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Ancestral Environments and Motivated Social Perception: Goal-Like Blasts From the Evolutionary Past

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"Now, why do the various animals do what seem to us such strange things, in the presence of such outlandish stimuli?"

— (William James, 1892, p. 260)

WHAT MOTIVATION MEANS

The word *motivation* has multiple meanings in the psychological sciences. Even in the narrower context of social perception and social behavior, the term is used in several very different ways. Sometimes the word implies the entire broad category of unspecified processes that supply answers to "Why do we do what we do?" questions of the sort posed by William James in the quote above. When used in this way, motivation refers not to any psychologically meaningful construct, but instead to a broad domain of inquiry.

Other times, the word motivation refers broadly to any causal process that answers a specific "Why do we do what we do?" question. If one suggests that a man's attempts to attain a high-status job is the result of some fundamental motivation to attract mates, this means simply (and somewhat vaguely) that there is some causal process through which status-seeking and mate-getting can be causally linked. But it doesn't necessarily mean that the alleged mating goal is actually represented in the man's cognitive structures at the time he applies for the job. Used in this way, motivation is something of a euphemism—a shorthand term indicating some sort of intrapsychic causal explanation—but it doesn't refer to any single psychologically meaningful construct.

But there are other times when motivation is indeed used to refer to specific, meaningful and potentially measurable psychological constructs—things alleged

to be represented cognitively (although not necessarily consciously), and which directly compel goal-consistent behavior. The study of human helping behavior offers some good examples of these types of motivations. Consider the phenomenon where the subjective experience of empathic concern for another person leads to an increased tendency to help that person. One explanation for this empathy-helping relation is as follows: Empathy is a negative affective state and leads to an intent to help specifically because helping serves the selfish goal of ameliorating the helper's negative state (Cialdini et al., 1987; Schaller & Cialdini, 1988). This functional purpose of the helping behavior (to improve one's own mood state) is the alleged motivation underlying empathic helping. Used in this way, motivation is not a euphemism; the purpose to which it refers is presumed to be a meaningful psychological construct that occupies the intrapsychic middle of the causal sequence of events. The same is true for a very different explanation for empathic helping. The empathy-altruism hypothesis (Batson, 1990, 1991) states that empathic concern for another leads to the truly altruistic goal of serving the other's needs. Again, what's specified here is a specific functional purpose of the helping behavior (to improve the other's welfare) and this purpose is the alleged motivation. And again, motivation refers to a specific meaningful psychological construct activated by empathy and represented in individuals' cognitive structures.

Other examples of this sort of meaning of motivation are found in work exploring the link between self-concept and intergroup prejudice. Consider the phenomenon in which threats to self-esteem influence the activation of stereotypes and prejudicial beliefs about outgroups (Brown, Collins, & Schmidt, 1988; Fein & Spencer, 1997). Several theories (including social identity theory and self-affirmation theory) yield motivation-based explanations for this phenomenon: Threats to self-esteem lead to the activation of the goal of re-establishing a positive self-concept, and this goal can be satisfied by the activation and/or expression of cognitions that denigrate outgroups relative to ingroups. Whether the motivation alleged to provoke these cognitive consequences is self-affirmation (Fein & Spencer, 1997) or the re-establishment of positive social identity (Tajfel & Turner, 1986), this motivation refers to a specific psychological construct—a purpose that is represented cognitively (although not necessarily consciously), that is activated by self-esteem threat, and that consequently exerts a causal influence on prejudice.

There is plenty to like about these sorts of purpose-based hypotheses. These types of hypotheses are useful guides for research; the specification of purpose facilitates discovery of hypotheses about the conditions under which certain phenomena will and will not occur. For instance, by attending to the alleged mood-management purposes of helping behavior, we are led to discover hypotheses indicating that the effects of negative mood on helping are limited, and will not occur under conditions in which there are more efficient means of relieving the negative mood (Cialdini, Darby, & Vincent, 1973; Schaller & Cialdini, 1988). In addition to their pragmatic utility, these sorts of purpose-based hypotheses are also appealing at an entirely gut level. It makes

considerable intuitive sense to suppose that the mental activation of purposes precede responses that serve those purposes.

For these and other reasons, when we speak of motivated cognition or behavior, we often imply the presence of some specific cognitive representation of the functional purpose served by that cognition or behavior. It is that implication, the often unspoken presumption, that I want to examine more closely in this chapter.

MOTIVATED RESPONSES WITHOUT MOTIVATION

I suggest that a lot of functional responses that we might presume to be purposeful (to result from the activation of some cognitive representation of intended functional consequences), are not. Although the predicted responses seem purposeful, they may occur without the activation of any cognitive representation (conscious or nonconscious) of purpose.

That is not a novel point. The same sort of conclusion is implied by work on the automatic activation of behavioral goals (Bargh & Chartrand, 1999). This work suggests that after repeated experience with the activation of a specific behavioral goal (intended plan of action) in a situation, the cognitive structures that represent that behavioral goal may be activated automatically whenever one encounters that situation. Thus, if one repeatedly experiences empathic concern for others, and in those situations deliberatively formulates the intent to help those others, the helping intention may become associatively linked to the emotional experience of empathy. Consequently, even in the absence of any conscious deliberation, a helping goal may be automatically activated whenever empathy is experienced. If so, then the cognitive representation of the behavioral goal may be removed entirely from any cognitive representation of purpose.

But we can arrive at the same conclusion through a different route than that suggested by past work on automatic goal activation. Rather than suggesting that these goals become automatic as the result of extensive learning experience, the perspective summarized here suggests that specific goals may be triggered automatically in certain situations even in the absence of any individual history of overlearning. This perspective focuses instead on the evolutionary history of the species.

This chapter also advances this perspective one step further. I suggest that in some cases, cognitive responses that we might presume to be goal-directed (i.e., precipitated by some cognitive representation of an intended plan of action) are not. Instead, the situation may trigger specific seemingly functional cognitive routines even in the absence of any cognitive representation of intention. In these cases, the very notion of goal activation may be superfluous. Motivated responses may occur without the activation of any cognitive representation (conscious or nonconscious) of goal constructs. Seemingly goal-directed cognitions may simply be triggered automatically in response to the perceptual recognition of certain situations. Again, the suggestion is that this automatic

triggering process occurs as a result of the evolutionary history of the species.

I illustrate these points by drawing on two specific theoretical stories, buttressed by empirical data. The first story pertains to empathy and helping behavior. I summarize speculation about the evolution of empathy and its relation to helping behavior, and on the basis of that evolutionary backstory, I summarize some hypotheses about the contemporary effects of empathy on helping. The second story pertains to stereotypes and intergroup prejudice and focuses on a theory that I have termed *intergroup vigilance theory* (Schaller, 1999). I summarize speculation about the evolution of antipathy toward outgroups, and on the basis of that evolutionary backstory, I summarize hypotheses about the contemporary effects of contextual cues on intergroup prejudices.

Evolutionary backstories of this sort can be easily falsified if wrong, but rarely can be convincingly verified to be right (Schaller & Conway, 2000). Nonetheless, these evolutionary psychological models of social perception and social behavior are useful as means of explaining existing findings and of discovering new phenomena. In this chapter, these evolutionary perspectives serve a broader purpose. They illustrate a set of historical and psychological processes that taken together, imply that some nontrivial chunk of ostensibly "motivated" responses may not actually involve motivations at all.

AN EVOLUTIONARY PERSPECTIVE ON EMPATHIC HELPING

The feeling of empathic concern for another typically compels people to help that person. There's no doubt about that. What remains a matter of some controversy, however, is the reason why this relation exists. There is evidence supporting the egoistic mood management explanation of empathic helping (Cialdini et al., 1987; Schaller & Cialdini, 1988). But other instances of empathic helping are not easily attributed to the mood management motive or to other egoistic motives, and these failures to implicate egoistic motives have been taken as indirect evidence for a purely altruistic motive instead (Batson, 1990, 1991).

Although explanations for the empathy-helping effect differ, the nature of the question guiding this line of inquiry has remained constant. Is empathic helping driven by an egoistic or altruistic motive? Or more generally: What is the motive underlying the empathy-helping effect?

Maybe that's the wrong question to ask. The question assumes that the helping response is motivated—that empathic helping is compelled by the cognitive representation of a purpose. Perhaps it's not. And perhaps empirical results that ostensibly imply an altruistic motive are better explained by an alternative perspective implying that empathy triggers a purposeless

helping response. A perspective along these lines can be deduced within an evolutionary framework.

Evolutionary Backstory

The origins of humans' capacity to help others is typically understood as being the product of two complementary evolutionary processes, one based on reciprocity and another on kinship (Hamilton, 1964; Ridley & Dawkins, 1981; Trivers, 1971). Both processes can be quite complex, and I shall illustrate the basic logic of each with brief, albeit oversimplified, summaries.

The reciprocity process follows from the assumption that during a long stretch of human evolutionary history, individuals lived in relatively small tribal groups in which there was some stability in membership. Therefore, across their lifetimes, individuals had repeated interactions with other individuals within their group and norms of reciprocal behavior emerged. Given such an environment, the tendency to help others would have been functional because those individuals who helped others in need would have been more likely to receive helping from others when they themselves were needy. Thus, helping behavior would have enhanced the propagation of one's own genes (including genes underlying the helping tendencies) to future generations.

The process based on kinship follows from the assumption that, within ancestral tribal groups, many of an individual's interactions were with genetically related others. Consequently, any general tendency to help others would often have been functionally beneficial to one's kin. By enhancing the propagation of relatives' genes, helping behavior would also have enhanced the propagation of one's own genes that are shared with the these relatives (including genes underlying the helping tendencies). Thus, through this indirect route, a tendency toward helpfulness would have been evolutionarily adaptive.

These lines of evolutionary logic merely lead to the conclusion that a biologically based tendency to help others could have evolved over time, but it doesn't lead to any particularly interesting psychological predictions. Where the evolutionary perspective does start to get interesting is when we attend to the important point that generally functional tendencies are not equally functional in all situations. For example, although it is handy to have the ability to run fast, the actual act of running consumes considerable resources and so we often prefer to move less speedily. The act of running is engaged selectively in contexts in which its benefits outweigh its costs. Similarly, although a general capacity for helpfulness may have been more functional than a general tendency toward selfishness, actual acts of helping behavior usually entail functional costs as well as conferring potential benefits. The extent to which the functional benefits of helping outweighed these costs would have been dependent on the helping context.

In what situations would the potential benefits of helping been most likely to outweigh the costs? The two evolutionary processes offer obvious answers:

Situations in which the recipient of the helping act really was likely to reciprocate in the future and/or in which the recipient really was closely genetically related. It would have been especially functional for the processes compelling helping behavior be engaged selectively in contexts indicating high likelihood of potential reciprocity or close kinship.

How could this sort of selectivity of response have been accomplished? It's implausible that it could have occurred through conscious, deliberative choice. It's more plausible that response selectivity would have been accomplished efficiently through the emergence of additional cognitive routines linking specific perceptual cues to the engagement of the helping response. Cues connoting high likelihood of reciprocity or close kinship may have emerged as triggers for the activation of compulsions to help. Some of these cues would certainly have pertained to features of the person in need. For example, familiarity and ingroup membership may have signaled likelihood of reciprocity. Feature similarity and family membership are among the more obvious cues that may have signaled kinship.

In addition to these perceptual cues, it's also likely that the helping response became linked to emotional cues as well. Perceptual cues are subtle and perhaps easily overlooked in the absence of a more consuming phenomenological experience. Emotions are consuming and more reliably compel immediate behavioral responses. Thus, just as specific emotions (i.e., fear) seem to have evolved for the purpose of compelling individuals to engage reflexively their ability to run fast in situations where running offered clear functional benefits, a specific emotional experience may have evolved to compel helping responses in situations where helping behavior was most clearly functional—and this response may be similarly reflexive.

The emotional response that seems likely to have evolved to serve this function is, of course, empathy (Hoffman, 1981; Sorrentino & Rushton, 1981). It's worth noting that cues such as familiarity and similarity are associated with empathic emotional responses (e.g., Batson, Duncan, Ackerman, Buckley, & Birch, 1981; Krebs, 1975, Stotland, 1969). It's likely that cognitive structures evolved in such a way that these and other perceptual cues signaling kinship and potential reciprocity automatically trigger empathy, which in turn automatically triggers the helping response.

Contemporary Psychological Processes

This evolutionary model has a straightforward implication for contemporary psychological responding: Whenever empathic concern for another is aroused, this emotional experience triggers automatically a reflexive intention to help that person—and that intention arises even in the absence of any cognitive representation of the purpose served by helping.

If empathy is a heuristic linked automatically, rather than rationally, to the helping intention, the process can be triggered in many situations in which there

is no actual kinship or likelihood of reciprocity. Therefore, the heuristic process is easily exploited by clever agents of deception, such as con artists seeking succorance. (Think of the Will Smith character in the movie "Six Degrees of Separation," who convinced a wealthy couple that he was the close friend of their son in order to exploit familial generosity.) This process is also easily exploited by those other famous agents of deception: Psychological researchers. If we lead experimental participants to experience empathy (i.e., through an intentional perspective-taking procedure), we can lead them to help total strangers at high levels ordinarily reserved for friends and family. This happens quite reliably (Batson, 1991; Eisenberg & Miller, 1987).

Sometimes, this effect of empathy on helping can be interrupted, and these interruptions have been interpreted as evidence for underlying egoistic motives. For instance, Schaller and Cialdini (1988) found that highly empathic individuals helped at relatively lower levels if they anticipated the imminent occurrence of a less costly means of improving their moods—a result implying that selfish mood management concerns can underlie empathic helping. But a lot of research reveals that the empathy-helping effect is not so easy to interrupt. For instance, in a conceptual replication of Schaller and Cialdini's (1988) study, Batson et al. (1989) found uniformly high levels of helping among highly empathic individuals—even among those individuals who, if they thought about it, could satisfy mood-management goals without helping. These and other results revealing robust main effects of empathy on helping behavior are exactly the evidence taken as support for the empathy-altruism hypothesis (Batson, 1990).

It appears, therefore, that some process in addition to strategic mood management must also operate to account for these cases of uniformly high levels of empathic helping. The empathy-altruism hypothesis offers one possible explanation, but not the only one. The empirical evidence taken as support for altruism is also entirely consistent with the more automated process implied by the evolutionary model. The distinction between the two arguments pertains to the presence of some cognitive representation of a purpose. The empathy-altruism hypothesis specifies the presence of a purpose (to improve the welfare of the other); the evolutionary model implies that the response occurs in the absence of any cognitive representation of this or any purpose. A goal of planful action ("help that person") may indeed be activated, but no underlying motive of any sort is implied.

The best evidence in favor of the empathy-altruism hypothesis would be some sort of data indicating the activation of cognitive structures associated with an altruistic purpose. No such evidence exists and that's no surprise; it's difficult to actually measure the presence (or absence) of the cognitive representation of a motive. This makes it difficult to distinguish empirically between these two explanations for non-egoistically-motivated helping, but not impossible. The empathy-altruism hypothesis does not logically imply conditions in which the facilitative effect of empathy on helping should disappear (except those conditions in which the needy person's need no longer exists). On the other

hand, the hypothesis that empathy triggers a reflexive response does imply a set of variables that may moderate the empathy-helping relation. Generally, any variable that leads empathic individuals to respond "mindfully" rather than "mindlessly" should reduce their tendency to help strangers. Previous research suggests that automated responses are most likely to occur when the costs of these reflexive responses are trivial, but that these automated response routines break down under high-cost conditions (e.g., Langer, Blank, & Chanowitz, 1978). Thus, if empathy triggers a heuristic (rather than altruistic) helping response, the empathy-helping relation should break down under conditions in which it is personally costly to offer help.

Exactly this hypothesis was tested by data reported by Batson, O'Quin, Fultz, Vanderplas, and Isen (1983). Results showed that under conditions in which the act of helping entailed minimal suffering on the part of the helper, empathy led to increased helping of a stranger. However, under conditions in which a helping response required high levels of suffering, the usual empathy-helping relation disappeared (although failure to help had the consequence that the person in need continued to suffer at high levels). The results are entirely consistent with the hypothesis that empathy automatically triggers a motivation free helping response—an automated response that is interrupted when the context compels individuals to exert deliberative executive control over their otherwise mindless tendencies.

Of course, these results are not uniquely consistent with the motivation-free hypothesis (they are also consistent with selfish mood management explanations). So it's worth identifying other variables that might interrupt the reflexive tendency for empathy to precipitate helping—and so which might offer additional tests of the motivation-free empathic helping hypothesis. For instance, it may be that the facilitating effect of empathy on helping behavior is most pronounced among individuals who prefer intuitive approaches to social decision-making, but is less evident among those who like to engage in rational, deliberative thinking. If such a result occurred, it would be more consistent with the "purposeless" evolutionary model than with any of the motivational models typically discussed in the social psychological literature on helping behavior.

This is not to suggest that empathic helping is never mediated by the activation of some purpose. Empathic concern is clearly affiliated with sadness, which tends to make individuals more deliberative and considered in their responses (Schaller & Cialdini, 1990), and so may lead to deliberatively purposeful responses that also intrude on the automated processes triggered by empathy. The argument here is more germane to those situations in which the deliberative consequences of sadness seem not to guide the helping responses. In such situations, it is tempting to assume that some other purpose is guiding the response, and it's for this reason that the hypothesis of a truly altruistic motive is attractive. However, in the absence of any more direct evidence of the presence of such a purpose, it's worth considering the

evolutionarily-derived hypothesis that the effect of empathy on helping may often be reflexive and purposeless.[1]

INTERGROUP VIGILANCE THEORY AND ITS IMPLICATIONS FOR PREJUDICE

The theoretical story about empathy and helping suggests that ostensibly purposeful behavior may be due instead to the automatic activation of immediate goals without purposes. Now let me turn to a different theoretical story that suggests that seemingly purposeful responses may not involve the activation of goals. The story is that of intergroup vigilance theory.

Intergroup vigilance theory describes the implications of ancestral intergroup contexts on the evolutionary emergence of certain cognitive processes bearing on perceptions of ingroups and outgroups and on the operation of these cognitive processes in contemporary environments (Schaller, 1999). Part of the theory leads to a number of hypotheses concerning the activation of stereotypes and expression of intergroup prejudice.

Evolutionary Backstory

This part of the theory is deduced from the assumption that during the long stretch of human evolutionary history when individuals lived in small hunter-gatherer tribal groups, interactions within one's own group were generally more supportive than those between groups. In particular, unexpected interactions with outgroup members would have been dangerous, potentially resulting in injury or death. Therefore, vigilant avoidance of unexpected interactions with outgroup members would have offered functional benefits to individuals—benefits with biological consequences (higher likelihood of passing genes on to offspring). Certain cognitive processes would have facilitated the vigilant avoidance of unexpected intergroup interactions. Consequently, these cognitive processes—like the vigilant behavior they precipitated—would have conferred functional benefits to individuals. If these processes were rooted in some genetic substrate, there would have been evolutionary consequences: Populations would have evolved in such a way that these vigilance-enhancing cognitive processes

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[1] The underlying evolutionary argument is broadly similar to that articulated by Cialdini, Brown, Lewis, Luce, & Neuberg (1997), but the resulting hypothesis is distinct. Cialdini et al. (1997) suggested that empathy leads to a phenomenological experience of self-other overlap, and this experience of "oneness" (rather than altruistic motivation) compels a self-directed helping response. In contrast, the argument here suggests than any experience of oneness is epiphenomenal, and that the emotional experience of empathy directly and reflexively compels the helping response. Empirical results reported by Batson, Sager, Garst, Kang, Rubchinsky, & Dawson (1997) fail to support the oneness hypothesis, but are entirely consistent with the reflexive helping hypothesis articulated here.

would have become increasingly prevalent within the population over time.

What processes might reasonably have emerged that would precipitate vigilant avoidance of intergroup interactions? One answer is obvious: The construction of overly simplistic stereotypes and prejudicial beliefs describing outgroup members as hostile, untrustworthy, and dangerous.

That line of reasoning is simple and straightforward, and doesn't tell us anything that hasn't already been said numerous times (e.g., Campbell, 1965; Fishbein, 1996). And if we stop there, the reasoning doesn't lead to any particularly interesting predictions. But where this evolutionary perspective gets interesting is when we attend again to the point that generally functional abilities are not equally functional to engage in all situations. The construction of outgroup stereotypes was likely not only to confer certain benefits, but also to involve certain costs. Cognitive resources are consumed by the construction of stereotypes, and the vigilant behaviors precipitated by these particular stereotypical beliefs would also have surely consumed valuable resources as well. Therefore, it would have been particularly functional to individuals if the processes underlying the construction of stereotypes and prejudices were engaged selectively in those situations in which the benefits of those processes most clearly outweighed their costs.

There are two general classes of situations in which vigilant avoidance of unexpected intergroup interactions would have conferred functional benefits: Situations in which the baseline likelihood of unexpected intergroup interaction was high (little is gained by avoiding interactions that are unlikely to occur in the first place), and situations in which the likelihood of malevolence in intergroup interactions was also high (there's little gained by avoiding interactions that are unlikely to have negative consequences). Thus, it would have been especially functional for the processes underlying intergroup stereotypes and prejudices to be engaged in contexts marked by high levels of potential intergroup contact and potential intergroup malevolence.

One plausible means through which this selectivity of response would have been accomplished is through the emergence of additional cognitive processes linking specific categories of perceptual cues to the automatic engagement of the prejudice processes. Just as certain perceptual cues emerged to serve as heuristic triggers compelling us to startle and run, so too do cues connoting high likelihoods of intergroup malevolence and/or intergroup contact may have emerged as triggers for the construction of stereotypes indicating the dangerousness of outgroup members.

Contemporary Psychological Processes

This model of evolutionary events implies a testable model of contemporary psychological processes. The fundamental assertion is that situations heuristically signaling high likelihoods of intergroup contact and/or intergroup malevolence trigger the construction of simplistic stereotypes and prejudicial

beliefs about the dangerousness of outgroups.

Some of these cues may actually refer to the outgroups themselves (e.g., evidence of hostile intent). A lot of research indicates that information indicating hostile or uncooperative intent leads to greater denigration of outgroups and favoritism toward ingroups (Brewer, 1979). Perceived threat also leads to the construction of more simplistic perceptions of both ingroup and outgroup (Rothgerber, 1997). Others cues refer to elements of the social context that logically imply certain types of intergroup behavior (e.g., intergroup competition over scarce resources, and other variables specified by realistic group conflict theory).

Still other cues may not be logically relevant to the intentions of outgroup members at all, but may nonetheless trigger the construction of specific stereotypes and prejudicial beliefs. The reason is that these cues are heuristics linked automatically, rather than rationally, to prejudice processes; consequently these processes may be triggered in many situations where there is no realistic threat of intergroup encounter or malevolence. Therefore, the heuristic processes triggered by these cues are easily exploited by clever agents of deception, such as government officials seeking civilian support for military actions—or social psychological researchers testing the theory. An example of one such cue is group size. Unexpected interactions with outgroup members are more likely if outgroup members outnumber ingroup members. Consequently, it is hypothesized that prejudicial beliefs about outgroups are likely to be especially pronounced when the outgroup is relatively larger than the ingroup. A lot of evidence indicates that this is indeed the case (Mullen, Brown, & Smith, 1992).

Other hypotheses describe the consequences of chronic internal cues, such as beliefs that the world is a dangerous place. These beliefs may serve as an ongoing cue indicating the malevolence of strangers, and so should precipitate the activation of stereotypic beliefs that tribal outgroups are dangerous. This seems to be the case. People who score highly on a individual differences measure of *belief in a dangerous world* (BDW) tend to be more prejudiced against a variety of outgroups (Altemeyer, 1988). These prejudicial responses are more pronounced on danger-relevant dimensions of evaluation than on dimensions that are less danger-relevant (Schaller & Park, in press).

Another set of hypothesis describes the consequences of ambient darkness. Darkness may serve as a cue indicating both intergroup contact (unexpected encounters are especially likely under conditions of impoverished vision) and intergroup malevolence (outgroup members may be more likely to do unpleasant things in the dark). Consequently, ambient darkness may also trigger the construction of simplistic stereotypes and prejudicial beliefs with "dangerous" content. Empirical evidence indicates that this is indeed the case, and that this seems to be the case primarily among individuals who chronically believe the world is a dangerous place. For example, one study (summarized by Schaller & Park, in press) revealed that, in the dark, Canadians with high BDW scores perceived Iraqis to be especially hostile and untrustworthy; there was no such effect on perceptions of Iraqis along equally pejorative but less danger-

relevant characteristics. In another other study (Schaller, Park, & Mueller, 2001), non-Black participants were presented with a slide show depicting Black men, and this slide show took place either in a dimly lit room or in total darkness. A measure of stereotype activation indicated that, among high-BDW participants, darkness led to greater activation of negative stereotypical characteristics of Blacks; this effect occurred more strongly on danger-relevant characteristics than on less danger-relevant characteristics.

The utility of these and other hypotheses derived from the theory is that they predict and explain a lot interesting effects of contemporary situational contexts on psychological responses to groups and group members. These effects are hypothesized to be the product of the functional benefits they offered to individuals over the course of evolutionary history. Thus, in a sense they served a goal. But, psychologically, these processes may proceed in a purposeless manner. No mental representation of purpose or even intent is necessarily activated; the perception of situational cues may simply trigger these processes directly.

Of course, it's difficult to detect the presence of a cognitive representation of a goal or motive, and it's logically impossible to prove that such a thing does not exist. Nonetheless, it defies logic that the alleged purpose served by the outgroup denigration responses—vigilant avoidance of the outgroup—could be cognitively represented in many of these contemporary situations. If there is some activated cognitive representation of intent to denigrate the outgroup, it certainly seems unlikely that it is activated through conscious deliberative effort. Is it possible that a nonconscious goal representation is activated by the perception of relevant cues—for instance, that darkness activates the goal "perceive them as dangerous"? Perhaps. But if so, it seems unlikely that this automated goal activation process emerged as the result of experience, because the prejudicial responses can occur on perceptions of groups with which individuals have had very little prior contact, and even less contact in the specific situations. The theoretical structure of intergroup vigilance theory offers a sensible description of a goal-free chain of psychological events that leads to a response that seems superficially to be motivated. Unless evidence can be offered that goal-activation does occur, or a compelling explanation can be offered why a goal-based process seems more likely than the more efficient goal-free process, it's worth considering the possibility that these prejudice phenomena represent goal-like blasts from the evolutionary past occurring in the absence of goals.

OTHER EXAMPLES

I have focused in detail on just two specific processes through which perceptions and behaviors might be stimulated reflexively by contextual cues; but these are by no means isolated examples. There are lots of other responses that seem purposeful but, on reflection, may actually be instances of purposeless,

routinized responding. Consider briefly two additional phenomena of intergroup cognition.

One example pertains to the effects of relative powerlessness (e.g., low social status) on attention to individuating information about members of relatively more powerful groups. Lower power predicts greater attention to and memory for this sort of individuating information (Fiske, 1993). It is easy to fit this phenomenon to the usual template for motivated social perception: The situation (low power) leads to the activation of a goal ("pay close attention") that serves a particular purpose (prediction of the tendencies of others who have the power to influence one's own outcomes). It is quite possible, however, that the effects of relative powerlessness on attentional processes are automatized, and not mediated by the activation of any mental representation of a purpose, or even a goal. It is possible that, over the course of history, powerlessness was a reliable indicator of the functional benefits of effortful attention, and so it now automatically triggers those attentional processes without any sort of intervening goal activation.

Another example pertains to the familiar effects of threatened self-esteem on intergroup prejudice. This too fits the usual template for motivated cognition, but it too may be a phenomenon that proceeds automatically, without intent. Again, an evolutionary perspective indicates a reason why. Within harsh ancestral environments, group membership offered multiple functional benefits. Expressions of prejudice favoring one's own group over others would have contributed toward sustaining good relationships with ingroup members, and would have been particularly functional in serving this purpose under circumstances in which there was some threat of social exclusion. Self-esteem, it seems, serves as an indicator of social exclusion (Leary, Tambor, Terdal, & Downs, 1995) and may have evolved for exactly this reason. Consequently, any threat to self-esteem may automatically trigger the cognitions underlying expressions of ingroup favoritism. This may occur without any intervening activation of cognitive representations of desires for self-esteem restoration, or the intent to express such ingroup favoritism.

These phenomena are typical examples of "motivated" social perception. For each phenomenon, it's easy to craft a causal model implying the mediating role of the activation of some specific goal. But it's also very easy to draw on the structure of ancestral environments to deduce plausible reasons why the particular contextual cues might be perceptual heuristics that automatically trigger the resulting cognitive responses—without any activation (either consciously or unconsciously) of intent or purpose.

FUNCTION AND PURPOSE, INSTINCT AND REFLEX

It is easy for psychologists to ignore evolutionary explanations for the origins of contemporary psychological phenomena because contemporary psychological evidence rarely demands such a deeply historical explanation. The primary

value of evolutionary backstories lies not in the ultimate explanations they provide for existing hypotheses and already documented phenomena, but in the intellectual tools they offer for discovery of new hypotheses and phenomena. Of course, these tools have to be handled sensibly if they are to have any meaningful payoff, and this is perhaps especially true when discussing motivation.

For an evolutionary approach to human motivation to be coherent, it's necessary to distinguish between evolutionary processes operating on populations over the course of history, and the cognitive processes operating on individuals in contemporary circumstances. We must also distinguish between the eventual consequences of actions and the psychological causes of actions. If we fail to make those conceptual distinctions, it's easy to assume that the functional consequences of evolutionarily adaptive responses are in some way represented in individual cognitive structures. It tempting to assume, for instance, that an individuals' prejudices toward an outgroup member are compelled by evolutionarily adaptive intentions to avoid interactions with that outgroup member, or to maintain communal ties within ingroup members. This is not necessarily the case. Sometimes, situational cues may indeed activate cognitive representations of this sort. But a lot of times, cognitively represented purposes and goals of this sort may not be part of the psychological course of events. Thinking may indeed be for doing, but actions that serve a purpose may not proceed purposefully.

Nevertheless, the resulting responses still fit squarely within a functional framework. The responses would not have become part of the contemporary psychological repertoire if they did not have functional consequences within preceding generations. Indeed, it is only by attending to these historically functional consequences that we fully appreciate the purposeless manner in which responses are currently engaged. In a sense, these ostensibly motivated responses are the vestigial product of cognitive processes that, in ancestral times led to desirable outcomes. Nevertheless, in contemporary contexts, they may occur without desire, without purpose, without intent.

The preceding paragraph echoes a statement from William James' famous textbook *Psychology* (James 1892, p. 281). In discussing the occasional irrational fears exhibited by men and mice, James rhetorically asked whether these odd responses might be "due to the accidental resurrection ... of a sort of instinct which may in some of our remote ancestors have had a permanent and on the whole a useful part to play?"

That quote is taken from a chapter in James' textbook entitled *Instinct*—a topic that may seem just a bit out-dated. Psychologists don't talk much about instinct any more, except when talking about hunger, thirst, sex and occasionally language acquisition. Of course, we are still interested in addressing the same question that prompted James to discuss instinct—the question of why we do what we do—but nowadays we answer that question by appealing to different constructs and mental processes. Instead of instincts, we discuss motives, goals and the effects of contextual cues on the activation of cognitive representations

of these goals. This is an understandable shift in terminology; after all, the word instinct carries with it a certain biological baggage that we often don't want to assume. Instead, the goal constructs we use seem more circumspect. But they are not without baggage too. When we speak of motivated or goal-driven psychological responses, we imply the presence of certain psychological events presumed to precipitate those responses. These presumptions and implications may not always be necessary or accurate. The biological baggage of instinct may turn out to be quite useful after all.

Similarly, psychologists who study social perception and social behavior rarely talk about reflex. Like instinct, reflex is usually applied only to certain specific behaviors—like salivating or suckling—that are linked simply and straightforwardly to obvious biological imperatives. But if a reflex is defined (as it usually is) as an unlearned, unintended response to sensory input, then it can be extended to all sorts of social cognitions and behaviors that are commonly attributed to goals and motives. The evolutionary processes that crafted instinctual, reflexive tendencies to suckle in the presence of nipples and salivate at the sight of nectarines may also underlie similarly reflexive tendencies to help in response to a rush of empathic emotion, and to perceive outgroups as especially hostile in the dark. Perhaps along with instinct, we would be wise to apply the concept of reflex more broadly to the realm of social perception.

ENVOI

Elsewhere in his textbook chapter on Instinct, James (1892, pp. 260-261) wrote: "Not one man in a billion, when taking his dinner, ever thinks of utility. He eats because the food tastes good and makes him want more. If you ask him *why* he should want to eat more of what tastes like that, instead of revering you as a philosopher he will probably laugh at you for a fool." Well, as psychological scientists, we know that there are deeper processes underlying phenomena that seem, to laypersons, to need no explanation. We know there's an important distinction between phenomenological experience and underlying psychological reality. And so, to describe that underlying psychological reality accurately, we're willing to ask seemingly foolish questions.

But we can also be informed, and sometimes duped, by our own phenomenological experiences. Lots of actions and cognitions seem obviously to involve the activation of motives, to be goal-directed, because they have such clear functional consequences. It appears so intuitively clear that these responses are preceded by the activation of goals and purposes that it seems foolish to ask whether reality might be otherwise. Nevertheless, if we want to describe that underlying psychological reality accurately, we might want to take this seemingly foolish question seriously. In doing so, we must distinguish carefully between the meanings of motivation that are identified in this chapter. There may indeed be reasons for why we do what we do, but we shouldn't assume that those reasons are represented cognitively in the sequence of

psychological events that precipitate what we do. Many ostensibly motivated perceptions and behavior may be vestigial blasts from the evolutionary past, proceeding without the psychological presence of any specific motivation.

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REFERENCES

Altemeyer, B. (1988). *Enemies of freedom*. San Francisco: Jossey-Bass.

Bargh, J. A., & Chartrand, T. L. (1999). The unbearable automaticity of being. *American Psychologist*, *54*, 464-479.

Batson, C. D. (1990). How social an animal? The human capacity for caring. *American Psychologist*, *45*, 336-346.

Batson, C. D. (1991). *The altruism question: Toward a social-psychological answer*. Hillsdale NJ: Lawrence Erlbaum Associates.

Batson, C. D., Duncan, B. D., Ackerman, P., Buckley, T., & Birch, K. (1981). Is empathic emotion a source of altruism motivation? *Journal of Personality and Social Psychology*, *40*, 290-302.

Batson, C. D., O'Quin, K., Fultz, J., Vanderplas, M., & Isen, I. (1983). Influence of self-reported distress and empathy on egoistic versus altruistic motivation to help. *Journal of Personality and Social Psychology*, *45*, 706-718.

Batson, C. D., Sager, K., Garst, E., Kang, M., Rubchinsky, K., & Dawson, K. (1997). Is empathy-induced helping due to self-other merging? *Journal of Personality and Social Psychology*, *73*, 495-509.

Brewer, M. B. (1979). In-group bias in the minimal intergroup situation: A cognitive-motivational analysis. *Psychological Bulletin*, *86*, 307-324.

Brown, J. D., Collins, R. L., & Schmidt, G. W. (1988). Self-esteem and direct versus indirect forms of self-enhancement. *Journal of Personality and Social Psychology*, *55*, 445-453.

Campbell, D. T. (1965). Ethnocentric and other altruistic motives. In D. Levine (Ed.), *Nebraska Symposium on Motivation* (pp. 283-311). Lincoln, NB: University of Nebraska.

Cialdini, R. B., Brown, S. L., Lewis, B. P., Luce, C., & Neuberg, S. L. (1997). Reinterpreting the empathy-altruism relationship: When one into one equals oneness. *Journal of Personality and Social Psychology*, *73*, 481-494.

Cialdini, R. B., Darby, B. L., & Vincent, J. E. (1973). Transgression and altruism: A case for hedonism. *Journal of Experimental Social Psychology*, *9*, 502-516.

Cialdini, R. B., Schaller, M., Houlihan, D., Arps, K., Fultz, J., & Beaman A. L. (1987). Empathy-based helping: Is it selflessly or selfishly motivated? *Journal of Personality and Social Psychology*, *52*, 749-758.

Eisenberg, N., & Miller, P. A. (1987). The relation of empathy to prosocial and related behaviors. *Psychological Bulletin*, *101*, 91-119.

Fein, S., & Spencer, S. J. (1997). Prejudice as self-image maintenance: Affirming the self through derogating others. *Journal of Personality and Social Psychology*, *73*, 31-44.

Fishbein, H. D. (1996). *Peer prejudice and discrimination*. New York: Westview Press.

Fiske, S. T. (1993). Controlling other people: The impact of power on stereotyping. *American Psychologist*, *48*, 621-628.

Hamilton, W. D. (1964). The genetical evolution of social behavior. *Journal of Theoretical Biology*, *7*, 1-52.

Hoffman, M. L. (1981). The development of empathy. In J. P. Rushton & R. M. Sorrentino (Eds.), *Altruism and helping behavior: Social, personality and developmental perspectives* (pp. 41-63). Hillsdale NJ: Lawrence Erlbaum Associates.

James, W. (1892 / 1961). *Psychology: The briefer course*. New York: Harper and Brothers.

Krebs, D. L. (1975). Empathy and altruism. *Journal of Personality and Social Psychology*, *32*, 1134-1146.

Langer, E. J., Blank, A., & Chanowitz, B. (1978). The mindlessness of ostensibly thoughtful action: The role of placebic information in interpersonal interaction. *Journal of Personality and Social Psychology*, *36*, 635-642.

Leary, M. R., Tambor, E. S., Terdal, S. K., & Downs, D. L. (1995). Self-esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of Personality and Social Psychology*, *68*, 518-530.

Mullen, B., Brown, R., & Smith, C. (1992). Ingroup bias as a function of salience, relevance, and status: An integration. *European Journal of Social Psychology*, *22*, 103-122.

Ridley, M., & Dawkins, R. (1981). The natural selection of altruism. In J. P. Rushton & R. M. Sorrentino (Eds.), *Altruism and helping behavior: Social, personality and developmental perspectives* (pp. 19-39). Hillsdale NJ: Lawrence Erlbaum Associates.

Rothgerber, H. (1997). External intergroup threat as an antecedent to perceptions of in-group and out-group homogeneity. *Journal of Personality and Social Psychology*, *73*, 1206-1212.

Schaller, M. (1999). Intergroup vigilance theory. Unpublished manuscript, University of British Columbia.

Schaller, M., & Cialdini, R. B. (1988). The economics of empathic helping: Support for a mood management motive. *Journal of Experimental Social Psychology*, *24*, 163-181.

Schaller, M., & Cialdini, R. B. (1990). Happiness, sadness, and helping: A motivational integration. In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (Vol. 2, pp. 265-296). New York: Guilford.

Schaller, M., & Conway, L. G., III (2000). The illusion of unfalsifiability and why it matters. *Psychological Inquiry*, *11*, 49-52.

Schaller, M., & Park, J. H., (in press). Prehistoric dangers and contemporary prejudices. *European Review of Social Psychology.*

Schaller, M., Park, J. H., & Mueller, A. (2001). Fear of the dark: Interactive effects of beliefs about danger and ambient darkness on ethnic stereotypes. Unpublished manuscript, University of British Columbia.

Sorrentino, R. M., & Rushton, J. P. (1981). Altruism and helping behavior: Current perspectives and future possibilities. In J. P. Rushton & R. M. Sorrentino (Eds.), *Altruism and helping behavior: Social, personality and developmental perspectives* (pp. 425-439). Hillsdale NJ: Lawrence Erlbaum Associates.

Stotland, E. (1969). Exploratory studies in empathy. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 4, pp. 271-313). New York: Academic Press.

Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7-24). Chicago: Nelson-Hall.

Trivers, R. L. (1971). The evolution of reciprocal altruism. *Quarterly Review of Biology*, *46*, 35-57.