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Taking the Social Origins of Human Nature Seriously: Toward a More Imperialist Social Psychology

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To recognize that human beings are adapted for social living is fundamental to the science of human psychology. I argue that the development of broad social psychological theory would benefit from taking this basic premise more seriously. We need to pay more attention to the implications for personality and social psychology of recognizing that all of the building blocks of human psychology—cognition, emotion, motivation—have been shaped by the demands of social interdependence. In this article I illustrate the generative potential of this basic premise for development of more expansive social theory.

Most behavioral scientists today accept the basic premise that human beings are adapted for group living. Even a cursory review of the physical endowments of our species—weak, hairless, extended infancy—makes it clear that we are not suited for survival as lone individuals, or even as small family units. Many of the evolved characteristics that have permitted humans to adapt to a wide range of physical environments, such as omnivorousness and tool making, create dependence on collective knowledge and cooperative information sharing. As a consequence, human beings are characterized by *obligatory interdependence* (Caporael & Brewer, 1995), and our evolutionary history is a story of co-evolution of genetic endowment, social structure, and culture (Boyd & Richerson, 1985; Caporael, 2001; Fiske, 2000; Janicki, 1998; Li, 2003).

Despite widespread acceptance of this characterization of humans as an ultrasocial species, the group-living premise has not been fully exploited in constructing theory in personality and social psychology. Recent developments in evolutionary psychology (e.g., Crawford & Krebs, 1998; Simpson & Kenrick, 1997) have raised awareness of the evolutionary roots of human social behavior, but much of the theorizing that has been promulgated under this rubric has been criticized for relying on a narrow, gene-based view of biological evolution (see, e.g., Scher & Rauscher, 2003). As Linnda Caporael and I have argued previously (Caporael & Brewer, 1995, 2000), psychological theory will be better served by reference to more recent multilevel, hierarchical models of evolution that recognize that natural selection operates at multiple levels of organization—from DNA molecules to cells to organisms to groups and regional ecosystems (Brandon, 1990; Buss, 1997; Maynard Smith & Szathmary, 1995; Sober & Wilson, 1998).

Hierarchical models of biological evolution recognize interactions across different levels of organization that give rise to organism–environment patterns or multilevel systems. Consider, for example, the implications of a specific biological adaptation, omnivorousness. An omnivore is potentially able to survive in a range of environments because meeting nutritional needs is not restricted to the availability of specific edible substances in a narrow environmental niche. But to fully exploit the advantages of this adaptation, a species has to surrender the adaptive advantage of having the "knowledge" of what substances are edible and what are toxic genetically encoded. (No single cues of edibility are likely to be sufficiently diagnostic across a very wide range of potential food substances.) If each individual member of an omnivorous species had to learn by trial and error what foods are toxic, efficiency would be very low (even with preparedness for one-trial learning). Thus, the full advantage of omnivorousness requires a capacity for vicarious learning and, at a higher level of organization, information about edibility that is retained and transmitted in the social environment. This, in turn, requires a high degree of susceptibility on the part of individual organisms to social influence about what is desirable to eat (see Rozin & Fallon, 1987). Thus, ominivorousness represents a complex pattern—a whole system entailing not only digestive machinery and biochemical absorption at the organism level but a social system that accumulates, retains, and transmits information and a psychological adaptation (suggestibility) again at the level of the individual organism.

In sum, hierarchical models of evolution recognize that the concept of "fit" must be conceptualized in

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terms of embedded structures. Genes, as one level of organization, are adapted to fit the environment of their cellular machinery; cells fit the environment of the individual organism; and individual organisms are adapted to fit the next higher level of organization within which they function. This view of adaptation and natural selection provides a new perspective on the concept of group selection as a factor in human evolution (Caporael & Brewer, 1991). With coordinated group living as the primary survival strategy of the species, the social group, in effect, provided a buffer between the individual organism and the exigencies of the physical environment. As a consequence, then, the physical environment exercises only indirect selective force on human adaptation, whereas the requirements of social living constitute the immediate selective environment. Starting from this perspective, I would suggest, may help us to generate more powerful, broad theories of social behavior that are nonreductionist and dynamic.

Some Implications for Theory Building

In this section I suggest a few principles to be drawn from this multilevel, hierarchical view of the evolution of human sociality that might have implications for constructing theory in personality and social psychology. These are guides that have proved useful to me in my own theorizing and pedagogy. In particular, I will make reference to the development of optimal distinctiveness theory (Brewer, 1991) to illustrate the generative potential of taking sociality seriously.

Look for Social Motives Underlying a Broad Range of Human Behavior

Social psychology is just beginning to emerge from the era of "social cognition" to a re-emphasis on the interplay among cognition, affect, and motivation as the basis for understanding social behavior. Consistent with our recent preoccupation with cognitive processes, the search for motivational underpinnings of behavior has largely centered on the role of epistemic motives such as need for certainty, cognitive closure, consistency, and meaning seeking more broadly (Kruglanski, 1989). With a few notable exceptions (e.g., Baumeister & Leary, 1995), somewhat less attention has been paid to the power of social motives such as the needs to be accepted by, connected with, and of value to other persons and social groups. Yet, under the evolutionary scenario, the species characteristics that we would expect to be biologically "built in" would be those associated with human sociality (Campbell, 1983). Sociality encompasses those propensities most associated with group identity—cooperativeness, group loyalty, adherence to socially learned norms, and fear of social exclusion.

From the perspective of human evolution, one might go so far as to suggest that social motives subsume epistemic motives. For a socially interdependent species, shared knowledge is the source of meaning, and consensus and certainty are virtually interchangeable (Hardin & Higgins, 1996). Outside of the artificial world of an Asch conformity experiment, people rarely experience a conflict between their own experience of reality and the reports of others about that same experience. In fact, a great deal of what we "know" about the physical world (let alone the social world) is in the form of what Festinger (1954) defined as "social reality," representations of the world and ourselves that we accept as true because everyone around us agrees it is so. For humans, information acquired indirectly or vicariously through the experiences or verbal reports of others is as much a part of our repertory of knowledge as our own experience (Campbell, 1974b), and once encoded in semantic memory our cognitive representations appear to be indistinguishable by source. Thus, a focus on epistemic motives serves to highlight our social interdependence.

There may be a social wisdom underlying many of the cognitive biases, heuristics, and "errors" of reasoning that have been identified in social cognition and decision research. Some errors in formal reasoning are explicable if one recognizes that such reasoning is an exaptation (Gould, 1991) of social problem solving. This explains why a reasoning task embedded in a social domain is more often correctly solved than when the same problem is embedded in an abstract reasoning task (Cosmides, 1989). As yet another example, the development and maintenance of social stereotypes may be as much a mechanism of group bonding and solidarity as a cognitive shortcut (Haslam, Turner, Oakes, McGarty, & Reynolds, 1998). From this perspective, the finding that social stereotypes exhibit such resistance to change may stem not from cognitive rigidity but from the fact that stereotypes represent highly socially embedded, shared beliefs that persist as social reality even when they are explicitly rejected at the personal level (Castelli, Vanzetto, Sherman, & Arcuri, 2001; Devine & Elliot, 1995).

My own work on social identity and ingroup bias was inspired largely by this principle of searching for social motives underlying individual behavior. Although the original minimal group experiments by Tajfel, Billig, Bundy, and Flament (1971) demonstrated the powerful effect of mere categorization as a basis for social discrimination and ingroup favoritism, the cognitive underpinnings of ingroup–outgroup differentiation clearly needed a motivational "engine" to explain the intensity of loyalty, emotional attachment, and self-sacrifice that are associated with ingroup identification in the real world. Initial attempts to identify the motivators of social identity, such as enhanced self-esteem and uncertainty reduction (Abrams &

Hogg, 1988), also struck me as inadequate to account for the universality of ingroup identification as a characteristic of human society. Optimal distinctiveness theory was conceived out of my conviction that exclusively social motives must be postulated to understand why people attach their sense of self to group identities in the first place.

Acknowledge Ambivalent Sociality and Competing Motives

Social motives such as the need for belonging and acceptance clearly serve self-interested purposes in the long run. Acceptance by a social group assures the individual of nurturance and aid that are essential to personal survival. But obligatory interdependence also implies that some social motives will be genuinely other-oriented as well. Because all individuals' chances for survival are affected not only by their own skills, abilities, and efforts but also by the efforts and behaviors of others within a bounded social community, commitment to and acceptance of interdependence among all members of the social unit is a requirement of group living. Within a social community, individuals are invested in the children of other individuals—not because of genetic relatedness but because the survival of one's own offspring is dependent on the continuity of the group as a whole.

However, sociality does not imply noncontingent altruism or self-sacrifice. Human beings are clearly vested with self-interest, but this view of evolutionary history contends that self-interest is naturally mitigated by identification with groups. I contend that self-oriented and group-oriented motivations represent two separate, semiautonomous regulatory systems that hold each other in check (Brewer, 1991; Brewer & Roccas, 2001). Just as prices in a free market system are regulated by the independent forces of supply and demand, unbridled individual self-interest is held in check by the demands of interdependence, but at the same time, sociality is constrained by the demands of individual survival and reproduction (Kurzban & Leary, 2001). In most cases, individual self-interest and group interests coincide, so that cooperation and interdependence serve group goals and satisfy individual needs at the same time. If I desire the benefits of winning in a team sport competition, for instance, then cooperating with my fellow team members is clearly the best way for all of us to meet our individual and collective goals. But individual goals and collective interests do not always coincide so perfectly. If my individual interests are enhanced by being the one member of my team that scores the most points, but my team's chances of winning depend on my providing other team members the opportunity to score, working for my personal goal and achieving the group goal are not completely compatible.

Because individual self-interest and collective interests do not always coincide, the necessities of group living require coordination not only between individuals but within individuals, to meet competing demands from different levels of organization. Human social life can be characterized as a perpetual juggling act—maintaining the integrity of individual identity, interpersonal relationships, and collective interests simultaneously. Humans are not driven either by unmitigated individual selfishness or by noncontingent altruism, but instead show the capacity for variable motivation and behavior patterns contingent on the state of the environment.

When individual self-interest and collective interests are placed in opposition, the innate ambivalences in human nature are revealed. "Social dilemmas" constitute a special set of interdependence problems in which individual and collective interests are at odds. The dilemma arises whenever individuals acting in their own rational self-interest would engage in behaviors that cumulatively disadvantage everyone. In the modern world, social dilemmas include problems of maintaining scarce collective resources such as water and rainforests, preserving public goods such as parks and public television, and preventing pollution and destruction of the environment. The self-interests of each individual are best served by taking advantage of the benefits of collective resources without contributing to their maintenance, but the cumulative effect of such self-interested actions would be that everyone pays the cost of resource depletion and environmental damage. To the extent that social life is characterized by these types of interdependencies, some mechanisms for balancing individual interests and collective welfare must be achieved.

Experimental research on social dilemmas such as public goods problems and resource conservation demonstrate how individuals behave when they must choose between immediate self-interest and group interest (Caporael, Dawes, Orbell, & van de Kragt, 1989; Kramer & Brewer, 1984). In these choice situations, individuals do not behave consistently selfishly or unselfishly; a great deal depends on the group context in which the decision is made. When a collective social identification is not available, individuals tend to respond to the depletion of a collective resource by increasing their own resource use, at the cost of long-term availability. However, when a symbolic collective identity has been made salient, individuals respond to a resource crisis by dramatically reducing their own resource use (Kramer & Brewer, 1984). Further, when a public goods decision is preceded by even a brief period of group discussion, the rate of cooperative choice (when decisions are made individually and anonymously) is almost 100 percent (Caporael et al., 1989). This level of cooperative responding suggests that, under appropriate conditions, group welfare is

just as "natural" as self-gratification as a rule for individual decision making. Situational cues, cultural indoctrination, and behavior of others determine which predisposition will dominate on any particular occasion. Such responsiveness to social situational contingencies is, of course, the central feature of social psychological theories of human behavior.

The necessity for meeting demands of existence at the individual, interpersonal, and collective levels of organization suggests that human social life is regulated not by single social motives but by the complex effects of multiple, competing motivational systems. My own model of optimal distinctiveness provides one illustration of how such competing motivational systems might work. The model posits that humans are characterized by two opposing needs that govern the relation between the self-concept and membership in social groups. The first is a need for assimilation and inclusion, a desire for belonging that motivates immersion in social groups. The second is a need for differentiation from others that operates in opposition to the need for immersion. As group membership becomes more and more inclusive, the need for inclusion is satisfied but the need for differentiation is activated; conversely, as inclusiveness decreases, the differentiation need is reduced but the need for assimilation is activated. These competing drives assure that interests at one level are not consistently sacrificed to interests at the other. According to the model, the two opposing motives produce an emergent characteristic—the capacity for social identification with distinctive groups that satisfy both needs simultaneously.

Recognize That Interdependence Operates at Different Levels of Organization

In actuality, the distinction between the individual level and social group level of organization is not a simple dichotomy. Interdependence and social coordination play out at different levels of group size and function. Caporael (1997) proposed that there are four basic levels of organization that have been present throughout the evolution of human social life. These four basic configurations are (a) dyads, two-person units such as the parent–child relationship; (b) teams, family, or work groups of 3 to 7 people; (c) bands, face-to-face interacting communities of approximately 30 to 50 people; and (d) tribes, macrobands characterized by shared identity and informational interdependence without continual face-to-face interactions. Each of these levels of organization exists to serve different survival functions, and each entails different problems of coordination and regulation.

I have found this particular typology extremely useful in my own work on social identity and social motivation (Brewer & Gardner, 1996). Recognizing that we function interdependently in social units of different size and purpose has widespread implications for theories of social influence, cooperation, social development, and even mental health. For human social life, these four levels of organization are all indispensable and not interchangeable. This means that to function effectively in the social world, individuals must possess the skills and cognitive representations needed to coordinate with others in different configurations, to move flexibly from one form of social interdependence to another as task and context require, and to establish and maintain connections with others at each level. It also means that the absence of close dyadic relationships, membership in teams or friendship circles, inclusion in a social community, or identification with large social collectives represent distinct forms of social deprivation that require resources for coping and repair. Social psychological theory will clearly benefit from a deeper understanding of the multiple ways in which we are interconnected with others across all aspects of life.

Think in Terms of "Downward Causation"

Cooperative groups must meet certain structural requirements to exist, just as organisms must have certain structural properties to be viable. For community-sized groups, these organizational imperatives include mobilization and coordination of individual effort, communication, internal differentiation, optimal group size, and boundary definition. The benefits to individuals of cooperative arrangements cannot be achieved unless prior conditions have been satisfied that make the behavior of other individuals predictable and coordinated. Group survival depends on successful solutions to these problems of internal organization and coordination.

Different levels of social organization and selection provide opportunities for both synergisms and conflicts between levels. In a hierarchical system, adaptive success at one level may need to be curtailed for the sake of success at a higher level in the system. As Caporael (2001) put it:

> in the evolution of multicellularity, some cells "gave up" reproductive autonomy to become body cells as others eventually became reproducing gametes. ... Similar conflicts and opportunities obtain for humans in the relationship between the individual and the group. Individual advantage may be curtailed at the level of the group, sometimes resulting in cooperative groups better adapted to the habitat. (p. 614)

If individual humans cannot survive outside of groups, then the structural requirements for sustaining groups create systematic constraints on individual bio-

logical and psychological adaptations. Leo Buss (1987) illustrated this point with a vivid example at the organismic level. The cells of the body must all be coordinated for an individual to function, but cell lineages may compete, as in the case of cancer. At the intraorganismic level, cancel cells epitomize differential reproductive success. However, at the next level of structure, the success of the cancer-cell lineage is the destruction of the individual organism—and with it all the competing lineages. As a consequence, structural requirements at the higher level of organization constrain competition at lower levels.

What I am talking about here is what Campbell (1974a, 1990) called "downward causation" across system levels. Downward causation operates whenever structural requirements at higher levels of organization determine some aspects of structure and function at lower levels (a kind of reverse reductionism). A particularly good illustration of a causal relation between social and biological levels of organization is the phenomenon of synchrony of lutenizing hormone cycles that has been documented in rodents, primates, and humans (McClintock, 1987). A group of women living in close proximity over a period of time exhibit synchronized lutenizing hormone cycles. This synchrony makes possible near-simultaneous conceptions and births and paves the way for cooperative rearing of offspring. This phenomenon is an illustration of social regulation of biology (downward causation) in that group living arrangements shape hormonal activity at the individual level.

Optimal distinctiveness theory was in part the product of an exercise in thinking about downward causation from the group to the individual level of analysis. The advantage of extending social interdependence and cooperation to an ever-wider circle of conspecifics comes from the ability to exploit resources across an expanded territory and buffer the effects of temporary depletions or scarcities in any one local environment. But expansion comes at the cost of increased demands on obligatory sharing and regulation of reciprocal cooperation. Both the carrying capacity of physical resources and the capacity for distribution of resources, aid, and information inevitably constrain the potential size of cooperating social networks. Thus, effective social groups cannot be either too small or too large. To function, social collectives must be restricted to some optimal size—sufficiently large and inclusive to realize the advantages of extended cooperation, but sufficiently exclusive to avoid the disadvantages of spreading social interdependence too thin.

Based on this analysis of one structural requirement for group survival, I hypothesized that the conflicting benefits and costs associated with expanding group size would have shaped social motivational systems at the individual level. If humans are adapted to live in groups and depend on group effectiveness for survival, then our motivational systems should be tuned to the requirements of group effectiveness. We should be uncomfortable depending on groups that are too small to provide the benefits of shared resources but also uncomfortable if group resources are distributed too widely. A unidirectional drive for inclusion would not have been adaptive without a counteracting drive for differentiation and exclusion. Opposing motives hold each other in check, with the result that human beings are not comfortable either in isolation or in huge collectives. These social motives at the individual level create a propensity for adhering to social groups that are both bounded and distinctive. As a consequence, groups that are optimal in size are those that will elicit the greatest levels of member loyalty, conformity, and cooperation, and the fit between individual psychology and group structure is better achieved.

This analysis of interaction across levels of organization has implications for intergroup relations as well as intragroup structure. The structural requirements of coordinated activity and mutual interdependence depend on a psychology of trust and obligation toward fellow group members. In effect, social groups represent bounded communities of reciprocal trust and cooperation. Within those boundaries, individuals can legitimately expect to receive (and to give) positive regard, aid, and predictability in the form of adherence to shared social norms and rules—expectations that are not extended to those outside the boundary. This gives rise to what Campbell (1982) called "clique selfishness," whereby the capacity for selflessness on behalf of ingroups, at each level of social organization, is matched by the most selfish extremes of greed and hostility when ingroup interests are pitted against those of outgroups at the same level. As the scope of interdependence grows wider, new social institutional innovations may be required to constrain competition among units at lower levels that reflect the inheritance of our evolutionary past.

Conclusion

The founders of modern social psychology in the 1930s and 1940s took it for granted that there was something special about the social level of analysis—that social phenomena were not derivative or reducible to mechanisms at lower levels of organization. But over the years, the process of legitimizing social psychology as a subfield of the discipline of psychology has led us to focus almost exclusively on the cognitive, motivational, and affective underpinnings of social behavior—treating these individual level processes as the building blocks of social processes. This emphasis has had the unintended consequence of "colonializing" social psychology, which has been viewed—from inside

and out—as a branch of learning theory, cognitive psychology, or psychophysiology.

My purpose in this article has been to try to reverse this colonial image of social psychology and to pursue a more imperialistic agenda—to gain recognition for the idea that the so-called building blocks of human perception, cognition, and motivation have been shaped by and derived from the requirements of social living. Thus, social interdependence is the basis for integrality of the biological and social aspects of the human phenotype. As Oyama (1991) put it, "nature is a product of nurture" (p. 32). In this view, sociality is not simply the product of biology—human biology is the product of social organization and culture. The interface between the sociological and the biological levels of analysis is the domain of social and personality psychology, and our theories should reflect this central positioning among the life sciences.

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