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The relationship between self-esteem and social Influence: An empirical comparison of two theoretical models

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The Relationship Between Self-Esteem and Social Influence: An Empirical Comparison
of Two Theoretical Models

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A thesis submitted to the Graduate Faculty of

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Abstract

The relationship between social influence and self-esteem was examined in two studies from the lens of two different theoretical approaches, Leary's sociometer theory and Henriques' Unified Theory of Psychology (HUTP). Whereas sociometer theory contends that self-esteem functions completely as a barometer of relational value, HUTP posits that human self-esteem should also be significantly influenced by the cultural context, especially the extent to which self-enhancement is justified. This conception leads to the prediction that socialization will influence self-esteem, after controlling for social influence. Specifically, individuals socialized to self-enhance should demonstrate higher levels of self-esteem after controlling for social influence. Two studies were conducted to examine this prediction. Based on research demonstrating that males are socialized to be more independent and self-enhancing than females, Study 1 compared men and women in the United States, and found, as the HUTP predicted, that after controlling for social influence, men scored higher on a measure of self-esteem than women. The second study compared Americans to Russians, and based on the conception that Americans are more individualistic and Russians more collectivistic, it was predicted that Americans would score higher on self-esteem than Russians. This prediction was not supported.

Implications and limitations are discussed.

Chapter 1: Introduction and Overview

How are social influence and self-esteem related? Is self-esteem purely a function of one's relational value, as some theories have proposed? Or, does the nature of cultural beliefs play a role in the expression of self-esteem? For example, are American males and females socialized to think about themselves differently and, if so, does this have an impact on their self-esteem? Or, in a similar light, would Russians and Americans differ in their expression of self-esteem due to cultural beliefs and values that are internalized as they are raised in their respective countries? The current cross-cultural study seeks to empirically explore the answers to these questions, looking at them through the lenses of two perspectives that attempt to shed light on the ultimate nature of self-esteem.

Although self-esteem has been one of the most researched constructs in psychology in the latter half of the 20th Century, Leary, Tambor, Terdal, and Downs (1995) argued that virtually no systematic attention had been paid to questions such as why humans have self-esteem and what function it serves. To remedy this gap, Leary offered the sociometer hypothesis (what would later be called sociometer theory), which posits that self-esteem is an evolutionary adaptation that has evolved as a result of the human need for belongingness. Specifically, sociometer theory claims that self-esteem is actually a "sociometer", or gauge, of one's perceived relational value. Thus, when people feel accepted or relationally valued by others, they should experience a high level of self-esteem, whereas when they feel rejected or a lack of relational value, they should experience a relatively low level of self-esteem. Leary and his colleagues conducted a number of studies that empirically demonstrated the very close linkage between relational value and a person's self-esteem (Leary et al.).

Interestingly, while Leary was developing his work on sociometer theory, a new set of ideas was being developed by Gregg Henriques that would share some key elements with Leary's work. Concerned with the enormous conceptual and theoretical fragmentation in psychology, Henriques developed a new unified theory of psychology that he argued could assimilate and integrate key insights and ideas from the disparate schools of thought within psychology into a coherent whole (Henriques, 2003; 2004; 2008; in press). Henriques' Unified Theory of Psychology (HUTP) has four different ideas that interlock to provide a whole new way to view the field. Two of these components relate directly to self-esteem and self-concept, and together they overlap much with Leary's formulation, and yet they also indicate that Leary's sociometer theory is likely not complete.

The first component of HUTP that relates directly to Leary's sociometer theory is called the Influence Matrix (IM). Directly paralleling Leary's formulation, the IM is grounded in evolutionary theory and posits that social influence was a crucial resource in the environment of evolutionary adaptation (see Barkow, Cosmides, & Tooby, 1992). As such, the IM posits that humans are keenly attuned to their levels of social influence, and when they achieve greater levels, they experience positive feelings in general, and feel good about themselves in particular. Similarly, loss of social influence is predicted to be associated with negative feelings, such as anxiety, depression or shame. Although there may be some slight differences between the notion of social influence posited by the IM and the notion of relational value posited by sociometer theory, it nevertheless remains the case that both perspectives are very similar in their formulations and predictions about the general relationship between self-esteem and social influence.

The second component of the unified theory that directly relates to issues of human self-esteem is called the Justification Hypothesis (JH). The JH is a new theory that ties together human language, self-consciousness, and culture in a way that provides a framework for understanding the evolutionary changes that occurred that spun the human animal in such a unique direction. With the added lens of the JH, it becomes apparent that sociometer theory may not fully capture the phenomenon of self-esteem. For instance, Leary's conceptualization of the sociometer is focused purely on the affective system, meaning it only focuses on self-esteem as a feeling and does not take into account how the evolution of human self-consciousness would have affected the self-esteem system. For instance, the question arises as to how our ability to self-reflect and think about our actions from our personal standards might impact self-esteem. Leary's theory seems to posit that all of the variance in true self-esteem should be accounted for by perceived relational value. In his writings, limited attention is paid to how other variables, such as human self-consciousness or cultural beliefs and values, could influence the experience and the expression of self-esteem.

In contrast, the JH makes explicit how self-consciousness and culture might affect self-esteem. According to the JH, human self-consciousness functions as a justification system that evolves with development and 'downloads' justification narratives of one's cultural context and uses those narratives to navigate the social environment. Through the IM, HUTP agrees with Leary that self-esteem will depend largely on social influence (or relational value). However, in contrast to sociometer theory, HUTP posits that the nature of how people are socialized into the justification narratives across cultures will impact the expression of self-esteem, regardless of social influence pressures.

This formulation makes a clear prediction. If one could take social influence out of the equation (i.e., control for social influence), people born into a culture that encourages self-enhancing biases, should self-report higher self-esteem than people born into a culture that is less conducive to self-enhancement. Thus, the current study predicts that the nature of the cultural justification systems in which an individual lives will have a moderating influence on self-esteem, after controlling for social influence.

Gender role socialization is another process that, from the vantage point of HUTP, could have an impact on the expression of self-esteem. Researchers have long noted gender differences in self-concepts or self-construals. Specifically men have been shown to be more independent, self enhancing, and self asserting, whereas women have been shown to be more relational, interdependent, and other-oriented (see Cross, Bacon, & Morris, 2000; Gabriel & Gardner, 1999; Gardner, Gabriel, & Hochschild, 2002; Kashima et al., 2004; Kimmelmeier & Oyserman, 2001b). In accordance with the JH, gender self-construals have been found to be largely dependent on gender stereotypes (Guimond, Chatard, Martinot, Crisp, & Redersdorff, 2006). In other words, from a HUTP perspective, men and women internalize justification narratives their culture provides them with to construct their own self-construals and self-concepts.

Although men and women might not differ in their motivation to maintain social influence, the fact that men are exposed to justification narratives that they should be more self-enhancing and women to narratives that they should be more communal or other-oriented should have implications for the expression of self-esteem. The current study will test the hypothesis that after controlling for social influence, American men will self-report higher self-esteem than American women.

A second study will compare Russian and Americans. Recent research has shown that Russians tend to be more on the collectivism end of an individualism-collectivism dimension, less protective of their personal sphere than Americans, and more interdependent and less independent than Germans (Smith, Trompenaars and Dugan, 1995; Tower, Kelly, and Richards 1997; Searle-White 1996). While the desire for social influence should be universal which should result in fairly equivalent reports of self-esteem, the different justification systems in America and Russia should moderate individual self-report of self-esteem. Given that Russians are born into a justification system that tends to emphasize the self as dependent on others as opposed to an American justification system that tends to emphasize the self as independent from others, the hypothesis was made that Russians will be less self-enhancing than Americans, and will thus self-report lower self-esteem than Americans, after controlling for social influence.

Chapter 2: Literature Review

Self-Esteem and Its Function

Across cultures and time, people appear to have a universal motivation to respect the character of the self. In recent times, psychologists have coined this universal motive to respect the self, “self-esteem.” Self-esteem is arguably one of the most studied constructs in the behavioral sciences. By conducting a search in PSYCINFO with self-esteem as a keyword, for instance, one finds nearly 20,000 articles dating all the way back to 1696. Research has mostly concluded that self-esteem can be characterized by affect-laden evaluations of the self rather than strictly non-emotional evaluations of the self. Throughout the history of psychology, self-esteem has been classified as a fundamental instinct (James, 1890). In other words, human beings are seen as having a natural inclination to maintain self-esteem from birth. More recently however, psychologists have preferred to think of self-esteem as a human need (Maslow 1968). Furthermore, a large body of research has looked at the connection between self-esteem and other variables. For instance, research has established strong implications for self-esteem in well-being, academic performance, depression and other psychological variables. Years of research have supported the idea that human beings are motivated to maintain self-esteem. Ironically, however, very few studies have been conducted to examine the function of self-esteem or why people seek to maintain it.

Leary and Baumeister (2000) have identified at least five explanations for the function of self-esteem over the years. First, many theorists have posited that people seek self-esteem because it is associated with well-being and positive affect. When people have high self-esteem they experience pleasurable feelings, whereas when they have low

self-esteem they experience negative, even painful feelings. Hence, according to this perspective on self-esteem, we seek to maintain self-esteem because we are trying to avoid negative feelings. However, according to Leary, nature would not have associated affect so strongly with self-esteem by chance. Knowing that affect and self-esteem are so connected begs the question of why they are so connected.

According to Bednar, Wells, and Peterson (1989), self-esteem functions to signal successful coping. According to their formulation, people experience positive affect (self-esteem) when they are coping with a psychological threat and negative affect when they are avoiding this threat. Furthermore, the level of self-esteem affects later coping. For example, high self-esteem leads to more successful coping whereas low self-esteem leads to more and more avoidance. According to Leary and Baumeister (2000) there are two problems with this theory. First, it doesn't account for many of the established causes and effects of self-esteem. Second, when people are ineffectively coping this would lead to low self-esteem and more avoidance of threats in one's environment. From an evolutionary standpoint, such a system would be adaptive if our self-esteem was always an accurate portrayal of our ability to cope. However, since self-esteem is often inflated or deflated depending on mood or circumstances, it would not always give us an accurate picture of our coping skills, and the system would be maladaptive.

Additionally, humanistic theorists have proposed that self-esteem is an indicator of how congruent we are with our true selves. Humanistic theories posit that people have high self-esteem when they behave in self-determined ways that reflect their "innate potentials and phenomenal core" (Deci & Ryan, 1995; Rogers, 1959). This healthy integrated sense of self is what they call true self-esteem. In contrast, contingent self-

esteem is based on unrealistic or unnatural standards imposed by oneself or others. From a humanistic perspective, contingent self-esteem is generally seen as unhealthy or maladaptive and it leads to lower self-esteem because it does not reflect one's true autonomous desires and potential. While this theory has gained popularity amongst humanistic psychologists, as will be shown below, it differs markedly from sociometer theory's conception of the function of self-esteem.

Dominance Maintenance Theory (Barkow, 1980) states that self-esteem is an adaptation that orients individuals to maintain dominance in the social environment. Unlike the other theories described thus far, this theory is grounded in an evolutionary framework. The theory assumes that early humans lived in societies run by dominance hierarchies; thus, we would have needed a system to monitor and enhance our dominance. The more dominance we maintained, the more likely we would have been to have access to mates and resources. Furthermore, when people had more dominance they were more likely to have more respect for the self (self-esteem). Thus, self-esteem became a marker of one's relative dominance and as a result played a role in reproductive fitness (Barkow, 1980). As will be described below, Dominance Maintenance Theory has much in common with the two models explored in the current work because of its reliance on evolutionary theory and its parsimonious explanation for the function of self-esteem. However as will also be discussed, this theory differs in key ways as well.

The final and arguably more controversial explanation for the function of self-esteem comes from Terror Management Theory (TMT). According to the proponents of this theory, self-esteem functions as "a buffer against the omnipresent potential for anxiety engendered by the uniquely human awareness of mortality" (Greenberg,

Pyszczynski, & Solomon, 1986). While experiments have shown that making death salient does make people more concerned with self-esteem and that high self-esteem does decrease people's anxiety about death (Greenberg et al., 1992), the data do not directly support the main thrust of the argument that self-esteem exists as a buffer against death anxiety (Pyszczynski, Greenberg, Solomon, Arndt, & Schimel 2004). In fact, according to Leary (2004), many of the major findings from TMT can be interpreted in terms of sociometer theory. For instance, it could be argued that many of the dependent variables that TMT researchers use – helping other people, respecting cultural icons, showing tolerance, driving in a risky manner, identifying with teams and ethnic groups, derogating other people – may relate more strongly to variables other than death anxiety, such as social acceptance (Leary, 2004). Furthermore, several studies have been conducted by Leary and others that seem to contradict the TMT argument (Sowards, Moniz, & Harris, 1991; Leary, Tchividjian, & Kraxberger, 1999).

While all of the aforementioned theories provide possible explanations for the function of self-esteem, they have little if any empirical support for the main tenets of their arguments. However, Leary set out to provide a parsimonious, empirically testable hypothesis about the function of self-esteem, which he called the sociometer hypothesis. According to the sociometer hypothesis, self-esteem functions as a gauge of our inclusionary status in the eyes of other people. Leary often uses the helpful analogy of a gas gauge to describe the sociometer. According to the analogy, just as a vehicle's gas gauge is a monitor of how much gas is present in the vehicle, self-esteem is a monitor of our inclusionary status, with social acceptance at the "full" end and social rejection at the "empty" end of the gauge. The idea for a sociometer first emerged when Leary and his

students were studying the affective reactions to rejection. They noticed a trend in the literature that rejection, in addition to being correlated with negative social emotions, was consistently correlated with low self-esteem. This led them to hypothesize that self-esteem might actually be a subjective monitor of one's perceived inclusionary or exclusionary status. Leary took this one step further and claimed that the need for self-esteem was actually a need to avoid being excluded from the group. Hence, Leary hypothesized that people will tend to behave in ways to avoid social exclusion as opposed to behaving in ways to maintain self-esteem itself per se (Leary, 1990; 2003; Leary & Guadagno, 2011). Leary's next step was to test his hypotheses and attempt to lay the empirical groundwork for his ideas.

Empirical and Theoretical Background for Sociometer Theory

To test the sociometer hypothesis, several experiments were designed and conducted. The first experiments were published as a series of five studies that became the foundation for sociometer theory. The first study attempted to test the idea that self-esteem is an indicator of one's social inclusion or exclusion using self-report measures. Results showed that when participants imagined themselves engaging in behaviors that had both negative and positive implications for social acceptance, their ratings on a self-esteem scale reflected how they thought others would respond to them (Leary, Tambor, Terdal & Downs, 1995; Leary, 2003). In the second study, participants were asked to recall an actual real life experience that resulted in their acceptance or rejection from their social group. Participants were asked to recall the experience and indicate how accepted or rejected they felt followed by how they felt about themselves at the time (state self-esteem). Correlations between perceived exclusion and state self-esteem, were from $-.68$

to $-.92$ (correlations differed based on the experiences participants were asked to recollect). As a result, Leary and others concluded, “for all practical purposes, self-feelings were a proxy for perceived exclusion” (Leary et al., p. 523). Furthermore, applicants were given the opportunity to qualitatively state why they felt the way they did. In further support of the hypothesis, responses implicated acceptance and rejection (Leary et al., 1995; Leary, 2003).

The third study attempted to sort out whether changes in self-esteem occurred more strongly when people are “personally” rejected or accepted, as opposed to just being rejected or accepted due to random chance. Participants were asked to fill out a self-descriptive questionnaire about themselves and this questionnaire was given to four other participants in the study. Each participant then indicated two people they would like to work with on an upcoming group task based on the questionnaire. Participants were subsequently given bogus feedback that they would be working with the three person group (inclusion) or alone (rejection). They were also told that their working alone was due either to the other participants’ evaluation of them or to random chance. The results indicated that those who were “personally” rejected by the group had significantly lower self-esteem than those who were excluded by random chance (Leary et al. 1995; Leary 2003).

The fourth study replicated the results from study 3, but with a different design (Leary et al., 1995; Leary, 2003). The researchers wanted to test out their hypothesis of being personally rejected by a single person as opposed to a group of people. Participants verbally interacted with a lone individual via intercom, and were given bogus feedback that they were either accepted, rejected or given no feedback by the lone individual.

Results were similar to those of study 3. Being “personally” rejected by a lone individual based on verbal interaction resulted in significantly lower self-esteem than being rejected due to random chance. Finally, whereas all the previous studies looked solely at state self-esteem, the final study was conducted to examine trait self-esteem, Leary originally hypothesized that trait self-esteem should be related to an “individual’s history of experienced inclusion and exclusion” (Leary, 1990, p. 227). Participants were given a self-report measure of general exclusionary status and two measures of trait self-esteem. Results indicated that the results from the general exclusionary status correlated negatively with both self-esteem measures.

Following these studies, Leary began to call his idea, sociometer theory. A stream of empirical studies further established the nature of the sociometer, how it is “calibrated,” how people with different levels of trait self-esteem react differently to social acceptance or rejection, and how people’s beliefs about what others will value predicts trait self-esteem (Haupt & Leary, 1997; Nezlek, Kowalski, Leary, Blevins, & Holgate, 1997; Leary, Haupt, Strausser, & Chokel, 1998; MacDonald, Saltzman, & Leary, 2002). In each of the sociometer theory studies, a quasi-experimental, quantitative approach was taken to examine the relationship between acceptance/rejection and self-esteem. A number of different research designs were used, from administering self-report measures to setting up scenarios where participants would be either accepted or rejected by fellow participants. In the various studies different psychological measures of self-esteem and social acceptance were also administered. The fact that they found similar results across paradigms and measures adds credibility to the formulation offered by sociometer theory.

As a result of more recent experiments Leary, Rice, and Schreindorfer (2005) argued that it's more accurate to conceptualize the sociometer as responding to fluctuations on a continuum of relational value with high and low relational value at each end rather than as responding strictly to social exclusion or inclusion per se. For instance, self-esteem may decrease even if an individual is not, strictly speaking, rejected or excluded from a group, if one believes she is not adequately valued as a relational partner or group member. In fact in their experiments, Leary et al. (2005) found that changes in self-esteem were more sensitive to changes in perceived relational value than to changes in inclusionary status. Thus, from a sociometer theory perspective, self-esteem is a marker of one's relational value to other people (Leary & Baumeister, 2000). Leary (2006) refers to relational value as "the degree to which a person regards his or her relationship with another individual as valuable or important". Of course whether or not an individual's perceived relational value in a group affects self-esteem will also depend on how much that individual values the group and wants to be considered a valuable relational partner by group members (Leary & Baumeister, 2000).

One key aspect of sociometer theory is that it is grounded in evolutionary theory. For example, Leary claims that as a social species, our prehistoric ancestors depended on group belonging and thus would have needed a system to warn individuals of threats to acceptance in their group. People who were rejected would have had less of a chance to pass their genes on to the next generation. Thus according to sociometer theory, self-esteem is an adaptation that evolved to respond to cues of acceptance and rejection in our environment. Before human self-consciousness evolved, this system would have been strictly affective, responding to nonverbal cues. For example, in response to negative

cues from others indicating rejection (e.g., frowning, abandonment), people would have experienced sadness, emotional pain, and fear. They would have tried to avoid these negative feelings and tried to approach more positive feelings that indicated they were accepted – feelings of joy, hope, and pleasure. Hence, due to evolution, negative feelings about the self (low self-esteem) became associated with rejection or low relational value and positive feelings about the self (high self-esteem) became associated with acceptance or high relational value. This strictly affective monitoring system of our social environment became the beginning of what we today call self-esteem (Leary & Baumeister, 2000; Leary, 2005, 1999).

Limitations of Sociometer Theory

Although sociometer theory carries strong evolutionary logic and there is accumulating empirical support for it, it may not fully capture the phenomenon of self-esteem, at least according to the perspective of a new unified theory of psychology developed by Henriques (2003). For instance, from an evolutionary perspective, modern day humans for the most part are much more advanced and live in much more complex societies than their hominid ancestors. However, Leary's conceptualization of sociometer theory does not seem to take into account how the evolution of human self-consciousness and culture might have affected our self-esteem system. For although Leary (2004) himself acknowledges, "The functioning of this system would have changed somewhat when human beings became self-aware because conscious thought would have become layered upon it..."(p. 479), he offers little in the way of explicating how this transformation might actually affect self-esteem.

Furthermore, research has not demonstrated conclusively that sociometer theory accounts for changes in self-esteem better than alternative explanations, nor does prior sociometer theory research account for other variables that might affect self-esteem. For example, when comparing sociometer theory to the alternative formulation of self-esteem derived from TMT, Leary (2004) admits that the findings from either theory can be understood or explained in terms of the other and that “declaring a theoretical winner at this time is premature”. Moreover, most of the sociometer theory studies are correlational. Thus, although Leary et al. (1995) make bold claims such as “for all practical purposes, self-feelings were a proxy for perceived exclusion” (p. 523), the findings are not evidence for evolutionary causation. The studies provide strong evidence that changes in self-esteem mirror changes in perceived relational value, but they do not demonstrate, as sociometer theory posits, that the actual function of self-esteem is to monitor relational value. Other conceptualizations, such as considering self-esteem as a monitor of personal competence, could also explain many of the findings. For instance, many of the sociometer studies involve participants being evaluated by complete strangers. Thus, it could be argued that changes in self-esteem are more a function of changes in perceived individual competence rather than of changes in relational value per se.

Additionally, there is very little discussion by proponents of sociometer theory of what other factors besides relational value might influence self-esteem. One study does mention gender differences in self-esteem, specifically that women were more sensitive to rejection than men (Leary et al., 1995). However, the researchers attribute this finding to the possibility that women’s criteria for relational value might be different and more dependent on others’ views of them than men’s criteria are. Yet, another possible

explanation for this finding is that women and men are socialized differently and respond to rejection accordingly.

Leary also briefly mentions how culture relates to self-esteem by explaining that self-esteem should be a human universal across cultures. That is, cross-culturally people should value feeling good about themselves rather than feeling bad about themselves. But again, Leary explains these differences in terms of relational value. He claims that different cultures have different levels of self-esteem as a function of the cultural variation in the characteristics that promote relational value (Leary 1999; 2005; Leary & Baumeister 2000). For example, in a culture that emphasizes humility and deferment, these very characteristics will be more connected to self-esteem than in a culture that emphasizes pride and self-enhancement because those who engage in them will receive greater social acceptance. However, Leary does not explain how culture might impact self-esteem apart from what is relationally valued. Overall, there is often little mention of other factors that might influence self-esteem. In fact, Leary (2004) himself states that sociometer theory “does not specify all of the moderating variables that account for when various self-esteem effects occur” (p. 482). Hence, the function of self-esteem might be more complex than what sociometer theory alone can account for.

The Unified Theory

A new unified theory of psychology developed by Henriques (2003) is a framework that may provide guidance in understanding other variables that influence self-esteem besides relational value. Thus, a comparison of Henriques’ unified theory of psychology (HUTP) with sociometer theory is a central focus of this study. HUTP is a metatheory that seeks to provide a clear definition, subject matter, and theoretical

framework for psychology. Currently, the field of psychology consists of many ideas that conflict with one another and are often presented as mutually exclusive. Henriques (2004) argued that the framework he developed can assimilate and integrate the key insights from the major perspectives into a comprehensive set of ideas that articulates a clearer picture of the human condition, including the human experience of self-esteem. HUTP consists of a number of pieces that fit together to form a whole. A brief review of each piece follows to provide the reader with a general sense of the theory. After this overview, the key pieces that have relevance to sociometer theory will be examined for the insights they bring to our understanding of self-esteem.

There are four pieces that make up the unified theory: 1) the Tree of Knowledge System, 2) Behavioral Investment Theory, 3) the Influence Matrix, and 4) the Justification Hypothesis. The latter two pieces are essential for setting up the logic for the current research. The Tree of Knowledge System (ToK System) is a new way of viewing the evolution of complexity from subatomic particles to molecules to organisms to human societies. As depicted in Figure 1, the ToK System depicts the evolution of complexity as four distinguishable emerging dimensions, labeled Matter, Life, Mind and Culture. Why, according to the ToK System, are there four separable dimensions of complexity? The reason is that each dimension that emerged after the Material dimension was the consequence of a new information processing system. Life, for example, emerged as a function of genetic information processing. Mind is conceptualized as emerging as a function of neuronal information processing. Finally, Culture is argued to emerge as a function of symbolic information processing (Henriques, in press).

The ToK system formulation gives rise to a model of nature as four ontologically different categories of objects and causes. This is a rather novel philosophical argument, one that Henriques (2004) argued opened up the solution to the effective definition of psychology. To appreciate why it is novel, consider that Rene Descartes' philosophical analysis is famous for its dualism. Matter and mind were conceived by Descartes as completely separate spheres. Of course, modern scientific views have argued for a monistic position. Mind must be some form of matter because the problem of nonmaterial causality is philosophically insurmountable. The ToK System is monistic in the sense that Energy is seen as the ultimate common denominator, and the higher dimensions of complexity supervene on the lower dimensions. But the ToK simultaneously shows why everything is not just energy and matter, thus avoiding the classic problem of material reductionism. The ToK System, in fact, posits that there are four separable classes of objects and causes: 1) the material (behavior of things like atoms, rocks and stars), 2) the organic (behavior of cells and plants), 3) the mental (behavior of animals like bees, rats and dogs), and 4) the cultural (behavior of people). Importantly, this categorical system aligns with thousands of years of common sense. Since the beginnings of culture and including great thinkers like Aristotle, humans have seen these four basic categories in nature. The ToK system provides a deep understanding as to why.

How are the dimensions connected? In the ToK system, theoretical "joint points" link the dimensions and provide a framework as to how the higher dimension emerged. There are four such joint points: 1) Quantum Gravity, which links Energy to Matter, 2) the Modern Synthesis, which links Life to Matter, 3) Behavioral Investment Theory, which links Mind to Life, and 4) the Justification Hypothesis, which links Culture to

Mind (Henriques, 2003). Quantum Gravity refers to the possibility of the theoretical merger of quantum mechanics and general relativity to yield a single unified theory of physics (Greene, 1999). The modern evolutionary synthesis refers to the merger of Darwin's theory of natural selection with genetics, which provides a framework for unifying biology (Mayr & Provine, 1998). The last two joint points, that between Life and Mind and that between Mind and Culture are Behavioral Investment Theory and the Justification Hypothesis, and they represent two of the three remaining pieces of HUTP.

As the joint between Life and Mind, Behavioral Investment Theory (BIT) provides the framework for understanding the evolution of mental behavior, which is the behavior of the animal as a whole, mediated by the nervous system (Henriques, 2004). The basic idea of BIT is that the nervous system has evolved into an energy management and investment value system that computes increasingly complex and flexible behaviors. Henriques (in press) argues that BIT consolidates existing theoretical perspectives and, in conjunction with the holistic vision afforded by the unified theory, allows for previously separate lines of thought and research to be coherently integrated. Specifically, BIT allows for the assimilation and integration of major perspectives of mind, brain, and behavior, including 1) evolutionary biology and genetics, 2) neuroscience, 3) behavioral science, 4) computational/cognitive science, and 5) developmental and dynamic systems theory. And, with its focus on investment and cost-benefit analysis, it also provides a framework for understanding animal and human behavior that is very congruent with economics. For example, Herb Gintis (2009), an economist who specializes in evolutionary biology and game theory, has argued that the central unifying principle underlying the behavioral sciences is the view that the mind is a decision-making organ

that calculates costs and benefits to arrive at choices, suggesting that the principle has broad application across a wide variety of different disciplines.

The Influence Matrix (IM) is an extension of BIT to human social motivation and emotion, which means that it incorporates principles from BIT including principles of energy economics, evolution, behavioral genetics, computational control, learning, and development (Henriques, in press). The IM is also represented in a diagram (see Figure 2) that attempts to map the architecture underlying the way humans process social information, develop social goals, and are guided by emotions in navigating the social environment.

Looking at the diagram, the motivations are inside the circle, whereas the emotions are listed on the outside. Starting with the motivations, notice the two boxes inside the circle, one toward the upper right and the other toward the lower left, labeled high and low influence respectively. These boxes represent core motivational templates that function as goal states that humans should be motivated to approach and avoid. The first foundational assumption of the IM is that social influence, defined as the capacity to get other individuals to act in accordance with one's interests, is a resource all humans are motivated to acquire. That is, like nutritious food, social influence reflects a basic, primary need and desire. It is, of course, not the only foundational motivation humans have, but it is theorized to be a central one. The second foundational assumption is that there are three conceptually distinct relational process dimensions underlying the computation of high social influence in adults: *Power* (dominance–submission), *Love* (affiliation–hostility), and *Freedom* (autonomy–dependence). According to the IM, higher levels of social influence are associated with higher levels of power and affiliation

and a healthy balance between autonomy and dependency. In contrast, lower levels of social influence are associated with hostile and submissive orientations and relative extremes of independence or dependence (Henriques, in press).

The IM posits that human relational processes can be conceptualized as a form of social exchange, whereby people are negotiating the acquisition of social influence with one another. To effectively negotiate such exchanges, individuals have motivational and emotional structures that allow for the representation of one's self-interests and the interests of important others. Dominance, autonomy, and hostility along with the emotions of pride, anger, and hate orient an individual toward promoting one's own self-interests in relation to the other. In contrast, the poles of affiliation, submission, and dependency along with the emotions of shame, guilt, and love orient the individual toward the importance and validity of others' interests relative to one's own. The IM suggests that in the course of engaging in social exchange, individuals will represent both their own interests and the interests of others. If the exchange is mutually beneficial, both parties will experience an increase in their sense of social influence. However, if there is conflict, both sides of the self-other dialectic become activated. Consequently, interpersonal conflict often produces a state of intrapsychic conflict, whereby individuals experience inclinations both to challenge and defy based on self-interests and to accommodate and defer based on others' interests. Of course, there are some individuals that tend to almost exclusively emphasize self-interests and become dominant, hostile, prideful and angry, whereas other individuals become submissive, dependent, guilty and shameful.

While one might consider social influence a one-dimensional construct, the IM

conceives of high influence and low influence as somewhat independent constructs. The IM is a map of what is happening intrapsychically. While one should be able to look at a specific interaction between two people and determine whether each person has high or low influence (interpersonal level), at the intrapsychic level, social influence will be bipolar, meaning people will have different templates for high and low social influence. For instance someone who focuses on career at the expense of family might have high social influence at work, but low social influence at home. Furthermore, regardless of one's current circumstances, people will have a history of social experiences where they were more socially successful (high influence), as well as experiences where they might have been rejected by their social group (low influence).

From a sociometer theory perspective, the IM can also be seen as a map of how people maintain self-esteem. According to this perspective, self-esteem can be seen as a gauge of social influence, thus, as people's social influence increases through high levels of power and affiliation and a healthy balance between autonomy and dependency, they receive feedback in the form of positive emotions such as pride and love, which in turn makes them feel good about themselves (high self-esteem). On the other hand, as people's social influence decreases they receive feedback in the form of negative emotions such as shame, guilt, and hate, and this makes them feel poorly about themselves (low self-esteem). However, it's important to note here that Henriques' IM is a map of nonverbal social exchange and thus cannot account for self-esteem in and of itself. In other words it is a map of nonverbal motivation and affect that describes either animal social exchange or human social exchange before the evolution of self-consciousness. Since the ability to feel good about oneself requires self-consciousness,

the IM was not meant to be a map of self-esteem. Hence, like Leary's conception of sociometer theory the IM itself does not make explicit how self-consciousness affects self-esteem. Rather, the next piece of HUTP, the Justification Hypothesis makes this explicit.

The fourth and final piece of the unified theory called the Justification Hypothesis (JH), is the joint point between Mind and Culture on the ToK System, and provides a framework for understanding the nature of human self-consciousness and the evolution of human culture. The JH interprets both human self-consciousness and culture as *justification systems*. Justifications are the linguistic reasons we use to legitimize our claims and actions, and justification systems are interlocking networks of specific justifications that legitimize a particular version of reality (Shealy, 2005). Using the lens of the JH, Henriques argues that processes of justification are ubiquitous in human affairs. Arguments, debates, moral dictates, rationalizations, and excuses, as well as many of the more core beliefs about the self, all involve the process of explaining why one's claims, thoughts, or actions are warranted. In virtually every form of social exchange, from warfare to politics to family struggles to science, humans are constantly justifying their behaviors to themselves and to others. Moreover, justification processes are a uniquely human phenomenon. Other animals communicate, struggle for dominance, and form alliances. But they don't justify why they do what they do. Human beings are the justifying animal.

The JH consists of three basic postulates (Henriques, 2003). The first is that the evolution of language created a new and unique adaptive problem for our hominid ancestors, namely the problem of social justification, which is the fact that the evolution

of language resulted in humans becoming the first animal in evolutionary history that had to justify why they did what they did. Effectively justifying one's actions is obviously crucial in contemporary society, as can be seen in the research examining the way explanatory styles impact other people's attitudes and behaviors (Antaki, 1994). And because humans have always been intensely social creatures, there is every reason to believe that social justification was an essential problem to solve in our ancestral past (Barkow, 1992).

The second postulate of the JH is the claim that the human self-consciousness system functions as a justification system that constructs narratives for why one does what one does. These narratives take into account one's social context and relative degree of social influence, and filter out unacceptable images and feelings. Henriques (2003, in press) has reviewed a large body of work in cognitive, social, developmental and neuropsychology, cognitive dissonance, self-serving biases, implicit and explicit attitudes, reason giving, and the nature of self-knowledge and has shown that language-based beliefs are in fact organized in a manner that tends to facilitate social justification. For example, people tend to alter their beliefs to maintain a narrative of themselves as effective, helpful and intelligent; people will consciously maintain against minorities; and people will tend to explain actions that result in favorable outcomes in terms of stable, internal causes, whereas actions that result in unfavorable outcomes are explained in terms of transient, external causes.

The third postulate is that the JH provides the basic framework for understanding cultural levels of analyses. This is because the concept of large-scale justification systems providing the rules and patterns for acceptable behaviors is consonant with modern

conceptions of culture (e.g., Shaffer, 2008). From this vantage point, laws, moral dictates, and even religious and philosophical beliefs are all seen as justification systems writ large that offer the individual roadmaps on what behaviors are socially acceptable. These large-scale cultural justification systems offer beliefs and values about what is morally right and wrong and make claims about how one should organize his or her personal and public life accordingly (Henriques, in press).

In relating the JH to sociometer theory it can be helpful to see it as a model similar to the one proposed by Epstein (1994) that integrates psychodynamic theory with cognitive science. Epstein proposed two domains, the “experiential” system and the “rational” system. The experiential system would have evolved before the rational system and it processes information automatically and holistically in the form of images and concomitant affects. The rational system evolved later and processes information sequentially, via words and symbols, and depends on reasoning and logic for justification. In explaining these two systems, Epstein compares them to folk psychology’s distinction between thinking and feeling, head and heart, and reasoning and intuition. However, Epstein’s model does not describe why the rational system would have evolved or what its function is. The JH fills in this gap by elaborating on Epstein’s reference to psychodynamic theory and characterizing the “rational” system as a “justification system” that inhibits and filters out nonverbal thoughts, images, and impulses that are socially unacceptable and allows justifiable actions to be expressed” (Henriques, in press, p. 204). In merging insights from both Epstein’s theory and HUTP, the sociometer and the IM can be seen as experiential systems because they both emphasize affect and by themselves don’t account for human reasoning and thinking. The JH can be seen as a rational system

that affects the experiential system or the IM. From this perspective, when the rational system evolved, human consciousness and culture began to affect the experience of self-esteem. In other words, when certain behaviors led to changes in self-esteem, people became able to think about and accordingly alter those behaviors that led to changes in self-esteem. Furthermore, as culture evolved, people also had the ability to think about the cultural justification of and expression of emotions processed by the experiential system. For instance, when people's social influence increased, and as a result positive emotion increased, the justification of self-enhancement may have begun to influence individual expression of self-esteem.

In the current work, the JH is essential in understanding how self-consciousness and culture influence the expression of self-esteem. The JH actually gives us a more complete picture of human self-esteem than previous theories like sociometer theory. Henriques (in press) argues that, together, the four pieces – The ToK system, BIT, the IM, and the JH – provide a new metatheoretical frame that can assimilate and integrate findings in psychology from diverse areas and make novel predictions. The present work applies this lens to the relationship between social influence and self-esteem and compares and contrasts it with Leary's formulation.

Self-esteem and Social Influence through the Lens of the Unified Theory

HUTP agrees with key elements of Leary's theory, such as the idea that relational value, which Henriques calls social influence, should connect directly to self-esteem. Before discussing this connection to self-esteem however, an explanation of the relationship between Leary's notion of relational value and Henriques' notion of social influence is necessary. There appears to be much overlap between these two constructs,

even in the way they are defined. For instance, as mentioned previously, Leary (2006) refers to relational value as the degree to which a person regards his or her relationship with another individual as valuable or important and Henriques defines social influence as the capacity to get other individuals to act in accordance with one's interests (Henriques & Stout, in press). Since someone with high relational value in the eyes of other people should be able to get others to act in accordance with his/her interests more easily, they could be seen as having high social influence. In other words it can be complicated to parse out the differences between social influence and relational value. Social influence is often thought of as being synonymous with dominance; however, according to Henriques, and as mentioned above from the perspective of the IM, it is achieved through a healthy balance of dominance and affiliation and autonomy and dependency. For example, an infant can have a substantial amount of social influence over its parents because of its dependency and the love its parents have for it. Thus, since relational value is seen as a more horizontal way of influencing people, at a conceptual level relational value and social influence have much in common.

At an empirical level, Leary conducted a study, the findings of which seem to imply that social influence overlaps a great deal with his notion of relational value. In fact, while Henriques was theorizing that social influence is typically obtained by two processes, dominance and affiliation (see Figure 1), Leary added validity to this notion through an empirical study where the findings suggested that two processes, dominance and acceptance, were mediated by relational value (Leary, 2001). Ever since this study, Leary has referred to self-esteem as a gauge of a continuum of relational value with high and low relational value at each end point which sounds very similar to Henriques

continuum of social influence with end points of high and low social influence. Although Leary began to speak of self-esteem as a gauge of relational value, he used five different measures in the above study, which measure different dimensions of social acceptance rather than relational value. Since there is no single measure that seems to cover the construct of relational value, it would be extremely difficult to determine what other factors might account for self-esteem above and beyond relational value. However, since Henriques has developed a measure of social influence with good psychometric properties (Henriques, 2011), this measure might help sort out what other variables might affect self-esteem when controlling for social influence. Therefore, for the purpose of this study, relational value and social influence will be seen as one and the same and the focus will be the dimension of social influence as conceptualized by the IM.

As explained above, the emotions surrounding the IM depict how people navigate their environment via an emotion feedback system. Similar to sociometer theory, before self-consciousness evolved, this system was “experiential”, based solely on emotion feedback. Hence, when people had high influence they experienced feedback in the form of emotions of joy and pleasure, this caused them to seek high influence in future interactions. On the other hand, when people experienced negative emotions it was an indicator that they were experiencing low influence and there was a tendency to avoid this state. As a result high and low influence, became associated with high and low self-esteem.

The IM would make similar predictions about self-esteem that sociometer theory would make. For instance, in accordance with sociometer theory that posits that self-esteem is a gauge of our relational value with acceptance at one end of the continuum and

rejection at the other, the IM would posit that self-esteem is a gauge of our social influence with high influence at one end of the continuum and low influence at the other end. While the IM itself relates fairly well with sociometer theory, as explained earlier, in and of itself it doesn't describe how self-consciousness would have changed the functioning of self-esteem. However, with its formulation of the JH, HUTP makes explicit how self-consciousness and culture might affect self-esteem.

As mentioned above the JH posits a justification or "reasoning", self-consciousness system layered on top of our "experiential" or affective system (the IM). From the perspective of HUTP, sociometer theory is purely an experiential or affective conceptualization of self-esteem. Hence, the question arises, "what would have happened to self-esteem after self-consciousness evolved?" According to HUTP, self-consciousness functions as a justification system that 'downloads' justification narratives of one's cultural context and uses those narratives to navigate the social environment. While Henriques agrees with Leary that self-esteem will depend largely on social influence/relational value, his theory leads further to the prediction that the nature of justification narratives across cultures will impact the expression of self-esteem, regardless of social influence pressures.

Evidence for this idea can be seen in cross cultural research on self-serving biases. The literature on self-serving biases states that people seek to explain events in a way that will reflect them in a positive rather than negative light. But the question arises, how would this translate to a collectivistic culture that emphasizes humility and communal values as opposed to an individualistic culture which tends to legitimize pride and self-enhancement? The research shows that people in more individualistic cultures engage in

more self-serving biases than those in more communal, collectivistic cultures (Mezulis, Abramson, Hyde, & Hankin, 2004). From a JH perspective this can be explained by the fact that people born into a cultural context that emphasizes the group or collective as the primary unit of functioning will have a different justification system than those born into a context that emphasizes the individual. Hence, Henriques' classifies the self-conscious system as an organ of culture that is markedly shaped by experience and cultural context (Henriques, in press).

Drawing on the research on self-serving biases, predictions arise regarding the cross cultural expression of self-esteem. People born into an individualistic culture that reinforces self-serving biases should also tend to self-report higher self-esteem than people born into a collectivistic culture that reinforces humility and deference. HUTP, with its conceptualization of the IM and the JH, makes explicit why we should see a difference in the expression of self-esteem across cultures. Drawing solely on an IM or sociometer perspective, people in individualistic cultures will not necessarily have different levels of self-esteem than those in collectivistic cultures. This is because people in both cultures should have a motive to maintain social influence. The only difference is that each culture will have different social cues or qualities that are socially desirable, and that will thus lead to social influence. For instance, in a collectivistic culture, qualities like humility and deference will lead to social influence and thus, maintenance of self-esteem in that culture. In contrast, in a more individualistic culture, qualities like pride and individualism will lead to social influence and thus, maintenance of self-esteem in that culture.

However, the JH makes explicit how different cultures' justification systems might lead people to self-report various levels of self-esteem regardless of social influence pressures. Theoretically speaking if one could take social influence out of the equation, people born into a culture that encourages self-serving biases should self-report higher self-esteem as a function of the justification narratives their culture provides them with. In contrast, controlling for social influence, people born into a culture that is less conducive to self-serving biases should self-report lower self-esteem as function of what their culture tells them is justified. Thus, HUTP predicts that the nature of the cultural justification systems in which an individual lives will have a moderating influence on self-esteem, after controlling for social influence.

Self-Esteem and Socialized Gender Roles

The current study will examine the predicted impact of socialized gender roles on self-esteem. Researchers have long noted gender differences in self-concepts or self-construals (Guimond et al., 2006; Josephs, Markus, & Tafarodi, 1992). Recent studies have shown that women exhibit more relational interdependence, whereas men exhibit more independence (see Cross, Bacon, & Morris, 2000; Gabriel & Gardner, 1999; Gardner, Gabriel, & Hochschild, 2002; Kashima et al., 2004; Kimmelmeier & Oyserman, 2001b). For example several studies have shown that men are more motivated toward self-enhancement and self-assertion (Heine, Lehman, Markus, & Kitayama, 1999) and that even from a young age they tend to boast about their abilities more than girls (Maccoby & Jacklin, 1974). Furthermore, Ehrlinger and Dunning (2003) showed that even though male and female college students scored equally on a scientific reasoning test, females underestimated their performance more than males. Yet another study

supported the hypothesis that female college students tend to be more modest than males (Cross & Madson, 1997).

Consistent with the JH, gender self-construals have been found to be largely dependent on gender stereotypes (Guimond, Chatard, Martinot, Crisp, & Redersdorff, 2006). In other words, research has shown that the social beliefs and values (which can also be classified as cultural stereotypes) about gender in a given context, moderate male and female self-construal. Furthermore, Guimond et al. (2006) have shown that these gender self-construals can be reliably altered when the framework or context of what is acceptable is altered. In other words, as the JH would predict, a person's gender self-construal is dependent at least in part upon unique cultural context.

Other researchers have additionally posited that men and women diverge in how they conceptualize themselves in relation to others (self-schemas) and how much they believe they are separate from or connected to others. These researchers also examined how gender conceptualization has direct bearing on men's and women's expression of self-esteem (Josephs et al., 1992). Specifically, data supported the hypothesis that women develop a more "*collectivist, ensembled, or connected*" self-schema. In other words, women tend to see themselves more in relation to others and as being a part of others. On the other hand, data showed that men develop a more "*individualist, independent, or autonomous*" self schema, meaning they define themselves more as being separate from others, rather than connected (Josephs et al., 1992).

These gender differences in self-schemas are hypothesized to have developed in a way that would be predicted by the JH. For instance, theorists have posited that men tend to be more individualistic and women more collectivistic because of early socialization

processes with their mother. Research has shown that young girls are encouraged to identify with and stay close to their mother, whereas young boys are socialized to separate and eventually become more independent from their mothers at an earlier age than girls (Chodorow, 1978). Other research has shown that the perception that women generally occupy a less powerful position in society when compared to men can lead to diverging self-schemas (Miller, 1986). Finally, Bakan (1966) has shown that from birth, men and women are assigned different roles of agency and communion due to biological sex differences. Each of these explanations are supported by the JH, as each of them explain how self-schemas develop due to justification systems that people are born in and socialized within.

Josephs et al. (1992) further showed that self-esteem was based on gender self-schema. In other words they showed that a positive view of the self was not fixed but depended on what was important or harmonious with the self-schema. They found that for the most part, men's self-esteem depended more upon being independent, autonomous, and better than others, whereas women's self-esteem depended more upon being connected to, attuned to, and generally interdependent with others. Interestingly, these findings are fairly congruent with what sociometer theory and the IM would predict. The qualities that men's and women's self-esteem depend upon should be those that they perceive would maximize social influence. Thus, men will have higher self-esteem when they are more autonomous because that is what they perceive as bringing them the most social influence. In contrast, women will have higher self-esteem when they are more connected with others, because that is what they perceive will maximize their social influence. However, the question the current study seeks to answer is: do the differing

justification systems that men and women are exposed to influence the expression of self-esteem above and beyond these social influence pressures? In other words if social influence could be held equal across gender would the nature of each genders self-schema be biased toward or against self-esteem?

Self-esteem in Russians and Americans

The justification systems or worldviews of collectivism and individualism are also often used to differentiate cultures or societies throughout the world today. For example, people in western countries such as the United States, or those that make up Western Europe are generally seen as more individualistic or as defining themselves as separate, autonomous individuals. On the contrary, people in Eastern countries such as China, Japan, Russia, and India are generally seen as having a more collectivistic worldview, meaning they see themselves more in terms of their relationship to others and generally have ideologies and norms that emphasize sacrificing the self for the good of the whole. The goal of the current study is to attempt to empirically demonstrate the effect of such justification systems on self-esteem.

For the purposes of this study, Russia will be classified as a collectivistic culture and the United States as a more individualistic culture. There are several reasons Russian people might be considered more collectivistic, interdependent, and relational than Americans. For instance, Anna Wierzbicka (1997) provides an analysis of the Russian language that supports the idea that Russians are more interdependent and relational than Americans. She points out that Russians have more words than Americans for the word “friend” and more adjectives to describe different levels of friendships. This greater variety of words in the Russian language may have evolved out of Russians’ greater need

for affiliation and intense human relationships (Smith, 1976). Furthermore, sociological surveys indicate that Russians may be more relational than Americans. For example, Soviet sociologist Kon (1987) found that whereas Americans ranked friendship as tenth on a list of values, Russians ranked it as sixth. Additionally, other studies found that Russian youth placed friendship as their number one priority in life (cf. Shlapentokh, 1989).

Other researchers have linked Russians great need for relationships to the political and social state of Russians under centuries of tsarist rule. They have linked a lack of political freedom and distrust in leaders to a greater need for close human relationships. According to Bauer, Inkles and Kluckhohn (1956), under the more recent Soviet regime, Russians came to “value warm interpersonal relations to an unusually high degree”. They remarked:

Virtually all aspects of the Soviet regime’s pattern of operation seem calculated to interfere with the satisfaction of the Russians’ need for affiliation. The breakup of the old village community and its replacement by the more formal bureaucratic and impersonal collective farm is perhaps the most outstanding example, but it is only one of many. The disruption and subordination of the traditional family group, the church, the independent professional associations, and the trade unions are other cases in point. Additional effects of a marked kind are created by the strains which the regime has created on friendship relations between two or more individuals, by its persistent programs of political surveillance, its encouragement and elaboration of the process of denunciation, and its assumptions about mutual responsibility for the failings of particular individuals. (p. 139)

Although communism has since fallen, most would agree that such recent history of political suppression in Russia is in stark contrast to the political freedoms people of the United States have enjoyed. In fact, the United States was established specifically by declaring independence from a British monarchy that early colonists believed was repressing them and depriving them of their individual rights. Thus, in a democracy that allows for more independence and agency, Americans may not have as great of a need for intense human relationships as Russians. Additionally, the idea of capitalism, where the economy is run by Adam Smith's "invisible hand" seems in stark contrast to communism, where the economy is run by the government and all people are given their equal portion. As a result of U.S. political and economic history, U.S. culture can be classified as more individualistic. In fact, in a study of 50 countries, Hofstede (1983) found that U.S. participants ranked highest on individualism. A more individualistic U.S. culture may condition Americans to be more independent, autonomous, and agentic than Russians whose history of a collectivistic culture conditioned them to be more interdependent, submissive and relational.

These differences in American and Russian culture may have implications for the self-report of self-esteem. In fact recent studies have indicated differences in the manifestation of self-serving biases between collectivistic cultures and individualistic cultures. As mentioned above research shows that people in individualistic cultures engage in more self-serving biases than people in communal, collectivistic cultures (Mezulis, Abramson, Hyde, & Hankin, 2004). While the research on self-enhancement in Russia is sparse, cross-cultural studies of self-enhancement have indicated that the Japanese, who are generally considered to be collectivist, do not engage in self-

enhancement like Americans and Europeans do and that the Japanese are more self-critical and less likely to compensate for failure by inflating their egos (Heine, Lehman, Markus, & Kitayama, 1999; Heine, Kitayama, & Lehman, 2001; Heine & Renshaw, 2002; Heine, Takata, & Lehman, 2000). As mentioned above, sociometer theory argues that the desire for relational value is universal; but the criteria by which one's relational value fluctuates might change from culture to culture depending on what is socially acceptable (Leary, 2006).

While HUTP agrees that the desire for social influence/relational value is universal, it also takes into account the cultural justification of self-enhancement. For example, according to HUTP, because American culture tends to legitimize pride and self-enhancement, after controlling for social influence, Americans' self-esteem should be higher than the self-esteem of those in more collectivistic countries like Russia where humility and communal values are legitimized and valued more. In fact, several researchers have identified Russians as being collectivistic rather than individualistic. For example, two studies by Smith, Trompenaars and Dugan (1995) and by Tower, Kelly, and Richards (1997) found Russians to be more collectivistic than individualistic. Furthermore, Searle-White (1996) found Russians to be less protective of their personal sphere than Americans. Additionally, a more recent cross cultural study conducted by Roeder found Russian participants to be more interdependent and less independent than German participants (as cited in Kuhnen et al., 2007). The question the current study seeks to answer is how do justification systems that Russians and Americans are exposed to influence the expression of self-esteem above and beyond social influence?

Hypotheses

The goal of this research is to examine the relationship between self-esteem and social influence and the moderating role that socialization and the context of cultural justification play on individual self-esteem. The current study consists of two studies. Study 1 first examined the relationship between social influence and self-esteem in American males and females. Study 2 examined this relationship in Russians and Americans. Based on sociometer theory and the IM, the hypothesis is put forth that high and low social influence should account for a large amount of variance in self-esteem in both males and females and in Russian and American samples. Furthermore, stemming from the theoretical analysis on the relationship between self-esteem and social influence, specific predictions about how socialized gender roles might moderate self-esteem in males and females can be made. As indicated above men and women will not necessarily score differently on self-esteem because both men and women have the motivation to maintain social influence. In other words their self-esteem will be derived in ways that are conducive to their self-concept, and thus that they perceive as maximizing their social influence. However, as self-esteem itself is a variable that encourages self-enhancement, the hypothesis was made that when controlling for social influence men should score higher than women on self-esteem.

Furthermore, based on the theories outlined above, one would expect to see differences in the self-report of self-esteem between Russians and Americans after controlling for social influence. Given Russians are born into a justification system that tends to emphasize the self in relation to others as opposed to an American justification system that tends to emphasize the self as independent from others, the hypothesis was

put forth that Russians will be less self-enhancing than Americans, and will thus self-report lower self-esteem than Americans, after controlling for social influence.

Chapter 3:

Study 1: Gender Differences in Self-Esteem Apart from Social Influence

Method

Participant demographics.

The initial sample consisted of 500 students from a large mid-eastern university who participated to receive research credit for an introductory undergraduate psychology course. Six participants were deleted from the database for missing data, and the participants included in the analyses were 191 males and 303 females between the ages of 18 and 23 ($M = 19$ years, $SD = .97$). Approximately ninety percent of the participants were white Caucasian freshmen or sophomores, with relatively few minorities represented (21 Asian American, 17 Hispanic, and 13 Black participants).

Analysis.

An analysis of covariance was conducted with one categorical independent variable, and two continuous covariates. The independent variable was gender and the dependent variable was self-esteem. The continuous covariates for were high and low social influence.

Measures.

The covariates were measured using the high social influence and low social influence subscales (see appendix) of the Influence Matrix Social Motivation Scale (IMSMS). As mentioned above, one might consider social influence a one-dimensional construct (in fact, a single measure of social influence could be obtained by subtracting low from high social influence scales), but the IM conceives of high influence and low influence as somewhat independent constructs contributing to self-esteem. Hence, to stay

true to the theoretical foundation, both subscales were used as covariates.

The IMSMS is a measure consisting of eight subscales developed by Henriques and colleagues (Henriques, Tabit, & Cozen, 2011). The subscales used for this study measured high influence using items such as “I am an admired person” and “I have many close, meaningful relationships”, and low influence through items like “Other people often ignore me”, and “I don’t have as many friends as I would like”. Participants responded to these items on a 1-5 likert-type scale (1= *strongly disagree*, 5= *strongly agree*).

The IMSMS demonstrates good internal psychometrics and yields results consistent with the theory (Henriques, 2011). For example, as expected high and low influence are negatively correlated with one another. Additionally, the IM as a whole correlates as expected with other prominent theories in psychology such as with the Big Five personality factors and with gender differences in relational styles and strivings. In the present study, Cronbach’s Alpha for the Social Influence subscales were .834 for High Influence and .834 for Low Influence. Although there may be other measures of social influence, using the IMSMS subscales is essential in answering current research questions as it was designed to relate directly to key aspects of HUTP.

The dependent variable was measured using the Rosenberg Self-esteem Scale (RSES) (Rosenberg, 1965), a widely used measure of trait self-esteem in the field (see appendix). Participants responded to ten items on a 1-4 likert-type scale (1=*disagree strongly*, 4= *agree strongly*). The RSES was used since it is the most widely used measure of trait self-esteem, and it is the measure most typically used by Leary.

Cronbach's alpha for the RSES ranges from .77 (Dobson et al., 1977) to .88 (Fleming and Courtney, 1984). The Cronbach's alpha for the current sample was .88.

Procedures

The participants were recruited via an online subject participant pool maintained by the university. The website contained a digital informed consent document with a link to the measures that participants could click on if they agreed to accept the risks and benefits of participation. By choosing to participate and complete the survey, participants received research credit requirements for their introductory psychology course.

Participants completed the three online measures as part of a larger online survey.

The intended size of the sample was 400 (200 females and 200 males). This goal was exceeded; thus, ensuring precision of the ANCOVA results. After completion of the survey, participants were given the contact information of the principal investigators and told they could contact them if they had any questions or wanted a report of the results when they came available.

Results from Study 1

Descriptive statistics & ancillary analyses.

Before conducting an ANCOVA, descriptive statistics were obtained and ancillary analyses performed. Mean high and low influence scores and mean self-esteem scores were obtained for American males and females (see Table 1).

Independent samples t-tests were performed to compare the groups. American men and women did not score significantly different on self-esteem $t(1) = 1.86, p = .063$. Additionally, in accordance with IM theory that one of the universal motives people have is to maintain social influence, males and females did not differ significantly on high and

low influence, $t(1) = -1.74$, $p = .083$ for high influence and $t(1) = 1.94$, $p = .053$ for low influence. The mean differences for men and women on self-esteem and social influence subscales were neither statistically significant, nor practically significant. Given the less than 1 point difference between both mean differences on a RSES scale that ranges from 1-40 and a High Influence scale that ranges from 1- 50 it was determined that the differences were not practically significant. In addition to examining the mean differences, Cohen's d was calculated to obtain a more objective result. However, the effect size was small for self-esteem and high and low social influence, meaning the difference between group means was negligible. This further supports the decision that the differences were not practically significant.

A correlation matrix for the relationship between self-esteem, and high and low influence for American males and females was also obtained. Correlations emerged as expected with high influence being negatively correlated with low influence and self-esteem being negatively correlated with low influence and positively correlated with high influence (see Table 2).

Assumptions.

To ensure the data was suitable for an ANCOVA, the assumptions of normality, independence of observations, homogeneity of variance, homogeneity of regression slopes, and independence of the covariate and the grouping variable were examined. To test for normality of the dependent variable, skewness and kurtosis were obtained for the self-esteem variable and values fell between the allowed perimeters of -3 to 3. To test homogeneity of variance, Levene's test was obtained and the assumption was met. Specifically, the variance of self-esteem across American males and females was equal, F

(1,492) = .006, *ns*. The data were independent as each score on the Influence Subscales and the RSES was from a unique individual in each group. To determine homogeneity of regression slopes the interaction effect was examined between American males and females. The relationship between high and low social influence and self-esteem for American males and females did not differ, $F(1,488) = .000$, $MSE = 14.06$, $p = .99$, partial $\eta^2 = .00$ for high influence; $F(1,488) = .716$, $MSE = 14.06$, $p = .398$, partial $\eta^2 = .001$ for low influence. In other words, as expected, the relationship between self-esteem and social influence was positive and the same for both American males and females. The assumption of independence of the covariate and grouping variable was tested by performing two independent t-tests with gender as the independent variable and high and low social influence subscale scores as dependent variables. This assumption was met as the analyses were nonsignificant, meaning that whether one is male or female is not related to social influence.

Main analysis.

The ANCOVA used to assess differences in self-esteem based on gender once controlling for social influence in the American sample supported predictions. To assess the relationship between social influence and self-esteem, a model was fit to the data that only included high and low social influence as predictors of self-esteem. As expected these covariates had significant relationships with self-esteem ($F(1,490) = 94.68$, $p < .01$, for high influence, and $F(1,490) = 69.21$, $p < .01$ for low influence). Together high and low social influence accounted for 41 percent of the variance in self-esteem for American males and females. Thus, as expected, in accordance with sociometer theory and the IM, a large portion of the variance in self-esteem can be accounted for by social influence.

The next model fit to the data was the ANCOVA model, where gender, high social influence and low social influence were entered as predictors of self-esteem. The results are provided in Table 3. Although the independent t-test results showed that gender was not able to significantly predict self-esteem, the ANCOVA model indicates that when social influence is added to the model, gender is a significant predictor of self-esteem $F(1,490)=18.50, p<.01$. Including gender in the model increased the percentage of explained variance in self-esteem by 2.2%, indicating that the strength of the relationship between gender and self-esteem, once controlling for social influence, was minor.

Although the difference between males and females in average self-esteem once controlling for social influence is small, the direction of the difference supports the *a priori* hypothesis. The adjusted means for self-esteem scores of men and women indicate that on average, men score significantly higher ($M = 31.87$) than women ($M = 30.37$) after controlling for social influence. This trend for men to score higher than women can be further supported by comparing Cohen's *d* before and after controlling for social influence. For example, Cohen's *d* for the unadjusted means was .171, whereas for the adjusted means it was .301. A larger Cohen's *d* for the adjusted means is indicative that men will tend to score higher than women on self-esteem when controlling for social influence.

Study 1 Discussion

The findings from study 1 support the hypothesis that American men would score higher than American women on self-esteem after controlling for social influence. As predicted by HUTP, socialized gender roles may play an additional minor, yet significant role above and beyond what social influence played in self-report of self-esteem in

American males and females. This may be because American men are socialized to be more independent and self-enhancing and women are socialized to be more interdependent and communal, thus resulting in a tendency for men to self-report higher than females on self-esteem when controlling for social influence.

There were several limitations to this study, however. First, while a large sample size increases the chances of finding a significant effect, the small relationship between gender and self-esteem after controlling for social influence indicates that finding a significant effect could have been due largely in part, to a large sample size. Furthermore, this study only examines a very specific construct (gender self-concept or self-construal) in a very specific context (1st – 2nd year American college students). Thus while the findings provide preliminary evidence for HUTP's predictions, they are by no means conclusive. The second study sought to extend the examination across cultures, specifically to Russian and American cultures, to determine whether the predictions HUTP makes regarding self-esteem are upheld in yet another context.

Chapter 4:

Study 2: Self-esteem in Russians and Americans Apart from Social Influence

Method

Participant demographics.

The sample consisted of 631 American and Russian college students. The American sample was the same sample described above, while the Russian sample consisted of 137 Russian students at a Central Russian University who volunteered to participate in the study. Ten participants were deleted from the database for missing data. Participants in the Russian sample were 101 females and 26 males between the ages of 17 and 23 ($M = 20$, $SD = .89$). Approximately eighty percent of the participants were either sophomores or seniors, while the remaining twenty percent identified themselves as either freshmen or juniors. The sample was overwhelmingly Russian with 123 participants identifying themselves as Russian, two as Ukrainian, one as Belorussian, and one as Armenian.

Analysis.

An analysis of covariance was conducted with one categorical independent variable, and two continuous covariates. The independent variable was country (Russia and America) and the dependent variable was again self-esteem. The continuous covariates were high and low social influence.

Measures.

As in study 1, the covariates were measured using the high and low social influence subscales (see Appendix) of the IMSMS. Cronbach's alpha for the social influence subscales in the Russian sample were .81 for high influence and .82 for low

influence. The dependent variable was again measured using the RSES (Rosenberg, 1965). The Cronbach's alpha for the Russian sample was .76.

Procedures

The American participants were recruited as explained above. The Russian participants were recruited via in-class announcements. Interested Russian participants reported to a classroom at specified times and were given informed consent forms to sign before being administered the three translated measures in hard copy. These measures were given as part of a larger battery of measures.

The intended size of the Russian sample was 150 (50 males and 100 females) in order to ensure accuracy of the ANCOVA. This goal was not met as not enough males volunteered for the study. After completion of the survey, participants were given the contact information of the principal investigators and told they could contact them if they had any questions or wanted a report of the results when they came available.

Results from Study 2

Descriptive statistics and ancillary analyses.

Before conducting an ANCOVA, descriptive statistics were obtained and ancillary analyses performed. Mean high and low influence scores and mean self-esteem scores were obtained for Russians and Americans (see Table 1). Independent samples *t*-tests were performed to compare the groups. Americans and Russians scored significantly different on self-esteem $t(1,627) = 2.86, p < .01$ and high social influence $t(1,624) = 5.77, p < .01$, with Americans scoring higher on both variables. However they did not score significantly different on low social influence $t(1,626) = -1.51, p = .132$. While the cross-cultural difference in self-esteem does not appear to be practically significant given it is

only a one point difference on a scale from 1-40, the difference in high influence appears otherwise. In addition to examining the mean differences, Cohen's d was calculated to obtain a more objective result. While the Cohen's d for the difference in self-esteem was negligible, a Cohen's d of .56 was obtained for high social influence and according to Cohen (1988) this is a medium effect size and means that the group means on high influence differ by .6 standard deviations. Hence, this difference appears to be practically significant.

Correlation matrices for the relationship between self-esteem, and high and low influence for country were also obtained. Correlations emerged as expected with high influence being negatively correlated with low influence and self-esteem being negatively correlated with low influence and positively correlated with high influence (see Table 4).

Assumptions.

To ensure the data was suitable for an ANCOVA, the assumptions of normality, independence of the observations, homogeneity of variance, homogeneity of regression slopes, and independence of the covariate and the grouping variable were examined for each variable. To test for normality, skewness and kurtosis were obtained and values fell between the allowed perimeters of -3 to 3 for the self-esteem variable. To test homogeneity of variance, Levene's test was obtained and the assumption was met. Specifically, the variance of self-esteem across Russians and Americans was equal, $F(1,619) = .925, ns$. The data were independent as each score on the Influence Subscales and the RSES was from a unique individual in each group. To determine homogeneity of regression slopes the interaction effect was examined between Russians and Americans. The relationship between high and low social influence and self-esteem did not differ for

Russians and Americans, $F(1,615) = 2.136$, $MSE = 14.05$, $p = .144$, partial $\eta^2 = .003$ for high influence; $F(1,615) = 2.523$, $MSE = 14.05$, $p = .113$, partial $\eta^2 = .004$ for low influence. In other words, as expected, the relationship between self-esteem and social influence was positive and the same for both Russians and Americans. The assumption of independence of the covariate and grouping variable was tested by performing two independent t-tests with country as independent variables and high and low social influence scores as dependent variables. While the assumption was upheld for low influence for Americans and Russians, it was not upheld for high influence, as indicated by the t-test comparing country on high influence above. Fortunately, however, ANCOVA is robust to the violation of this assumption.

Main analysis.

The hypothesis that Americans would score higher on self-esteem when controlling for social influence was not supported (see Table 5). As in the American sample, the covariates had significant relationships with self-esteem, $F(1,617) = 110.67$, $p < .01$, for high influence and $F(1,617) = 75.69$, $p < .01$, for low influence. Similar to study 1, high and low social influence subscales accounted for 39.5 percent of the variance in Rosenberg self-esteem score for Russians and Americans. Nonetheless, the ANCOVA including country was not significant, $F(1,617) = .010$, $p = .919$. In other words, Americans did not score significantly higher than Russians on self-esteem after controlling for social influence. Indeed, including country in the model did not increase the percentage of variance explained in self-esteem, indicating no relationship between country and self-esteem. In fact, while Americans ($M = 30.95$) scored slightly higher than Russians ($M = 29.62$) before controlling for social influence, the gap narrowed after

controlling for social influence with Americans ($M = 30.68$) and Russians ($M = 30.66$) scoring nearly identical. Furthermore, Cohen's d for the unadjusted means was .277, whereas for the adjusted means it was .004. A smaller Cohen's d after controlling for social influence is indicative of a trend for Russian self-esteem to increase and American self-esteem to decrease after controlling social influence.

Interestingly however, while no hypothesis was made regarding Russian gender differences, an ANCOVA examining the difference between Russian males and females after controlling for social influence was approaching significance $F(1,123)=1.89, p = .172$. Evidence for the fact that this difference is approaching significance can be seen by examining the adjusted means. While the mean self-esteem scores for Russian males ($M = 29.62$) and females ($M = 29.62$) were equal before controlling for social influence, the adjusted mean score for males (30.49) was higher than the adjusted mean score for females (29.40), after controlling for social influence. Cohen's d also increased from 0 before controlling for social influence to .27 after controlling for social influence.

Study 2 Discussion

The findings from study 2 did not support the hypothesis that Americans would score higher than Russians after controlling for social influence. Hence, HUTP's prediction that cultural socialization will play an additional minor, yet significant role above and beyond what social influence will play when comparing Russian and American self-report of self-esteem, was not supported. Plausible explanations for this failure to support study 2's hypothesis are that HUTP's formulation for self-esteem is not valid; Russian culture does not socialize Russians to be less self-enhancing than

Americans; the Russian sample for his study was not representative of the population as a whole; and measurement error. Each of these explanations will be expanded upon below.

While the hypothesis about Russian and American differences in self-esteem was not supported, trends in gender differences in self-esteem were observed between Russian males and females. Hence, while study 2 does not provide further evidence that HUTP can provide a more comprehensive picture of self-esteem across the cultural beliefs and values of different countries, it does provide further support that HUTP might give a more comprehensive understanding of gender differences in self-esteem perhaps even across cultures.

Chapter 5: General Discussion

The purpose of this line of research was to examine the relationship between self-esteem and social influence and the moderating role that socialization and the context of justification play on individual self-esteem. Based on sociometer theory and the IM, the hypothesis was posited that high and low social influence should account for a large amount of variance in self-esteem in both Russian and American samples. Study 1 examined the relationship between social influence and self-esteem in American men and women and the hypothesis was made that while men and women would not necessarily score differently on self-esteem, after controlling for social influence men would score higher than women on self-esteem. Study 2 examined this relationship in Russians and Americans. Based on a theoretical and empirical background, the influence of different cultural justification systems on self-esteem was examined. Again, self-esteem was not necessarily hypothesized to be different between Russians and Americans before controlling for social influence. However, given the idea that Russians may be socialized in a more collectivistic way that tends to emphasize the self in relation to others as opposed to Americans who may be socialized in a more individualistic way that tends to emphasize the self as independent from others, the hypothesis was put forth that Russians will be less self-enhancing than Americans, and will thus self-report lower self-esteem than Americans after controlling for social influence.

Overall, the hypothesis that American men should score higher than American women on self-esteem after controlling for social influence was supported, while the hypothesis that Americans would score higher than Russians after controlling for social influence was not supported. Thus, it appears that HUTP and its conception of the JH and

the IM does provide us with a more complete understanding of the relationship between gender and self-esteem in America and possibly in Russia, but it may not provide a clearer picture of the relationship between country and self-esteem (at least when comparing Russians and Americans). Furthermore, as theorized by sociometer theory and the influence matrix, self-esteem appears to largely be a gauge of social influence or relational value (as Leary labels it) across cultures and gender. However, while a large portion of the variance in self-esteem could be accounted for by social influence in both studies (roughly 40 percent) 60 percent of the variance remains, and may be explained by other variables, such as the justification of self-enhancement.

As indicated by the findings from both studies, not only do men and women appear to be socialized to express self-esteem differently in America, but the same trend appears to be found in Russia. While these studies do not answer the question as to why men score higher than women on self-esteem when controlling for social influence, the theories about gender self-construals and self-schemas explained above provide plausible explanations for these findings. Previous research that men tend to be more motivated toward self-enhancement and self-assertion, whereas women tend to be more modest, and that these motivations are heavily influenced by gender stereotypes would support the gender difference in self-esteem discovered in this sample. Since self-esteem seems to be largely connected to social influence, by controlling for social influence, we could be seeing the residual effects of gender stereotypes. While it is true that stereotypes are not necessarily representative of men's and women's true expression of self-esteem, studies have shown that stereotypes do influence people's behavior and their identities (Marx & Goff, 2005; McGlone, & Aronson, 2006; Merton, 1968; Snyder, 1984; Steele & Aronson,

1995). Furthermore, according to HUTP gender stereotypes are considered a type of cultural justification system that would influence male and female self-esteem.

Furthermore, as explained above, gender self-schemas influence expression of self-esteem. While the findings from this study do not provide evidence for whether these differences in gender self-schemas are due to socialization processes, to different social roles that men and women occupy in society, or to actual biological differences; they do provide further support that self-schemas do influence self-esteem after controlling for social influence. In fact, in accordance with research on self-schema, American men and women in this study did not score differently in self-esteem before controlling for social influence. According to the IM, both men and women should be equally motivated to maintain social influence even if by separate processes. However, after controlling for social influence, men scored higher than women on self-esteem most likely because the nature of men's self-schema or justification system (generally more agentic and self-oriented) increased men's self-report of self-esteem. In contrast, after controlling for social influence, women's generally more communal, other-oriented self-schema or justification system lowered women's self-report of self-esteem. Thus, in accordance with HUTP, in accounting for self-esteem across gender, the context of justification may have played an additional role above and beyond what social influence played. These findings provide further evidence for the plausibility of HUTP and its capability to assimilate and integrate various theories to provide a clearer picture of self-esteem in males and females.

The cross-cultural hypothesis that Americans would score higher than Russians on self-esteem after controlling for social influence was not supported. Given the fact that

the expected trend was actually in the opposite direction (Russian and American self-esteem actually becomes more equal after controlling for social influence), we can be fairly certain that the hypothesis was in fact not supported. This could be for several reasons. The first possible reason is that HUTP may be wrong in its prediction that the context of justification plays an additional role above and beyond social influence at least at a Russian-American cross-cultural level. If this is the case, sociometer theory may actually provide us with a more accurate picture of self-esteem and its manifestation across cultures than HUTP. As Leary posited, the desire to be relationally valued and thus to maintain self-esteem should be universal across cultures. The only difference should be in the characteristics that promote relational value across these cultures. Hence, from this perspective, Russians may be more interdependent and less self-enhancing than Americans, but they maintain the same level of social influence by being this way as Americans do by being independent and more self-enhancing. Since sociometer theory suggests that the level social influence/relational value should be synonymous with the level of self-esteem, it's not surprising that Americans and Russians were equal on self-esteem even after controlling for social influence. However, the fact that Leary posits that true self-esteem should be synonymous with perceived relational value, his theory as an explanation for the current findings is unlikely given there was still much variance in self-esteem to be explained after controlling for social influence. One could argue that social influence is not the same construct as relational value, but since there is no measure of relational value, it is difficult to determine this for sure.

A more plausible explanation for the hypothesis not being valid is that Russian culture does not actually suppress expression of self-esteem as theorized, at least in the

sample that was used in the current study. In fact, the hypothesis that Russians would score lower than Americans on self-esteem after controlling for social influence was based more or less on a loose theoretical argument connecting history and cultural beliefs and values which led to an educated guess by the author. The empirical findings leading to the hypothesis were more about Russians having a collectivistic worldview rather than the cultural justification of self-enhancement. While studies have shown that other collectivistic countries like Japan and India seem to rely less on self-enhancement than the West, there is relatively sparse empirical research on Russian self-enhancement. It could be that Russians view self-enhancement and competition in more of a positive light than other collectivistic countries. Indeed, many changes have occurred in the past several decades and Russian collectivism may be outmoded. While Russia has a long history of monarchy followed by communism, the fall of communism and the introduction of the internet has led to drastic changes over the past 20 years. These changes have most likely allowed western ideas and culture to influence Russian culture more than at any other time. Thus, the current study's hypothesis might have been supported had this same experiment been conducted 20 years ago, but not in a more modern, westernized Russian society. Additionally, the hypothesis may not have been supported because the sample was taken from mostly female college students. This may not be representative of the Russian population as a whole, especially since this sample was taken from a Russian university, where students might be more influenced by western individualism and more critical of collectivistic ideas and thinking than mainstream culture. Furthermore, college students may tend to be more confident and

self-enhancing as a function of trying to get through school and present themselves as more employable when they graduate.

Finally, the cross-cultural hypothesis not being supported may have been due to issues in measurement error, translation issues, and response bias. While the fact that acceptable Cronbach's alphas were obtained for all three measures across countries helps rule out this explanation, a more rigorous test of whether the psychometric properties of the scales hold across countries could be acquired using a measurement invariance study. It's very possible that due to problems in translation, different constructs might have been compared in the Russian and American samples, resulting in uninterruptable results. Unfortunately, the measures were not translated back from Russian to English until after the measures had already been administered to Russian participants. Thus, several of the items that were problematic were not able to be corrected. For example, an original item from the Low Influence subscale, "I have a lot of failures relative to my friends and family" was back translated from Russian to English as, "I have a lot of setbacks and failures associated with my friends and family." Furthermore, the translation of the response scales may have affected the way Russians responded compared to Americans. For instance, the response "mixed/neutral" in English was translated as "difficult to say" in Russian. Even if the translation was acceptable, differences in response bias could have influenced the results. For instance, a 5 on a Likert-type scale to Russians might mean something different than a 5 on that same scale to Americans. Thus, justification systems may also affect what numbers people report. Again, a measurement invariance study could give us some indication as to whether response bias is happening.

Limitations

Together, the current studies have several limitations. First, as implied earlier, the findings may not be generalizable to the general population since both samples were taken from a population of young college students. College samples typically don't represent the extremes of the mainstream culture or gender differences. Thus, a sample taken from the general population might have resulted in larger effect sizes and a possible significant difference between Russians and Americans in self-esteem. Also, Rosenberg self-esteem is only a ten item measure that captures only a slice of self-esteem versus a fuller more global conceptualization of self-esteem. For example, Rosenberg self-esteem only seems to capture how one feels about oneself in general. However, a fuller conception of self-esteem might include items that measure self-esteem stemming from competence. For instance, an individual who is able to solve a difficult task or who receives a high IQ score, might have an increase in self-esteem regardless of how they feel about themselves in general. Nonetheless, for the purposes of this study, Rosenberg self-esteem should be that slice of self-esteem that is most sensitive to the justification of self-enhancement. Finally, we cannot be sure that small amount of variance that gender can predict in self-esteem is actually due to the justification of self-enhancement in gender. HUTP would explain the remaining variance in this way, but because no measures of the justification of self-enhancement or gender self-construal were administered, this explanation needs further support.

Chapter 6: Future Research and Conclusion

Future research could look at measuring the justifiability of self-enhancement across gender and country (Russia and America) to see whether this is in fact the reason that men score higher than women on self-esteem after controlling for social influence. Furthermore, by measuring gender socialization or gender self-construal one could test whether this is related to social influence and whether the remaining variance in self-esteem (after controlling for social influence) is related to gender self-construal. If it is, then the plausibility of HUTP's explanation for this remaining variance would be more solid. Also, the results from the back translation of items could be used to create more valid measures to administer to a Russian sample. A think-aloud interview could then be implemented with Russian participants to ensure they are understanding and interpreting the measures in the same way that Americans are. Also, as mentioned above, a measurement invariance study is needed. Finally, the cross-cultural aspect of the study could also be extended to countries that are generally considered more collectivistic than Russia, such as Japan and India.

While the current studies are only exploratory, they do provide promising evidence for the plausibility of HUTP. They can provide us with a more comprehensive picture of gender differences in self-esteem than sociometer theory can. Overall, these studies make it clear that there are other factors that influence self-esteem besides social influence or relational value. Additionally these studies provide preliminary evidence for the role the context of justification plays in expression of self-esteem. However, just how much of a role the context of justification plays and in what contexts it plays a role will need to be determined in future studies.

Appendix A: Instruments

INFLUENCE MATRIX-SOCIAL MOTIVATION

ITEMS BY SUBSCALE

The following set of questions deals with how you feel about yourself and your relationships. Please rank each question on a scale of 1 to 5, with a 1 being strongly disagree and a 5 being strongly agree. Please remember that there are no right or wrong answers.

Strongly Disagree	Disagree	Mixed/Neutral	Agree	Strongly Agree
1	2	3	4	5

High Social Influence

1. I am an admired person.
2. I have many close, meaningful relationships.
3. Other people pay attention to what I have to say.
4. I am well loved.
5. Other people view me as successful.
6. Other people look up to me.
7. I am well-respected by my friends and family
8. I have a lot of influence with my peers.
9. I am secure in my relationships.
10. Other people will make sacrifices for me if I need them to.

Low Social Influence

1. Other people often ignore me.
2. I don't have as many friends as I would like.
3. I have difficulties relating to others.
4. Other people often criticize me.
5. I have a lot of failures relative to my friends and family.
6. I sometimes feel neglected by important people in my life.
7. I don't do as well socially as other people do.
8. I have been criticized and rejected more than most people.
9. My relationships with others are not stable or trustworthy.
10. I generally don't compare well with others on most measures of success.

Rosenberg Self-Esteem Scale

The following is a list of statements dealing with your general feelings about yourself. Please rate following items using the following scale

Disagree strongly 1	Disagree 2	Agree 3	Agree strongly 4
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I feel that I am a person of worth, at least on an equal plane with others.

I feel that I have a number of good qualities.

All in all, I am inclined to feel that I am a failure.

I am able to do things as well as most other people.

I feel I do not have much to be proud of.

I take a positive attitude toward myself.

On the whole, I am satisfied with myself.

I wish I could have more respect for myself.

I certainly feel useless at times.

At times I think I am no good at all.

Appendix B: Tables

Table 1. Means and Standard Deviations of American Males and Females and Russians and Americans across Low Influence, High Influence and Self-esteem.

<u>Independent Variable</u>	<u>Low Influence</u>		<u>High Influence</u>		<u>Self-esteem</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
American Male	24.7	5.63	36.35	4.8	31.47	5.22
American Female	23.7	5.58	37.08	4.34	30.62	4.79
Russian	24.94	6.03	34.16	4.89	29.62	4.09
American	24.09	5.62	36.8	4.57	30.95	4.97

Table 2. Correlation between Rosenberg Self-esteem scores, High Social Influence, and Low Social Influence subscale scores for American males and females.

	<u>Self-esteem</u>	<u>High Social Influence</u>	<u>Low Social Influence</u>
<u>Self-esteem</u>	-----	.568	-.534
<u>High Social Influence</u>	.626	-----	-.529
<u>Low Social Influence</u>	-.615	-.609	-----

Note: Values above the main diagonal are for females; values below the main diagonal are for males. All correlations are significant at the $p < .01$ level.

Table 3. Analysis of Covariance Summary for American Males and Females.

<u>Source</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>R²</u>
High Influence	1328.88	1	1328.88	94.68**	.41
Low Influence	971.38	1	971.38	69.21**	
Gender	259.71	1	259.71	18.50**	.22
Error	6877.43	490	6877.43		

** indicates significance at the $p < .01$ level.

Table 4. Correlation between Rosenberg Self-esteem scores, High Social Influence, and Low Social Influence subscale scores for Americans and Russians.

	<u>Self-esteem</u>	<u>High Social Influence</u>	<u>Low Social Influence</u>
<u>Self-esteem</u>	-----	.470	-.416
<u>High Social Influence</u>	.582	-----	-.390
<u>Low Social Influence</u>	-.555	-.565	-----

Note: Values above the main diagonal are for Russians; values below the main diagonal are for Americans. All correlations are significant at the $p < .01$ level.

Table 5. Analysis of Covariance Summary for Americans and Russians.

Source	Sum of Squares	df	Mean Square	F	R ²
High Influence	1571.11	1	1571.11	110.67**	.395
Low Influence	1074.45	1	1074.45	75.69**	
Country	.15	1	.15	.010	0.00
Error	8759.03	617	14.20		

** Indicates significance at the $p < .01$ level.

Appendix C: Figures

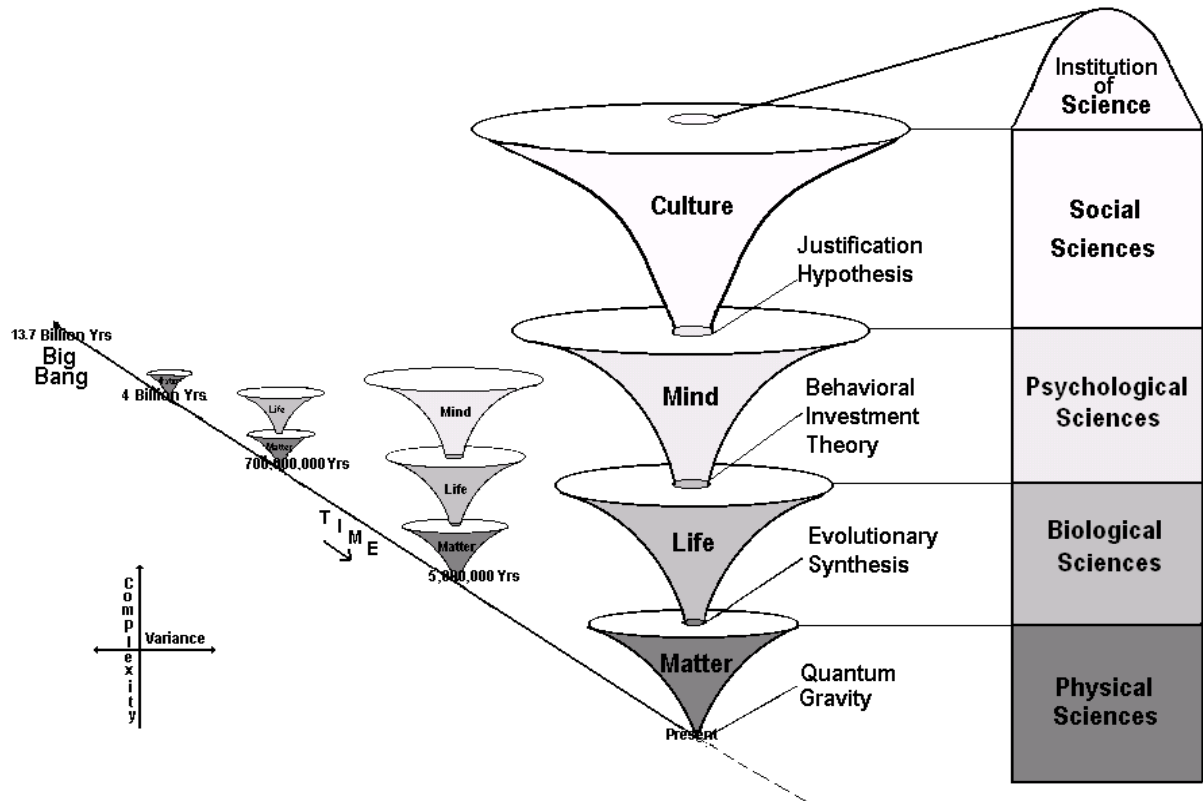
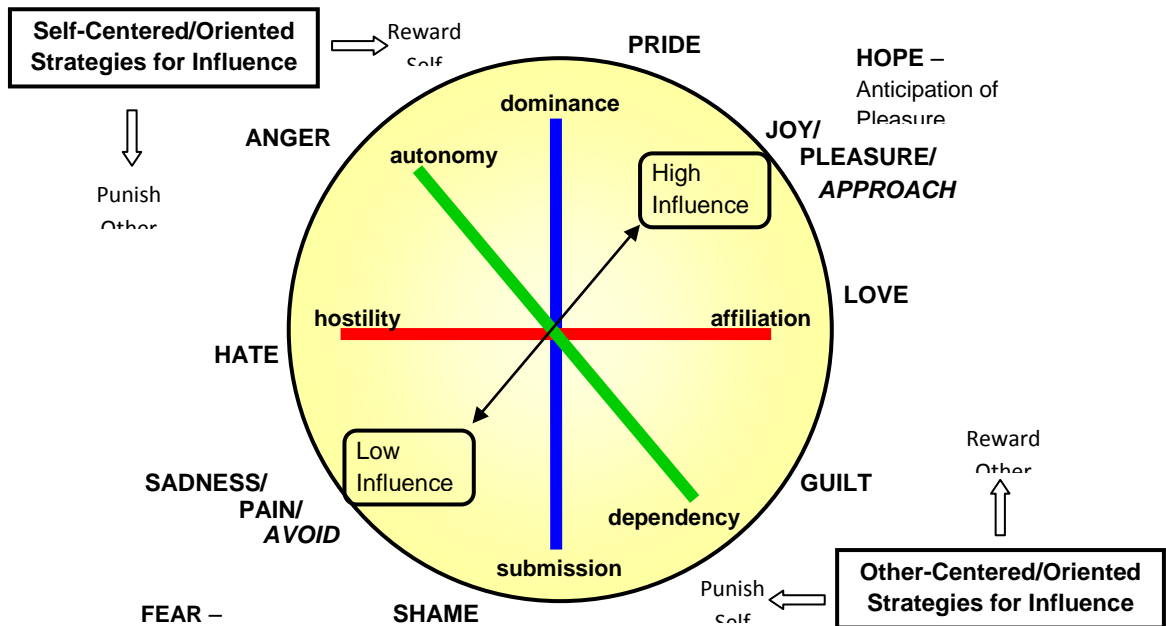


Figure 1. The tree of knowledge system, a map of emerging complexity over time.



POWER Y-AXIS = INFLUENCE THROUGH **COMPETITION/ CONTROL**

LOVE X-AXIS = INFLUENCE THROUGH **ALTRUISM/ COOPERATION**

Figure 2. The influence matrix: a map of the architecture underlying the way humans process social information, develop social goals, and are guided by emotions in navigating the social environment.

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