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Self-esteem: An Evolutionary-Developmental Approach

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ABSTRACT

While the research literature is replete with studies focusing on the developmental factors that affect self-esteem, little attention has been paid to the source or functions of the self-esteem motive itself. The present paper aims at exploring some ways in which an evolutionary-developmental-psychological (EDP) perspective can explain the adaptive nature of self-esteem. This paper attempts to address some important issues that are the focus of evolutionary psychology, including, possible evolutionary functions of self-esteem, by focusing on two theories namely, the Terror Management Theory (TMT) and the Sociometer Theory. Additionally, this review also attempts to identify some of the links between self-esteem and social relationships using an evolutionary-developmental-psychological (EDP) framework.

Keywords: Self-esteem, adaptation, sociometer theory, evolutionary psychology, terror management

INTRODUCTION

Whilst reading newspapers, reviewing professional association conference programs, or even watching television sitcoms, we fairly quickly get the impression that a person's self-esteem is a major determinant of what a person accomplishes, and how fulfilled and rewarding a life he or she lives. Historically, no aspect of personality has received greater theoretical and empirical attention than self-esteem. Many theorists have emphasized the

centrality of the self-concept as an object of self-awareness and as a determinant of behavior (e.g., Cooley, 1902; Epstein, 1973; Greenwald, 1980; Harter, 1983; James, 1890 etc.). An important aspect of self-process is the evaluative component commonly referred to as *self-esteem*. Although self-evaluations may relate to specific areas of experience, such as social, academic, and athletic domains, most theorists also subscribe to a superordinate construct of global self-esteem that refers to one's generalized sense of self-worth (Harter, 1983; Shavelson, Hulner, & Stanton, 1976).

Developmental factors that affect self-esteem have attracted the attention of both theorists and researchers. James (1890) and Cooley (1902) both viewed self-concept as a product of social interaction, and this view continues to prevail today. Within a variety of settings, interactions with significant adults and peers provide important evaluative feedback in the form of reflected appraisals, and social comparison processes permit self-evaluative inferences about one's traits and competencies (Fiske & Taylor, 1991; Rosenberg, 1979; Swann, 1990). This proposition that people have a fundamental need to maintain their self-esteem has provided the cornerstone for a great deal of work in personality, social, developmental, clinical, and counseling psychology. In the century since William James (1890) first referred to self-esteem as an "elementary endowment of human nature," a number of personality theories have addressed the importance of self-esteem needs; many emotional and behavioral problems have been attributed to unfulfilled needs for self-esteem, and many psychotherapeutic approaches have focused in one way or another on the client's feelings about himself or herself (Adler, 1930; Allport, 1937; Bednar, Wells, & Peterson, 1989; Maslow, 1968). Among social psychologists, the self-esteem motive has been offered as an explanation of a wide array of phenomena, including self-serving attributions (Blaine & Crocker, 1993), reactions to evaluation (Jones, 1973), self-handicapping (Jones & Berglas, 1978), downward social comparison (Wills, 1981), attitude change (Steele, 1988), and in-group/out-group perceptions (Crocker, Thompson, McGraw, & Ingerman, 1987). Furthermore, positive feelings of self-worth (self-esteem) and supportive relationships with others (social support) each have been conceptualized as resources that promote successful adaptation during childhood and adolescence (Compas, Hinden, & Gerhardt, 1995; Petersen, Kennedy, & Sullivan, 1991; Sandler & Twohey, 1998).

Despite the fact that the self-esteem motive has been invoked to explain so many phenomena, little attention has been paid to the source or functions of the self-esteem motive itself. It almost appears as if the field has taken it for granted that people have a motive to protect their self-esteem without adequately addressing the question of why they should have such a motive or what function it might serve. We might wonder why, despite the fact that thousands of studies have examined individual differences in self-esteem, the field has lacked an overriding theoretical framework that prudently accounts for the relationships between self-esteem and other psychological constructs that explain why self-esteem is such an important psychological entity.

The present paper aims at exploring some ways in which an evolutionary-developmental-psychological (EDP) perspective can explain the adaptive nature of self-esteem. This paper attempts to address some important issues that are the focus of evolutionary psychology, including, possible evolutionary functions of self-esteem, by focusing on two theories namely, the Terror Management Theory (TMT) and the Sociometer Theory. However, before going into the two theories, a brief overview of evolution and self-

esteem is presented. Additionally, an attempt is also made to identify some of the links between self-esteem and social relationships using an EDP framework.

Evolution and Self-esteem: A Broad Overview

Evolutionary psychology focuses on the concept of *natural selection*, according to which, some heritable traits (or adaptations) promote reproductive success in a particular set of environmental circumstances. Hence, these adaptations become dispersed throughout a population. According to contemporary evolutionary psychology, it is suggested that the mind comprises a host of domain-specific mechanisms and systems which have been designed by natural selection to solve adaptive problems faced recurrently by our ancestors (Sedikides & Skowronski, 1997; Buss, 1995; Tooby & Cosmides, 1992). Over evolutionary time, those genetic recipes for mechanisms and systems that proved to be more adaptive than alternative designs were retained as species-typical traits. It is believed that these mechanisms organized behavior by selectively attending to particular kinds of input information (environmental cues, internal states, etc.), and processed this information via various forms of inferential rules, and thus generated behavioral output.

Researchers with an evolutionary perspective have conceptualized the self and self-esteem as evolutionary adaptations. They propound that evolutionary pressures led to the emergence of the self; and the functions of the self led to its maintenance, propagation, and continued evolution. At this juncture, it is important to distinguish among three different aspects of self: *subjective self-awareness*, *objective self-awareness*, and *symbolic self-awareness*. With a cursory review of the relevant literature, one can fairly confidently state that subjective self-awareness is an attribute of all living organisms, whereas objective self-awareness is an attribute of only a handful of primate species (i.e., the great apes--chimpanzees, orangutans; and humans), and symbolic self-awareness is an attribute unique to humans (Wicklund, 1975; Swartz & Evans, 1994; Sedikides & Skowronski, 1997). While objective self-awareness may lead to the formation of a crude self-concept, symbolic self-awareness leads to the formation of a highly refined self-concept, which would include the topic under focus in this paper, namely self-esteem. Thus, the symbolic self-awareness refers to the unique capacity of the human organism to communicate the symbolic self to other organisms and negotiate the content of the symbolic self with other organisms in an effort to establish personal and social relationships. It also links the behavioral outcome to feelings toward the symbolic self—i.e., self-esteem—for instance, feelings of high self-esteem or pride when goals are met, and feelings of low self-esteem, shame or embarrassment when goals are not met (Sedikides & Skowronski, 1997).

One widely acknowledged explanation for the self-esteem motive is that people strive for self-esteem because high self-esteem promotes positive affect by buffering the person against stress and other negative emotions and enhancing personal adjustment, whereas low self-esteem is associated with depression, anxiety, and maladjustment. Research findings attest that people with low self-esteem experience virtually every negative emotion more commonly than those with high self-esteem (e.g., Cutrona, 1982; Goswick & Jones, 1981; Leary, 1983; Taylor & Brown, 1988; White, 1981). Furthermore, high self-esteem appears to buffer people against feelings of anxiety, enhance coping, and promotes physical health (Baumeister, 1993; Greenberg et al., 1992; Taylor & Brown, 1988). Although the link between self-esteem, affect, adjustment, and health is undisputed, it is less clear as to why self-esteem should produce these effects. From an evolutionary perspective, one might infer

that people who worried about possible misfortunes (including death) would have been more likely to survive and reproduce (Leary, Tambor, Terdal & Downs, 1995).

Terror Management Theory

Greenberg, Pyszczynski, and Solomon's (1986) Terror Management Theory (TMT) was the first empirically oriented theory to address the question of why people need self-esteem. It posits that people are motivated to pursue positive self-evaluations because self-esteem provided a buffer against the omnipresent potential for anxiety engendered by the awareness of mortality (an awareness unique to the human species). Terror Management Theory (TMT) proposes that the combination of a biologically rooted desire for life with the awareness of the inevitability of death (which has resulted from the evolution of sophisticated cognitive abilities unique to humankind) gives rise to the potential for paralyzing terror. According to TMT, our species "solved" the problem posed by the prospect of existential terror by using the same sophisticated cognitive capacities that gave rise to the awareness of death to create cultural worldviews: humanly constructed shared symbolic conceptions of reality that give meaning, order, and permanence to existence; provide a set of standards for what is valuable; and promise some form of either literal or symbolic immortality to those who believe in the cultural worldview and live up to its standards of value. Thus, TMT conceptualizes self-esteem as resulting from one's own assessment of the extent to which one is living up to internalized cultural standards of value. The people around the individual play an important role in the process of maintaining both self-esteem and faith in the internalized version of the cultural worldview from which self-esteem is ultimately derived. Both self-esteem and faith in one's cultural worldview are thus maintained through a process of consensual validation (Festinger, 1954; Swann, 1987). Consequently, when others agree with one's conception of reality and evaluation of self, it implies that these conceptions are correct and based in external reality; when others disagree with these conceptions, it threatens to undermine this faith and confidence. Thus, from the perspective of TMT, self-esteem is a culturally derived construction that is dependent on sources of social validation, it is essentially defensive in nature, and it functions to provide a buffer against core human fears.

The earliest direct assessments of the TMT analysis of the self-esteem motive tested the anxiety buffer hypothesis. In the initial test of this hypothesis, Greenberg, Solomon, et al. (1992) demonstrated that boosting self-esteem with positive feedback on a personality test led to lower levels of self-reported anxiety on the State Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970) in response to graphic video depictions of death. Two subsequent studies showed that both positive personality feedback and success on a supposed test of intelligence led to lower levels of physiological arousal (specifically, skin conductance) in response to the threat of painful electric shock, levels no higher than those exhibited by participants not threatened with shock. Additional support for the anxiety buffer hypothesis was provided by Greenberg et al. (1993), who demonstrated that both experimentally enhanced and dispositionally high self-esteem lead to lower levels of defensive distortions to deny one's vulnerability to an early death. Whereas in control conditions participants reported whatever level of emotionality (high or low) they had been led to believe is associated with a long life expectancy, participants with dispositionally high or experimentally enhanced self-esteem did not show this bias.

An important question regarding self-esteem in the literature concerns whether self-esteem serves functions other than anxiety reduction in the ultimate service of death denial.

TMT posits that, phylogenetically, the self-esteem motive emerged as a side effect (by-product?) of the evolution of the sophisticated intellectual abilities that made members of our species aware of their inevitable mortality. However, self-esteem undoubtedly provides other benefits for the individual as well. For example, positive evaluations may simply feel good, thus contributing to the individual's general level of positive affect, although why they make people feel good, whether it is by increasing feelings of security or through other mechanisms, requires specification. High levels of self-esteem also provide the sense of efficacy that is necessary for engagement in difficult activities and that provides resources for coping with difficulties, setbacks, and failures (Carver & Scheier, 1981, 1998). However, TMT views these as ancillary benefits of the protection against core anxiety that self-esteem provides. Thus, according to TMT we could say that the need self-esteem is an evolved mechanism (perhaps an exaptation that came about due to the evolution of sophisticated intellectual abilities in humans), since self-esteem provides a shield against a deeply rooted fear of death inherent in the human condition.

The Sociometer Theory

A relatively recent framework for explaining the functional significance of self-esteem was propounded by Leary and his colleagues. Like the TMT proponents, they too reject the conceptualization of self-esteem as a goal or motive in itself, in favor of a model in which self-esteem represents a gauge or index designed to provide input into systems designed to serve other (adaptive) goals or motives. Leary and his colleagues viewed the self-esteem system as a sociometer that was involved in the maintenance of interpersonal relations (Leary & Baumeister, 2000; Leary, 1990; Leary & Downs, 1995). Thus, a person's feelings of self-esteem were considered to be internal, subjective indices or markers of the degree to which the individual was being included versus excluded by other people (i.e., the person's *inclusionary status*), and the motive to maintain self-esteem functioned to protect the person against social rejection and exclusion. The sociometer hypothesis propounded by Leary and his associates offers several important arguments that illustrate the application and utility of evolutionary-psychological thinking to social-psychological topics, and provide a general conceptualization of self-esteem that is different from previous conceptualizations.

Many writers have observed that human beings possess a fundamental motive to seek inclusion and to avoid exclusion from important social groups and that such a motive to promote gregariousness and social bonding may have evolved because of its survival value (Campbell & Foster, 2006; Ainsworth, 1989; Barash, 1977; Baumeister & Leary, 1995; Baumeister & Tice, 1990; Bowlby, 1969; Hogan, 1982; Hogan, Jones, & Cheek, 1985). Since solitary human beings in a primitive state were unlikely to survive and reproduce, it would be appropriate to deduce that certain psychological systems (like self-esteem) evolved that motivated people to develop and maintain some minimum level of inclusion in social relationships and groups. This notion gets added credence since human beings have evolved to be a highly social species, and many of the adaptive problems our ancestors faced would have involved negotiating their social world.

Thus, it is feasible to concur that the sociometer theory regards self-esteem as an evolutionary adaptation that emerged to monitor an individual's relational value with other people—since being valued as a relational partner would be important as it would increase the likelihood that others would be available for practical, social and emotional support, and thereby enhance the individuals reproductive success. Further, one would suppose that this

relational value would have been especially important in the ancestral environment, where the automatic monitoring of one's relational value on an ongoing basis would have been an asset. The subjective feelings that are associated with changes in self-esteem could provide feedback regarding one's relational value in other people's eyes and motivate behaviors that help to maintain or enhance the individual's relational value. Thus, high self-esteem is associated with perceiving a high relational value, whilst low self-esteem is related to perceiving a declining relational value. Further, Leary and his colleagues view self-esteem not as a free-floating goal state that people are motivated to enhance and protect, but rather as an internal index or gauge designed to monitor the individual's success with respect to other adaptive goals.

Hence, according to the sociometer hypothesis, *self-esteem* reflects the operation of a mechanism (i.e., a sociometer) that has been designed for evaluating the self in relation to others in the context of diverse social-cognitive psychological systems. We could also say that self-esteem reflects the operation of evolved psychological mechanisms designed by natural selection to monitor specific aspects of the self in relation to others. These self-evaluative mechanisms could perform a wide variety of adaptive functions in the context of psychological systems designed to guide behavior adaptively with respect to social relationships.

Kirkpatrick and Ellis (2001) suggest some extensions and refinements of the sociometer theory in light of two general sets of issues that are raised by an evolutionary perspective, i.e., the adaptive function and domain-specificity of self-esteem. While mostly agreeing with Leary et al's sociometer hypothesis, Kirkpatrick and Ellis note that interpersonal relationships can be of varying kinds which differ qualitatively with respect to the particular adaptive problems they pose and the solutions required to negotiate them successfully. For instance, while attachment and care-giving systems do guide parent-child interactions, these systems would not guide other familial interactions like sibling relationships or marital relationships. Kirkpatrick and Ellis suggest that natural selection is likely to have fashioned numerous psychological mechanisms for monitoring functioning in distinct types of relationships; especially since a general social-inclusion gauge (as professed by Leary et al) alone seems unlikely to provide sufficiently detailed information about the nature of the adaptive problems that need to be solved, or be very useful in guiding appropriate behaviors to solve that problem. For example, a sociometer that monitors levels of acceptance and rejection from romantic partners may be useful for guiding the individual's mate-selection strategy, but not for guiding his/her interactions with teachers at school. This view is analogous to a central premise of evolutionary psychology that the mind/brain comprises numerous, domain-specific mechanisms representing evolved solutions to recurrent adaptive problems in ancestral environments. In other words, qualitatively different adaptive problems require qualitatively different solutions.

Kirkpatrick and Ellis's view suggests that there are multiple domains and functions to self-esteem. The idea of a multidimensional self-esteem is not new. Previous researchers have proposed various dimensions of self-esteem, such as competence or achievement, virtue or morality, power or control etc (e.g., Coopersmith, 1967; Epstein, 1973, Harter, 1983 etc.). However, in most cases, multidimensionality has been inferred from factor-analytic results. In contrast to this descriptive approach, Kirkpatrick and Ellis's evolutionary perspective does appear to offer a strong theoretical basis for distinguishing types or dimensions of self-esteem in terms of ways in which they operate to help solve different kinds of adaptive problems at

different stages in the individuals life. Thus, from an EDP perspective, several functionally distinct kinds of relationships are important for different reasons, and domain-specific sociometers might therefore be associated with each.

Self-esteem and Social relationships

The following section attempts to identify links between self-esteem and social relationships (e.g., community relationships, kin relationships, mating relationships, etc.) using an EDP framework. This paper will explore the links between self-esteem and family and mating relationships in the domain of social inclusion.

Social Inclusion

An important aspect of social life concerns acceptance in various forms of coalitions and alliances, which could include macro-level groups like one's tribe, village, community, city or country, and micro-level groups (like family, neighbors, friendship groups, etc) that are exist within the larger macro-level group. According to Baumeister and Leary (1995), self-esteem at the macro-level would be tied in with feelings of belongingness and a sense of being an accepted member of one's local community or nation. Schatz, Staub and Lavine (1998) suggest that self-esteem at the macro-level may even be correlated with nationalism and patriotism. From a developmental perspective, children's self-esteem at a macro-level could be tied in with feelings of belongingness in the school community and the related school spirit.

Coming to micro-level group processes, human beings routinely form smaller coalitions and alliances (a behavior which is also seen in chimpanzees (Wrangham & Peterson, 1996)). Inclusion in these micro-level groups affords a variety of benefits, including mutual social support, physical protection, access to external resources like food, shelter, territory etc., access to mating opportunities, and coalitional support in negotiating status and dominance hierarchies. Self-esteem in this domain should hence be reflected in feelings of being loved and valued by family, friends, and colleagues, and therefore correlate empirically with related constructs like perceived social support, social integration and absence of loneliness. The child's perception of support by family members has been known to influence subsequent development of reproductive strategies. Consistent with this, Ellis, McFadyen, Dodge, Pettit and Bates (1999) found that greater warmth and positivity in parent-child relationships-as observed in the summer prior to kindergarten, predicted later pubertal timing in daughters in seventh grade.

Dubois, Burk-Braxton, Swenson, Tevendale, Lockerd and Moran (2002) studied the influences of social support and self-esteem on adjustment in early adolescence via a 2-year longitudinal study. Since successful transition to full-fledged adolescence is considered to be dependent on achieving greater intimacy and involvement with friends while at the same time handling significant new roles and responsibilities within the family and increasingly challenging demands in the school environment (Lerner, Lerner, von Eye, Ostrom, Nitz, Talwar-Suni, & Tubman, 1996). Therefore, DuBois and his colleagues used multi-informant data (youth and parent) to assess both overall levels and balance in peer- versus adult-oriented sources for social support and self-esteem. They found that self-esteem mediated the effects of social support on both emotional and behavioral adjustment. Further, lack of balance in social support and self-esteem in the direction of stronger support and esteem from peer-

oriented sources predicted greater levels and rates of growth in behavioral problems. Finally, their results also indicated a need for process-oriented models of social support and self-esteem and sensitivity to patterning of sources for each resource relative to adaptive demands of early adolescence.

These findings are consistent with an evolutionary perspective on group affiliation that highlights varied types of micro-level groups (e.g., family, peer group, mating partners etc) that are relevant to both self-esteem and social-support. Hence micro-level groups could function as *instrumental coalitions*, *mating relationships* and *family relationships*. An instrumental coalition can be simply defined as a group where two or more individuals coordinate their efforts to achieve a shared and valued objective. Over the course of human evolutionary history, intergroup aggression and hunting of large game animals have involved the formation of instrumental coalitions. These coalitional activities would have been important both for obtaining animal protein by way of food, and also for obtaining greater sexual access to women by virtue of being the victors (Chagnon, 1992; Manson & Wrangham, 1991). Since our male ancestors engaged in group-level hunting and warfare, selection forces could be expected to have shaped the male affiliative cognitions to especially value participation in these kinds of groups. Therefore, it is appropriate to assume that perceived inclusion in instrumental coalitions (like competitive sports teams—i.e., athletics) would be an important facet of self-esteem, and more salient in boys rather than girls overall feelings of self worth. This assumption is supported by research in the developmental literature (e.g., Harter, 1983, 1998) that has shown that boys ascribe a greater value to athletic abilities than girls. For instance, Marsh, Hey, Roche and Perry (1997) found that physical-athletic self-concepts were higher for boys than for girls.

From an evolutionary perspective, no interpersonal relationship is more important than the *mating relationship*. Attracting and retaining mates is an essential element of successful reproduction (Bale & Archer, 2013). It follows, therefore, that specialized sociometers would be designed to assess one's success in the "mating game". Given the notions of domain-specificity, from an evolutionary-developmental perspective we could suppose that separate sociometers monitored success in short term mating (i.e., success in achieving short-term sexual access to a variety of partners) and long-term mating (i.e., success in forming committed relationships with reliable nurturant mates). Further, one could expect that the relative weights given to these two mating strategies would be dependant on the gender and perhaps even the developmental life stage (age) of the individual. For example, since men and younger individuals, can increase the number of offspring produced through short term relationships, selection can be expected to have shaped men's (more than women's) sexual psychology to value short term mating, hence inclusion in short term mating might be more central to male self-esteem. This view is supported by Lalumiere, Seto and Quinsy (1995) who found that the number of sexual partners since puberty was positively correlated with self-esteem among men.

Kin-based relationships are also of great importance to human beings. Inclusive fitness theory predicts that, all else being equal, individuals will allocate investment towards genetic relatives who are most able to convert the investment into current and future reproduction. Therefore, people might have specialized psychological mechanisms for monitoring inclusion in kin based alliances, which show predictable patterns of developmental change—for instance, perceived levels of inclusion and support from parents would become less central to self esteem as individuals mature from childhood to adolescence to adulthood. DuBois et al's

(2002) findings lend credence to this view, as they found age related changes in ascribed values to peer and parent support (depending on the situational context).

From an evolutionary perspective, the value of being included in a group is inextricably linked with the relative quality and strength of one's own group vis a vis the other groups. A principle adaptive function of inclusion concerns defense against outgroups. Inter-village warfare and raiding was common among our hunter-gatherer ancestors (Manson, & Wrangham, 1991). High self-esteem should therefore be associated with beliefs not only about inclusion in a collective, but also the perceived quality and strength of that collective relative to competing groups. Consistent with this, Americans take pride in the accomplishments of their country's many sports teams, as opposed to people from a country that doesn't do as well in sports. Thus, we can suppose that sociometers for monitoring the relative strength of one's coalitions and alliances would have been selected for because inclusion in larger and stronger groups afforded benefits to the individual that translated into survival and reproduction.

CONCLUSION

Any study with an evolutionary perspective is slightly tricky because the ecological and social environment (i.e., social organization) in which our forefathers lived have left very few high-definition imprints; it is therefore difficult to grasp the magnitude of the evolutionary forces that acted on them. Nevertheless, an evolutionary perspective on self-esteem focuses attention on the adaptive, functional value of self-evaluations—on the ways in which these evaluations are useful (or, *were* useful to our ancestors) in solving adaptive problems. Because different types of interpersonal relationships differ qualitatively with respect to the particular adaptive problems they pose, a number of different sociometers serving a variety of functions are needed to negotiate these relationships successfully. Hence, it appears to be, that a multidimensional view of self-esteem with an EDP perspective (as suggested by Kirkpatrick and Ellis) would make it possible to identify components or dimensions of self-esteem that parallel the actual design of our species-general cognitive architecture, rather than merely reflecting the conscious self-reflections of introductory psychology students (who usually make up most data samples). Further, an EDP perspective looking at multiple dimensions of self-esteem could bring together the terror management theoretical perspective and the sociometer hypothesis of self-esteem, and thus provide us with a deeper, overarching theoretical framework to bring order to the fragmented literature concerning self-esteem. Such an approach can also aid in organizing future research and provide a solid basis for applications of this knowledge in the real world.

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