

Bridging Social Psychology

Benefits of Transdisciplinary Approaches



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Social Relations: Culture, Development, Natural Selection, Cognition, the Brain, and Pathology

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Social psychology often focuses too narrowly on perception and inference about persons. But persons are not merely important stimuli—they coordinate with each other, interacting with reference to jointly meaningful, mutually motivating relational models. That is, people form relationships. Social relationships are not products of individual brains alone; sociality is shaped by the interaction of evolutionary, developmental, neuroanatomical and neurophysiological, psychological, societal, and cultural processes. To understand how people relate to each other, we need to understand how these interdependent processes jointly shape human sociality. Because these processes are highly interdependent, we cannot understand any of them in isolation from the others. Thus to understand social relations, we need to link social psychology to ethnography, ethnology, cognitive science, neuroscience, clinical psychology, evolutionary psychology, developmental psychology, economics and management science, and social theory.

My own research on relational models theory began with the discovery of a convergence among developmental psychology, political sociology, and theodicy theology. That is, I realized that the same three ways of understanding and evaluating social relations were being described by Jean Piaget, characterizing stages of moral development among Swiss children; Max Weber, sketching ideal types of legitimation of authority; and Paul Ricoeur, analyzing

the history of Judeo-Christian explanations for misfortune. In these diverse domains they each described homologous models of social relations: first, a sense that people have something fundamental in common, some essential quality that makes them the same (or that separates them from others whose essence differs); second, a perception of people—or people in relation to God—as hierarchically differentiated, with subordinates owing obedience to superiors; third, a sense of proportionality, whether expressed as prices, efficiency, or justice. It seemed to me that if these three models of social relations emerged in such diverse domains, then perhaps they were manifestations of elementary forms of social coordination that humans used to structure all kinds of interaction.

ETHNOGRAPHIC, ETHNOLOGICAL, AND THEORETICAL RESEARCH ON RELATIONAL MODELS

The logical deduction is that these three relational models should be present in every culture. So, with considerable trepidation, I committed myself to test the theory with participant observation fieldwork among the Moose of Burkina Faso. Learning their language and then living in a small, remote village for 2 years, I attempted to fit the three elementary models to what I learned by participating in daily life and rituals. Somewhat to my astonishment, the models fit extremely well, helping me to understand what I saw and how people related to me. However, the three models failed to encompass one significant part of Moose social life: Often people related as equals, balancing and matching, taking turns or making equal contributions. With the formulation of this fourth model, nearly the whole of Moose social life seemed explicable. Moreover, the nature of each of the other three relational models was clarified by contrast to the fourth.

With further analysis, clear analytic definitions of four relational models emerged (Fiske 1992, 2004a). Communal sharing (CS) is an equivalence relation, in which people organize some aspect of their interaction with respect to some essential feature they have in common. Members of a team or ethnic group or people in a romantic relationship exemplify CS. Authority ranking (AR) is linear ordering, according to which people differentiate themselves hierarchically in relevant contexts. AR is evident in military command, in relations of seniority, and in relationships with superior deities. Equality matching (EM) is a relationship in which people keep track of additive differences, using even balance as the homeostatic reference point. We see EM in turn-taking, the rules of games and team sports, voting, balanced reciprocity in dinner invitations, or an-eye-for-an-eye vengeance. Market pricing (MP) is based on a socially meaningful ratio or rate, such as a price, rent, tax, cost-benefit analysis, or a sense of due proportion in punishment. People coordinate the MP aspect of their interactions with reference to this proportional standard.

I wrote my dissertation describing the operation of these four relational models in Moose social life. Impressed by the convergence of developmental

psychology, political sociology, and theodicy theology with ethnography, I decided to put the emerging theory to further tests. If indeed the four relational models were elementary, they should shape social psychology and relationships in all domains of social life. So I reviewed diverse social science theories and literatures, where I indeed discovered manifestations of the models just about everywhere (Fiske, 1991). Most previous authors had characterized subsets of two or three of the elementary relational models: for example, Durkheim's organic and mechanical solidarity, or the trio of intimacy motivation, power motivation, and need for achievement. However, economic historians and anthropological economists had described four modes of labor organization, and four systems of exchange and distribution—exactly corresponding to the four elementary relational models (Polanyi, 1968; Udy, 1970). Yet, perhaps because of the lack of interdisciplinary bridges, no one had recognized that these four relational models were fundamental, elementary systems that structure every kind of social coordination. Even cultural anthropologists, describing these forms of organization in specific domains in particular communities, failed to realize that they were a framework for understanding many aspects of social relations, social institutions, and social structures in every society. Ethnologic research, systematically comparing ethnographies, showed that these relational models organize virtually every domain of human sociality. The distinctively human adaptation is complex, culturally mediated social coordination. The four relational models are the foundations for this coordination.

Subsequently, ethnologic research revealed that across cultures people consistently constitute, communicate, and cognize each of the relational models in a medium distinctive of that relational model (Fiske, 2004b). People constitute CS relations indexically, by making their bodies similar. In contrast, AR operates in an iconic mode, representing people as above and below, bigger or smaller, many or few, powerful or weak, earlier or later in time. People constitute and represent EM procedurally, in terms of concrete matching operations: taking turns, flipping a coin, or setting items in one-to-one correspondence. MP functions in the medium of abstract symbols such as numerals, contracts, and money. Participant observation in a Moose village revealed this fundamental pattern, which ethnology refined, developed, and confirmed. This theoretical and anthropological work has led us to a current empirical study of when and how children develop capacities to recognize the relational models.

RESEARCH ON RELATIONAL COGNITION AND ON PSYCHOPATHOLOGY

This synthesis of the literature was analytic, the ethnography was subjective, and my reviews of other evidence were inductive. But I was in the Department of Psychology at University of Pennsylvania, so I knew that to convince my colleagues I needed to deduce and test hypotheses derived



from this theory. Could we predict basic processes of social cognition? A team composed of Nick Haslam, myself, and others carried out a series of 11 studies of naturally occurring social errors; we collected instances where people confused one person with another in addressing or referring to them, in interacting, or in recalling interactions. Sure enough, the predicted pattern emerged: People mix up persons with whom they have the same type of relationship (Fiske, Haslam, & Fiske, 1992). If you have a CS relationship with Susan and call her Barbara, it's because your relationship with Barbara is also CS. Tested against several other taxonomies, relational models theory made the best predictions. We then tested and supported the theory in samples from four other cultures, and showed that it also governs intentional substitutions, in which a person seeking to do something picks an alternate partner (e.g., if you have an EM relationship with your running mate, who has the flu today, you seek generally a substitute with whom you also have an EM relationship; Fiske, 1993; Fiske & Haslam, 1997). Subsequent studies showed that the relational models structured free retrieval of persons from memory, judgments of similarity among personal relationships, categories created in free sorting of personal relationships, and prototypicality judgments (reviewed in Haslam, 2004a). Indeed, the relational models strongly and consistently shaped every cognitive process we looked at.

Cognitive research demonstrates that the models organize implicit and explicit thinking about social relationships. But these lab studies do not just show how relational models function to coordinate everyday social action. To find out, we started looking at psychopathology. If relational models are the systems people use to coordinate with each other, then aberrant uses of the models should cause severe, persistent interpersonal problems, such as personality disorders. Nick Haslam and two of his students organized one study of a non-clinical population recruited for interpersonal problems and another study of a clinical population with diagnosed personality disorders. Aberrant implementations of the relational models were indeed related to interpersonal distress, with different aberrations related to different personality disorders (Haslam, 2004b). Three other researchers have recently studied normal people interacting across cultures, across positions in organizations, or making different assumptions about the structure of an interaction (reviewed in Haslam, 2004a). In these situations, differences in implementation of the relational models often results in discord, recriminations, and dissatisfaction with corporate and management work teams or partnerships.

NATURAL SELECTION AND NEUROBIOLOGY

Elementary human capacities for coordination must have evolved by natural selection, yet the great cultural diversity in implementation of the relational models shows that the evolved capacity does not directly or fully determine

coordination structures. Theoretical work demonstrates that natural selection can indeed generate highly structured social potentials coupled with specially tuned learning proclivities (Fiske, 2000). This evolutionary tuning is an adaptation permitting children to discover the cultural complements that necessarily specify when, where, with whom, and how to implement the innate models.

Human action, cognition, and emotion operate through the brain, of course, and discovering the neural regions and circuits involved can sometimes illuminate the mechanisms. With this in mind, I organized a social cognitive neuroscience team to investigate the functional neuroanatomy of the relational models. We discovered that the brain regions activated were when people watch realistic videotapes of ordinary CS and AT interaction are quite different from activations produced by any other imaging study (Iacoboni, Lieberman et al., 2004). Watching social interactions strongly activates the bilateral anterior regions of the superior temporal sulcus, which seem only to be activated by stimuli that are socially meaningful. Moreover, two regions activated by our realistic stimuli have never before shown increases compared to a resting baseline: the medial parietal lobe (precuneus) and dorsolateral medial prefrontal lobe. This suggests the possibility that these three regions comprise a system dedicated to analysis of social relations. Moreover, these latter two regions are part of what has been called the “default” brain system that is active when people have no specific task to perform but is deactivated by virtually all nonsocial cognitive tasks. A plausible inference is that processing of social relations (reflectively and/or unconsciously) is a default activity of the human brain.

Two other approaches to the study of brain functions also illuminate how the brain operates in social relationships. Theory suggests that social and moral emotions are essential to motivate people to overcome immediate temptations and act so as to sustain the social relationships that are adaptive in the long-run (Fiske, 2002). Clinical neurology shows that anterior temporal and medial prefrontal lesions, or degeneration in these regions caused by frontotemporal dementia, seriously disrupt social relations, apparently by diminishing these crucial socio-moral emotions.

Neurochemistry provides a complementary perspective on brain processes. Maternal bonding in humans and other animals is mediated by a set of hormones, especially oxytocin; oxytocin mediates pair bonding in monogamous voles, along with the closely related peptide arginine vasopressin (de Bono, 2003). Although almost nothing is known about the neurochemistry of other social relationships in humans, there is a drug that produces intense, euphoric, indiscriminate CS relationships: MDMA (Ecstasy). Taken at raves or in other contexts, MDMA typically creates an extremely powerful feeling of affectionate oneness with everyone nearby (Olaveson, 2003). Unpacking the mechanisms of MDMA and the regions it affects might lead to the discovery of the natural pathways to CS.

CONCLUSIONS

Why attempt to study, let alone integrate, psychological, cultural, evolutionary, developmental, neuroanatomical, and neurochemical processes? These processes jointly shape human sociality, and their causal interdependence means that their effects on social relations cannot be adequately understood separately, in isolation from each other. Although we have only just begun to partially understand some of these processes and a few aspects of their interdependence, a synthetic approach offers the only opportunity to fully understand human sociality. For example, to understand the cultural aspects of sociality, we need to understand the processes of natural selection through which humans evolved to be cultural animals; to understand culture, we need to know why humans evolved specific capacities for culture, and what these capacities consist of. To understand these cultural and evolutionary processes, we need to discover the developmental and neural mechanisms that result from and constrain them.

Furthermore, we can understand all of these systems only when we study how they malfunction in psychopathology, interpersonal disjunction, or cultural misunderstanding. To help people meet their social needs and interact more fruitfully, we need to identify all of the processes that are jointly necessary for functional social relations, and how these complementary processes depend on each other. This kind of research requires interdisciplinary training and interdisciplinary teamwork. As social animals, we are uniquely equipped for such coordination.

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