THE PSYCHOLOGICAL BASIS OF TRUST

José M. Prieto
Complutense University, Madrid, Spain

Abstract: Psychological research has paid more attention to negative emotions such as anxiety, stress or anger than to positive emotions such as well-being, satisfaction or happiness. So, there is a bias towards aspects related to abnormal psychology. The psychological understanding of trust seems to be conspicuously absent in textbooks of psychology but it plays an important role in applied psychology where the focus is on normal people and everyday performance. For instance, how to produce a climate of trust is an important challenge when health professionals interact with children in hospitals facing long treatment programs for cancer. It plays an important role in the transactions made by Internet users when they look for reliable information as well as the interactions held by behavioral therapists and customers. In consumer psychology trust is a cornerstone in the decision making process of customers when they go shopping. Trust is also the psychological target for terrorists when they plan actions to generate terror. From the economic psychology perspective, emphasis is placed on the nexus between trust and economic transactions. From the perspective of social psychology, emphasis is placed on trust as a form of community cement. From the applied psychology perspective, emphasis is placed on interpersonal relationships and individual performance. Three different phases may be distinguished: trust, non-trust and distrust and there seem to be six underlying dimensions from the psychological perspective. Two dimensions give evidence of an emotional background, two a cognitive frame of reference and two a volitional background. Anxiety and stress seem to be cumulative emotions, whereas trust seems to indicate a mercurial nature.

Address: José M. Prieto, Faculty of Psychology, Complutense University, Somosaguas, 28223 Madrid, Spain. E-mail: jmprieto@correo.cop.es

TRUST: A THREE- LAYERED STRATUM SYSTEM

In classic Greek two different verbs were used to express the present idea of trusting: θαρρέω as well as πιστεύω, and so related nouns such as, θάρρος and πίστις.

- «We trust because we take precautions (*Διά τήν εὐλάβειαν θαρραλέοι*)». This sentence of Epictetus (c 55-135), the stoic philosopher, draws attention to the understanding of trust as daring (that is, θαρρεύω in contemporary Greek). At first glance, the hazardous nature of trust seems to be grounded in having the mindset for taking risks and accepting challenges (Castelfranchi & Falcone, 2000). From this perspective, trust and caution make sense together, as two sides of the same coin (Doney & Cannon, 1997). So, good sense suggests that trust requires the counterbalance of preventive measures taken in advance and the use of expertise to bring about a strategic plan of action to stay away from hazards and put oneself under protection. In other words, it entails a *cognitive layer*.

- A different but related verb in classical Greek, θαρρύνω, was used to express the idea of cheering up, encouraging, lifting the spirit to generate self-confidence in oneself or in persons close to oneself. It is the domain of feeling or providing affection in the immediate surroundings, of obtaining or dispensing moral support, of sensing that even when things do not go well, they will work out well in the end. Under the heading "trust versus mistrust" Erik H. Erikson (1902-1994), a well-known psychoanalyst, highlighted this perspective as the first stage (out of eight) in the psychosocial development of "ego identity" (Erikson, 1984, and for further details http//facultyweb.cortland.edu/ ~ ANDERSMD/ERIK/). During the first eighteen months of life children come to feel that the surrounding world is trustworthy if they get the support of loving and reliable caretakers. If the child experiences a climate of neglect, lack of love or inconsistent treatment then basic mistrust appears and obstructs the development of self-confidence and trust. So, there is an *emotional* layer.

- *Πίστις*, in classic Greek, fuses two meanings, faith and trust, and so advocates that faith is based on trust and trust is based on faith. Thus, there seems to be a nexus between trust and beliefs as expressed in parallel resolutions such as "having faith in" or "placing trust in" someone or some-

thing. Such a nexus discloses a preferential decision in the background, which reflects great credit on those involved and a partisan conviction for action. The first psychologist who paid attention to reading up on beliefs under a volitional perspective was Alexander Bain (1818-1903) in his classical book on "The emotions and the Will" published in 1859. «Belief,» he wrote, «has no meaning, except in reference to our actions... the primordial form of belief is expectation of some contingent future about to follow on our action... action is the basis and ultimate criterion of belief... An intellectual notion, or conception, is likewise indispensable to the act of believing, but no mere conception that does not directly or indirectly implicate our voluntary exertions, can ever amount to the state in question.» (p. 569-570). A more contemporary author such as Luhmann (1988) also pointed out the circular relation that underlies the appearance of trust in rather familiar settings when risk and action come together. So, trust and will blend together because, too often, trust is molded and shaped at will. Hence, there seems to be a *volitional* layer.

These three layers represent a classical perspective in the psychological analysis of human performance. They provide the basic stratum for an understanding of trust as a mercurial rendition where cognitions, emotions and volitions go on the stage. The use of the adjective "mercurial" makes sense in the psychological study of trust because it emphasizes the idea that trust is subject to frequent changes, some of them reactive and some proactive, that may be anticipated or elucidated. In this model, mercurial does not mean unpredictable. The metaphor of a mercurial rendition is advisable to make the contrast with the idea of cumulative rendition that may be used to describe stress or anxiety (Hobfoll, 1991; Spielberger, 1966). It allows, also, the suggestion of a certain parallelism between trust and climate and so fluctuations that may be related to external or internal phenomena in the person, group or organization under scrutiny.

The reason for using these Greek etymologies as a departure in this presentation is not only to pay homage to the Hellenic culture but mainly a way of calling attention to a classical approach initiated by Gordon W. Allport (1897-1967). He used an unabridged dictionary to identify about 18,000 English language words that refer to human characteristics and personality traits (Allport & Odbert, 1936) and launched it as the cardinal framework to carry out further psychological research in personality and mood realms. There is a veiled nexus between lexical and psychological analysis, between words and

behavioral patterns, between verbal remarks and descriptions of human performance. Human language leads to distinctions, nuances, and categories.

TRUST: A THREE-ACT PLAY SYSTEM

Three different but quite independent acts on stage may be distinguished in the ongoing display of trust in human lives. There are moments of trust and distrust, which may be unraveled initially as opposite junctures, and a halfway moment of non-trust.

- The recognition of communality of interest and a certain degree of interdependence are basic ingredients for the occurrence of a climate of trust whenever persons, groups or organizations interact (Purkey & Stanley, 1991). Somehow the relationship and interactions are perceived as harmless and built on mutual reliance, duty and respect. Also a person may rely on a machine, software, and a database. Then transactions occur in a relaxed and easy-going atmosphere because there are grounds for optimism and positiveness (Fukuyama, 1999).
- A climate of distrust prevails when someone or something cannot be relied upon. Then all kinds of transactions are kept to a minimum and if possible deconstructed because there are grounds for a sense of vulnerability and suspicion (Sagarin, Rhoads, & Cialdini, 1998). William James (1842-1910) resorted to the expression "self-distrust" in the section devoted to the study of "the empirical self or me" in chapter 10th of *The Principles of Psychology* (James, 1890). Mistrust is a related term in English that was used (a) by Erikson (1980) to describe the anticipation of discomfort and insecurity as a direct consequence of casualness and inconsistency in care, and (b) by McAllister (1995) to describe lack of commitment to the goals of the organization fractured by misunderstandings and disintegrating dissensions.
- Non-trust is an intermediate phase prompted by warnings of danger or by feelings of uncertainty that appear when reality does not live up to expectations or reputations (Deutsch, 1958). Transactions continue but generate moments of uneasiness when suspicion crops up during undertakings demanding direct and indirect reciprocity (Berg, Dickhaut, & McCabe, 1995). It is the consequence of starting to appraise that too much risk is involved and that it can lead to an unsafe state of affairs that might be convenient to avoid (Castelfranchi & Falcone, 2001). Deception is also linked to episodes of non-trust, as an intermediate phase, as Castelfranchi and Tan (2001) have verified in studies carried out in virtual communities.

These three distinct acts on the stage do not come one after the other. Each stage is ephemeral but lasts for a period of time that cannot be specified in advance. As a whole, trust comes about as a mercurial rendition. That is, trust is inflated and deflated by the individual (or by group members) in a reactive or a proactive manner. Baier (1986) also acknowledged a similar view when he observed that trust is much easier to maintain than it is to get started and is never hard to destroy. Trust is a fleeting psychological phenomenon, which owes its autonomy every now and then to blindness and every now and again to the force of circumstance. Stress, for instance, is a cumulative psychological phenomenon: it grows until a point of no return is reached and psychosomatic disorders appear (Hobfoll, Spielberger et al., 1991). Anger also is cumulative and very often a crisis point is reached. By contrast, trust may become suddenly no trust because consternation or lack of conviction emerges hurriedly and the rationale cannot be appraised reliably.

TRUST AS A DOUBLE ENTRY INTERFACE

The psychological model under scrutiny has been structured as a double entry interface where a space-multiplexed arrangement and a time-multiplexed course of action converge.
- Two volitional, two cognitive and two emotional components have been identified and arranged as a three-layered stratum system.
- Trust, non-trust and distrust have been identified and programmed as a three-acts play system.

The term "interface" has been used deliberately because it stresses the idea that each specific cell serves as a common boundary for a space arrangement and a time-related course of action. Each cell in Table 1 has a specific identity and each row singles out a three-layered facet.

Volitional facets

The first volitional facet puts on display three episodes: credibility, doubt and disappointment. The psychological basis is the belief system, that is, a more or less organized set of individual (or group) convictions that modulate the degree of committed support displayed when the person expresses trust, non-trust, and distrust (Rotter, 1980). Also trust is modulated by the degree of similarity in the belief system held by the person who trusts and the person who is trusted. So trust seems to be related to the degree of congruence in

Table 1. Trust as an interface: Space arrangement plus time-related course of action

Trust	Non-Trust	Distrust	Component
Credibility	Doubt	Disappointment	Volitional
Approval	Confusion	Rejection	Volitional
Safety	Precaution	Vulnerability	Cognitive
Reliability	Inconstancy	Inconsistency	Cognitive
Sympathy	Uneasiness	Annoyance	Emotional
Calm	Alarm	Tension	Emotional

keeping up beliefs and in communication patterns intended to change be-
liefs. So it becomes a typical instance of persuasion, and a direct consequence
is that the person who is credible is not only trustworthy but also more per-
suasive (Anderson & Weitz, 1990). Trust activates psychological triggers
that influence consumers to comply with requests or induces generosity as a
way of overpaying, for instance, favors received in the past (Cialdini, 1993).

The second volitional facet puts on display three episodes: approval, con-
fusion, and rejection. The psychological basis is the study of commitment in
constructive versus destructive processes in social dilemmas where there is
interdependence of outcomes (Morgan & Hunt, 1994). Constructive
processes require both cooperation and approval schemes among partici-
pants, as was evidenced in laboratory studies such as the classical "prisoner's
dilemma" game (Deutsch, 1962). Cooperation assumes the willingness to ap-
prove and accept someone or something as satisfactory at the risk of being
exploited. The constructive climate declines when confusing facts or news ap-
pear; a move of rejection sows the seeds of a destructive process (Jones &
Geirge, 1998).

Cognitive facets

The first cognitive facet puts on display three episodes: safety, precaution
and vulnerability. This is the domain of a safety or vulnerability conscious-
ness among employees. Discernment is the psychological basis in the process
of transforming fuzzy sets of information into suitable knowledge to build
distinctly predictable environments and to avoid fairly ill-protected opera-
tions and transactions (Davenport & Prusak, 1998). Special emphasis is
placed on the proactive contribution of tacit knowledge, that is, expertise and
experience of individuals or group members that is shared in an informal way

and is very rarely documented (Polanyi, 1966). The cornerstone is setting up first a culture of safety and afterwards a reputation of safety by determining vulnerability markers and discriminating between relevant and immaterial facts that allow the reduction of transactional costs and an efficient use of resources (Klein, 1997). Precaution emerges as a safeguard when vital pieces of information do not fit together. Security is a related term that, in English, used to express freedom from harms or dangers that may be derived from attacks.

The second cognitive facet puts on display three episodes: reliability, inconstancy, and inconsistency. The psychological basis is dependability and predictability (Holmes & Rempel, 1989). Performance consistency and absence of error messages seems to be the critical factor that makes something or someone solid and robust, being able to count on, to depend on, and so, trust. This is a well-known phenomenon in daily interactions with machines such as computers: there are moments when software and hardware do not work properly, the connection breaks, and the system gives nothing. This is the black hole that cultivates distrust in machines, or in psychological terms, phobia. Performance consistency suggests quality and allows generalizing across occasions as well as across observers, that is, the person ready to trust (Rempel, Holmes, & Zanna, 1985). Frequently changing standards or outcomes give the impression that things cannot be trusted on a regular basis and it is convenient to monitor, to set aside defective goods or services.

Emotional facets

The first emotional facet puts on display three episodes: sympathy, uneasiness, and annoyance. The psychological basis is awareness of emotional responses binding persons together in situations where people yoke together, or where a person decides to trust another (Wispé, 1991). Often signs of prosocial behavior and altruistic motives are involved, at least at first glance (Hinde & Grobel, 1991). The occurrence of uneasiness seems to be related to rumors suggesting dishonest or unpleasant actions regarding the trusted person, group or institution trusted (Marshall, 1994). Annoyance comes to light as an aversive emotional reaction and gives rise to self-oriented concerns that may express punitive courses of action or, at intervals, distress (Duck, 1994).

The second emotional facet puts on display three episodes: calm, alarm and tension. The psychological basis is that emotions are biologically deter-

mined by the activation of a set of structures in brain that monitor and regulate automatic or stereotypical body states around optimal psycho-physiological values. But also, cultural and individual conventions may influence the set of inducers and can inhibit or modify overt expressions. The emotional arousal model proposed by Schachter and Singer (1962), as well as contemporary theories of emotions digested by Izard, Kagan, and Zajonc (1984) or by Dammasio (1999), are in the background. In a given situation the materialization of unanticipated physiological arousal signals to a person what external cues will allow him or her the labeling of what emotion is occurring. Calm is located at the low level and tension at the high level of the emotional activation spectrum. It means that the calm and relaxed person is ready to trust because he or she slows down controls and restrictions, whereas the overburdened or strained person displays mental and emotional tension and so behaves mistrustfully. This facet has strong psychobiological foundations and psychoactive drugs are, often, used to favor willingness to trust when the clinical psychologists or the psychiatrist deals with a tense and strained patient (LeDoux, 1996).

Table 2 summarizes the main psychological mechanisms that are involved in each psychological facet identified. Each one of these mechanisms is understood as a theoretical process through which trust, non-trust and distrust episodes can be apprehended and explained. The identification of such a mechanism is essential in the exercise of examining the psychological basis of trust. Without mechanisms behind the scenes the analysis would be focused on the taxonomy of layers and passages organized by categories. With mechanisms in mind it is possible to grasp the network of channels and motions involved at its core.

Information encapsulated in Table 2 points out that trust has been approached and studied in quite different fields of psychology until now, but under different names. The nexus between trust and faith has been explored under the framework of psychology of religion. Commitment understood as the engagement of a given individual to a specific course of action at present or in the near future has been studied by researchers focusing their attention on the social psychology of relationships and cohesiveness. Discernment unraveled as the process of forming an opinion or reaching a conclusion based on the available information has been the focal point of cognitive psychologists. Dependability has been the center of attention of psychologists devoted to the analysis of errors and mistakes within the domain of human factors and ergonomics. Responsiveness as a positive regard and a warm response of

Table 2. Trust as an interface of psychological facets and mechanisms

Psychological Facets	Psychological Mechanism
Credibility	Faith
Approval	Commitment
Safety	Discernment
Reliability	Dependability
Sympathy	Responsiveness
Relaxation	Arousal

acceptance, as a way of reacting quickly and mirroring the affects expressed by patients has been the focus of analysis among clinical psychologists under headings such as attachment, bonding, cathexis, empathy and transference. Finally, arousal has been the focus of long term inquiries carried out by personality assessment researchers as well as those with expertise in psychophysiology and neurosciences. In other words, trust seems to result in several characters in search of an author.

PSYCHOLOGICAL ASSESSMENT OF MOMENTS OF TRUST, NO TRUST, AND DISTRUST

There is a cardinal premise in contemporary Western culture as well as in the scientific community: there is a realm of 'truth' which exists prior to and independent of its representation by words and language. This premise has been identified as logocentrism (Ulmer, 1985). Logocentrism is a critical challenge in contemporary psychology. There are psychological researchers who use only questionnaires, inventories, or survey data to identify behavioral dimensions via factor analysis, cluster analysis and so on. So these researchers consider that words are mixed up with the phenomena they represent, just the subject of psychological inquiry and scrutiny. In other words, reality cannot escape from words, and questions posed by researchers. Cattell (1946) argued that the main realistic and workable source for the totality of personality traits turns out to be just language. In experimental research he introduced, however, a distinction between Questionnaire, Life, and Test data (Cattell, 1966) and so provided a quite intricate frame of reference for psychological assessment and research. Psychological dimensions may be identified in each realm but their understanding is improved if the dimensions identified in one realm coexist in other realms.

- Q data are based on answers to questions where the subject is requested to describe or remember specific behaviors, through self-assessment and self-observation.
- L data are based on observed behavior in daily life situations in indoor and outdoor settings. An external observer is needed, ready to get records and ratings or do the tracking, paying special attention to haptic, kinesic, and proxemic behaviors that express feelings of sympathy or relaxation,
- T data are tasks used to test or measure human behavior or performance in standardized and replicable settings, showing a preference for unobtrusive procedures.

These three different approaches have been used to carry out psychological assessment and research on trust, non-trust and distrust episodes.

A conventional questionnaire such as the 16 PF (Cattell, Cattell, & Catell, 1993) includes two dimensions, L (Trusting versus suspecting) and Q 4 (Relaxed versus Tense) among the primary factors. In a similar vein the NEO PI-R and the NEO-FFI of Costa and McCrae (1992 a, b) take into account a Vulnerability Facet under Neuroticism and a Trust Facet under Agreeability. These are typical instances of psychological assessment of trust as a trait.

In Educational Psychology the appraisal of trust via questionnaires may be traced back, for instance, to the study carried out by Halpin and Croft (1963) on the organizational climate that prevailed in educational settings. A specific scale devoted to trust was developed to inquire into principals' behavior. Willower, Eidell, and Hoy (1967) developed a Likert type scale with five categories where items such as "staff in our school trust one another" or "pupils can be trusted to work together" are examples of how the "pupil-control ideology" among teachers was analyzed.

In Work and Organizational Psychology, Rotter (1967) developed an interpersonal trust scale to assess the expectation held by an individual or group that the word, promise, verbal or written statement of another individual or group can be relied upon. Roberts and O'Reilly (1974) developed a specific scale devoted to the measurement of trust within the context of communication roles in organizations. Cook and Wall (1980) developed a 12-item classification scale to differentiate faith in the intentions and confidence in the actions of peers and management, but this distinction did not survive the factor analysis. Nyhan and Marlowe (1997) elaborated an Organizational Trust Inventory of 12 items, eight measuring trust towards the immediate supervisor and four towards the organization as a whole. The results of seven

case studies carried out using this inventory showed the adequacy of this tool and the distinguishing marks of trust as distinct from personality traits.

Another perspective is the examination of communication codes held during interactions singling out behavioral indicators of trust. For instance, holding arms while walking, walking arm-in-arm or arms around each other's shoulders may be considered signs of sympathy, as is too the case with postural mirroring or postural congruence among couples (LaFrance, 1985). Close proximity, forward lean or direct body contact such as caress, embrace or kiss may suggest also great sympathy. Grim smiling, gritting teeth or clenching fists may insinuate episodes of alarm or tension whereas facial pleasantness or grinning from ear to ear may imply that things are going slowly and calmly (Bayes, 1972). Gazing away or at the ceiling, knuckle cracking, blank stares and nodding off may reveal annoyance or disappointment (Clore, Wiggins, & Itkin, 1975) whereas head nods and eye contact suggest some kind of approval and credibility. As a whole this is the realm of L Data and here researchers as well as those in charge of the assessment procedures recur to non-verbal communication patterns to benchmark measures and markers (Burgoon, Buller, & Woodall, 1989).

Finally, it is possible to identify very specific tasks or demands that operate as a litmus test to verify the existence of a climate of trust, non-trust or distrust. For instance, a fellow worker may say to another: "May I use your computer to access my e-mail box during your coffee-break?" The spontaneous answer to this question may be interpreted as a unobtrusive test for trust, non-trust or distrust: "OK, you may use it for a short while", "May I know why you cannot do it with your computer?" or "Give me a good argument to persuade me you are the right person to use my computer during my absence" are just examples of T data pointing out if the workmate is in the mood to comply with the request. Another instance is a typical exercise introduced very often in team-building workshops. A rope is stretched tightly between two fence posts and about 66 cm (2 feet) above the ground and each participant is requested to behave as a tightrope walker with the eyes covered by a bandage and following the instructions of a teammate. For decades a well-known Spanish railway company had a bad reputation for unpredictability regarding arrival times of trains. After strong investments in technological innovations the following measure was announced: five minutes of delay in a long-distance trip entails immediate cash refund. The consequence is that this railway firm has earned a good reputation for reliability and compensation schemes in case of failure. Five minutes of delay is now the critical T da-

ta for reliability; there are indications of increasing dependability on railways among regular travelers as compared to airlines where frequent changes and delays seem to be the standard in departures. In a car the behavioral patterns of a passenger sitting by the seat to the right (or left) side of the driver supply again critical T data. For instance, if hands, arms or jaw muscles are stretched tight it betrays tension and so distrust; by contrast if the person is sleeping almost all the time during the trip it suggests both relaxation (and so trust) as well as tiredness (or drowsiness). The habit of drinking several Greek or "espresso" coffees during working hours increases the probability of tension and irritation among employees, whereas drinking green tea slowly and deliberately is associated with a more relaxed atmosphere and, for centuries, the merchants in the great bazaar of Constantinople have used this T data as an advantage to make a good deal.

REFERENCES

Allport, G. W., & Odbert, H. (1936). Trait-names, a psycho-lexical study. *Psychological Monographs, 47,* 171-220.

Anderson, E., & Weitz, B. (1990, Fall). Determinants of continuity in industrial channel dyads. *Marketing Science, 8* 310-323.

Baier, A. (1986). Trust and antitrust. *Ethics, 96,* 231-260.

Bain, A. (1859). *The emotions and the will.* London: Parker.

Bayes, M. A. (1972). Behavioral cues of interpersonal warmth. *Journal of Counseling and Clinical Psychology, 39,* 333-339

Berg, J., Dickhaut, J., & McCabe, K. (1995). Trust, reciprocity, and social history. *Games and Economic Behavior, 10,* 122-142.

Burgoon, J. K., Buller, D. B., & Woodall, W. Gill (1989). *Nonverbal communication: The unspoken dialogue.* New York: Harper & Row.

Cattell, R. B. (1946). *Description and measurement of personality.* London. Harrap.

Cattell, R. B. (1966). The data box: Its ordering of total resources in terms of possible relational systems. In R. B. Catttell (Ed.), *Handbook of multivariate and experimental psychology* (pp. 67-128). Chicago: Rand McNally.

Cattell, R. B., Cattell, A. K., & Cattell, H. E. P. (1993). *16PF Fifth Edition.* Champaign, IL: IPAT.

Cialdini, R. B. (1993). *Influence: The psychology of persuasion.* New York: Morrow.

Castelfranchi, C., & Falcone, R. (2000). Trust and control: A dialectic link. *Applied Artificial Intelligence, 14,* 799-823.

Castelfranchi, C., & Falcone, R. (2001). Social trust: A cognitive approach. In C. Castelfranchi & Y. Tan (Eds.), *Trust and deception in virtual societies* (pp. 55-90). Dordrecht, The Netherlands: Kluwer.

Castelfranchi, C., & Tan, Y. (2001). Introduction: Why trust and deception are essential for virtual societies. In C. Castelfranchi & Y. Tan (Eds.), *Trust and deception in virtual societies* (pp. xvii-xxxi). Dordrecht, The Netherlands: Kluwer.

Clore, G. K., Wiggins, N. H., & Itkin, S. (1975). Judging attraction from non-verbal behavior: The gain phenomenon. *Journal of Consulting and Clinical Psychology, 43,* 491-497.

Cook, J., & Wall. T. (1980). New work attitude measures of trust, organization commitment and personal need non-fulfillment. *Journal of Occupational Psychology, 53,* 39-52.

Costa, P. T., & McCrae, R. R. (1992a). *NEO-PIR (Personality Inventory Revised)*. Odessa, FL: Psychological Assessment Resources.

Costa, P. T., & McCrae, R. R. (1992b). *NEO-FFI (Five-Factor Inventory)*. Odessa, FL: Psychological Assessment Resources.

Damasio, A. (1999). *The feeling of what happens: Body and emotion in the making of consciousness*. New York: Harcourt

Davenport, T., & Prusak, L. (1998). *Working knowledge*. Boston, MA: HBS Press.

Deutsch, M. (1958). Trust and suspicion. *Journal of Conflict Resolution, 2,* 265-279.

Deutsch, M. (1962). Cooperation and trust: Some theoretical notes. In M. R. Jones (Ed.), *Nebraska Symposium on Motivation* (pp. 275-320). Lincoln, NE: University of Nebraska Press.

Doney, P. M., & Cannon, J. P. (1997). An examination of the nature of trust in buyer-seller relationships. *Journal of Marketing, 61,* 35-51.

Duck, S. (1994). Strategems, spoils, and a serpent's tooth: On the delights and dilemmas of personal relationships. In W. R. Cupach & B. H. Spitzberg (Eds.), *The dark side of interpersonal communication* (pp. 3-24). Hillsdale, NJ: Erlbaum.

Erikson, E. H. (1980). *Identity and the life cycle*. New York: Norton.

Erikson, E. H. (1984). Reflections on the last stage - and the first. *Psychoanalytical Study of Child, 39,* 155-166.

Fukuyama, F. (1999). *The great disruption: Human nature and the reconstitution of the social order*. London: Profile Books.

Halpin, A. W., & Croft, D. B. (1963). *The organizational climate of schools*. Chicago: University of Chicago Press.

Hinde, R. A., & Grobel, J. (Eds.). (1991). *Cooperation, prosocial behavior, trust and commitment*. Cambridge, UK: Cambridge University Press.

Hobfoll, S. E. (1991). Traumatic stress: A theory based on rapid loss of resources. *Anxiety Research, 4,* 187-197.

Hobfoll, S. E., Spielberger, C. D., Breznitz, S., et al. (1991). War-related stress: Addressing the stress of war and other traumatic events. *American Psychologist, 46,* 848-855.

Holmes, J. G., & Rempel, J. K. (1989). Trust in close relationships. In C. Hendrick (Ed.), *Review of personality and social psychology: Close relationships* (Vol. 10, pp. 187-220). Newbury Park, CA: Sage.

Izard, C. E., Kagan, J., & Zajonc, R. B. (Eds.). (1984). *Emotion, cognition and behavior*. Cambridge, UK: Cambridge University Press.

James, W. (1950/1890). *The principles of psychology*. New York: Dover.

Jones, G. R., & Geirge, J. M. (1998). The experience and evolution of trust: Implications for cooperation and teamwork. *Academy of Management Review, 23*(3), 531-546.

Klein, D. B. (1997). Knowledge, reputation, and trust, by voluntary means. In D. B. Klein (Ed.), *Reputation: Studies in the voluntary elicitation of good conduct* (pp. 1-9). Ann Arbor, MI: University of Michigan Press.

LaFrance, M. (1985). Postural mirroring and intergroup relations. *Personality and Social Psychology Bulletin, 11,* 207-217.

LeDoux, J. (1996). *The emotional brain*. New York: Simon and Schuster.

Luhmann, N. (1988). Familiarity, confidence, trust: Problems and alternatives. In D. Gambetta (Ed.), *Trust: Making and breaking cooperative relations* (pp. 94-107). Oxford, UK: Blackwell.

Marshall, L. L. (1994). Physical and psychological abuse. In W. R. Cupach & B. H. Spitzberg (Eds.), *The dark side of interpersonal communication* (pp. 281-311). Hillsdale, NJ: Erlbaum.

McAllister, D. J. (1995) Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal, 38*(1), 24-59.

Morgan, R. R., & Hunt, S. D. (1994, July). The commitment-trust theory of relationship marketing. *Journal of Marketing, 58*, 20-38.

Nyhan, R. C., & Marlowe, H. A. (1997). Development and psychometric properties of the organizational trust inventory. *Evaluation Review, 21*, 614-635.

Polanyi, M. (1966). *The tacit dimension*. New York: Doubleday.

Purkey, W. W., & Stanley, P. H. (1991). Invitational teaching, learning and living. Washington, DC: National Education Association.

Rempel, J. K., Holmes, J. G., & Zanna, M. P. (1985). Trust in close relationships. *Journal of Personality and Social Psychology, 49*(1), 95-112.

Roberts, K. H., & O'Reilly, C. A. (1974). Measuring organizational communication. *Journal of Applied Psychology, 59*, 321-326.

Rotter, J. (1967). A new scale for the management of interpersonal trust. *Journal of Personality, 35*, 651-65.

Rotter, J. B. (1980). Interpersonal trust, trustworthiness, and gullibility. *American Psychologist, 35*, 1-7.

Sagarin, B. J., Rhoads, K., & Cialdini, R. B. (1998). Deceiver's distrust: Denigration as a consequence of undiscovered deception. *Personality and Social Psychology Bulletin, 24*, 1167-1176.

Schachter, S., & Singer, J. E. (1962). Cognitive, social, and psychological determinants of emotional states. *Psychological Review, 69*, 379-399.

Spielberger, C. D. (Ed.). (1966). *Anxiety and behavior*. London: Academic.

Ulmer, G. L. (1985). *Applied grammatology: Post(e)-pedagogy from Jacques Derrida to Joseph Beuys*. Baltimore: John Hopkins University Press.

Willower, D. J., Eidell, T. L., & Hay, W. K. (1967). The school and pupil control ideology (The Pennsylvania State University Studies No. 24). University Park, PA: Pennsylvania State University.

Wispé, L. (1991). *The psychology of sympathy*. New York. Plenum.