the answers posed in current research hark back to the answer initially provided by the Scottish moral philosophers: an emotionally based contract or commitment. The results of the present research strongly support the importance of identity processes as undergirding the development of committed relationships, emotional attachments, and a collective orientation in forming the backbone of social structure. At the same time, these identity processes accomplish the work of society and maintain social structure. That is, in performing the roles attached to identities, the meanings, information, and resource flows, which define these families in particular and social structure in general, are managed and manipulated.

Our results suggest a model in which self-verification has two different effects. On the one hand, self-verification operates indirectly through self-feelings and trust to increase subjective commitment and emotional attachment. These latter two outcomes are mediated completely by trust: This result is consistent with earlier research on the importance of trust under conditions of uncertainty (Kollock 1994). On the other hand, self-verification operates directly on the behavioral measures of commitment and a group orientation; neither of these is influenced by one's level of trust in the other.

Although these results must be validated by future research, they tentatively suggest that two different, and somewhat independent parallel processes occur in relationships: one based on trust and emotional responses, the other on information and cognitive processes. These results are consistent with the separate cognitive and affective effects noted by Swann and his colleagues (Swann et al. 1987) and with their suggestion that the individual possesses separate and

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[9] These results are available from the authors.

independent cognitive and affective systems. This duality in our results is confirmed further by the over-time results: These show that trust and a group orientation each enhance self-verification in the next time period, thus completing separate feedback cycles. Although we do not have data enabling us to completely identify and understand these two separate pathways, we make some reasonable (but speculative) suggestions.

Each of the paths seems to involve separate processes. On the one hand, subjective commitment and emotional attachment both involve an *emotionally based interpersonal connection.* They assess one's *subjective relationship* to the partner. In light of this emphasis, trust (also a subjective, relational concept) should be an important factor, on which these outcomes depend. Indeed, the largest standardized effect in our results is that between trust and emotional attachment. Trust thus appears to be central to the subjective development of the relationship (how one feels about their spouse), and trust depends on the self-verification process.

On the other hand, the behavioral measures of commitment and a group orientation do not depend on first developing trust in the other. Rather, what one *does* (turning to the spouse rather than to others in time of need and using *we* more frequently than *I* in conversations) appears to be influenced directly by being verified in one's spousal identity. These behaviors may depend on cognitive rather than emotional processes. Turning to the other for help is based on the *knowledge* that that other will verify one's self.[10] In addition, insofar as one develops a self-verification context for the spousal role that includes the other, one's sense of self becomes tied to the other, and a *cognitive shift* is made from an individual focus (on "I") to a global unity—a "we." As has been pointed out in the structural version of symbolic interaction, the naming and classifying of the social is especially important in creating and maintaining social structure (Stryker 1980). The "we" that is evolving in the pre-

sent self-verification context may be in the process of becoming a new, named element of the perceived social structure.

To summarize our results, we find that the identity processes which occur in self-verification act as part of a control system that maintains self-relevant perceptions close to the point held in the identity standard. Again, these perceptions of what the spouse feels are indexed by the spouse's actual feelings. Several outcomes of the successful self-verification process are of theoretical importance. Self-verification activates positive self-feelings and diminishes negative self-feelings. From the enhancement of positive self-feelings and a corresponding reduction of negative self-feeling, trust in specific others whose activities help to sustain the self (one's role partners) is increased. Enhanced trust and positive self-feelings give rise to a positive emotional attachment and subjective commitment to one's role partners; these sustain the interaction, even through times when it may be advantageous to break off relations.

Simultaneously, knowledge of the other appears to increase, and cognition apparently shifts. These processes increase behavioral commitment and create a collective orientation and view of the set of persons involved in the context as a unit—a new, named social entity. Over time, trust and the group orientation facilitate a change in the identity standard to enhance the degree of self-verification that occurs. Also, the activity that leads to self-verification controls the meanings, information, and resource flows in the situation, which define the current spousal role. In short, the identity processes that take place within a social structure create, appear to enhance, and sustain the identities themselves as well as the structure in which they exist, and from which they draw the standards that guide the whole process.

Because of some of the limitations of the present research, future research must be undertaken to strengthen and extend our results. First, as we have mentioned, investigation of the apparently separate cognitive and affective paths is needed, especially to clarify the apparent failure of the role of trust on the cognitive side. Also, researchers must explore the influence of other variables

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[10] It is also based on one's own state. Depressed persons are more likely to use this alternative, as are people who have developed a sense of mastery and thus are more likely to take *any* action.

that are important in identity theory. Does identity salience strengthen the effects of self-verification that we have found? Does the self-verification process change when we are dealing with negative identities? For example, do individuals feel bad when stigmatized or disparaged identities are verified? Finally, we have pointed out that identity theory focuses on dyadic trust and on how it increases commitment, whereas exchange theory focuses more strongly on the role of generalized trust in reducing uncertainty but also in reducing commitment (Yamagishi et al. 1998). Research is needed to sort out the relationship between these two forms of trust, their sources, and their distinct roles in the commitment process.

Is this identity theory view of the commitment process different from that suggested by exchange theory? If we take a broadened view of exchange, in which the meanings that verify the self are produced through the manipulation of signs and symbols by members of a couple for each other as an exchange, and if the value of the meanings is determined by their being that which verifies the self, then we see little difference between the present theory and exchange theory. Insofar as this is true, identity theory offers a theoretical avenue by which we have broadened the conditions to which the process of trust and commitment apply. Unlike research in the exchange tradition, our research has examined trust and commitment between individuals who have a history of interaction. Because most of our daily interactions involve familiar or intimate others, the processes that we have outlined above, particularly the role of self-verification in building trust and commitment in relations, apply to a wider range of interactions.

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