

CULTURAL VARIATION IN UNREALISTIC OPTIMISM

by

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Abstract

The recently proposed notion that self-enhancing biases are significantly implicated in mental health is being challenged by cross-cultural research which suggests that such biases may be limited to cultures which foster an independent construal of self. We examined whether individuals from a culture characteristic of an interdependent construal of self (Japanese) would show less unrealistic optimism about potential, future life events than individuals from a culture characteristic of an independent construal of self (Canadian). Canadian respondents were indeed significantly more unrealistically optimistic than the Japanese, although the Japanese did demonstrate an optimism bias in some localized cases. Canadians made more unrealistically optimistic judgments for particularly threatening events, whereas this was not so for the Japanese. The weaker unrealistic optimism bias of the Japanese was associated with lower self-esteem, lower dispositional optimism, a more external locus of control, and less of a tendency to imagine stereotypical people associated with the events. The results provide further evidence that self-enhancing tendencies are more common for cultures characteristic of an independent construal of self.

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For decades, classical psychological thought had maintained that a requirement of mental health was that one's perceptions have a firm footing in reality. Accurate perceptions, for example, of one's social environment and abilities, were viewed as critical for one to function in an effective and healthy manner (Jahoda, 1958; Jourard & Landsman, 1980). Recently, however, a number of theorists have challenged this assumption, arguing that the healthy mind is characterized by misperceptions that depart considerably from reality (see Greenwald, 1980; Taylor & Brown, 1988, for reviews). Much contemporary work on the self has focused upon people's tendencies to distort their perceptions of the world in a self-enhancing manner. Accuracy, although necessary to a certain extent, is often compromised in favor of flattering information in a typical self-evaluation. For example, people tend to remember their past performance as better than it actually was (Crary, 1966), they judge positive personality attributes to be more appropriate in describing themselves than in describing others (Alicke, 1985), and they tend to take credit for success, yet attribute failure to the situation (see, e.g., Greenberg, Pyszczynski, & Solomon, 1982).

The prevalence of these illusions, and their tenacity, across a broad spectrum of psychological processes has lead some theorists to argue for the inherent adaptive value of constructing a world view that departs from reality (Myers & Ridl, 1979; Taylor & Brown, 1988). Furthermore, there is corresponding evidence that links the absence of these self-serving biases with lower self-esteem and mild depression (e.g., Alloy & Ahrens, 1987; Lewinsohn, Mischel, Chaplin, & Barton, 1980). Taylor and Brown (1988) suggest that "It appears to be not the well-adjusted individual but the individual who experiences subjective distress who is more likely to process self-relevant information in a relatively unbiased and balanced fashion" (p. 196). Self-enhancing biases thus

appear to be necessary luggage for the trek to mental health. These "positive illusions," as Taylor and Brown coined them, have been found to be associated with happiness and contentment (Freedman, 1978), resulting in enhanced abilities of caring about the self and others (Isen, 1984), and effective performance in situations where perseverance is critical (Greenwald, 1980; Taylor & Brown, 1988).

Cross-cultural research, however, has raised questions about the universality of these biases (see, for example, Markus & Kitayama, 1991a). Research has shown that with certain cultures, some effects attributed to self-enhancing tendencies are significantly lower, if not absent or even reversed (e.g., Kashima & Triandis, 1986; Takata, 1992). The lack of cultural universality of self-enhancing biases challenges the claim that these illusions are the *sine qua non* to mental health. An investigation of this cultural variation by comparing the general mental health of different cultures would, of course, be doomed to be awash in ethnocentric currents. Any measure of mental health for a given culture cannot be assumed to have the same value or meaning for a different culture, thus rendering any cultural ranking on this dimension biased and misleading. A more reasonable approach would be to suggest that the benefits of maintaining positive illusions presuppose certain cognitive or motivational tendencies which might be specific to certain cultures. Cross-cultural research suggests that various cognitive, emotional, and motivational processes are culturally variant (see Markus & Kitayama, 1991a, for a review), and to the extent that these processes support and sustain self-enhancing biases, the cultural variance of these biases is understandable. Cross-cultural analyses have thus proven useful in identifying the cultural boundaries of certain self-enhancing biases and in aiding our understanding of the cognitive and motivational processes that constitute them.

Unrealistic Optimism

One self-serving bias that has proven to be consistently robust in studies with North American respondents relates to optimism. In general, it appears that people are future-oriented (Gonzales & Zimbardo, 1985), and believe that the present is better than the past and the future promises to be even better (Brickman, Coates, & Janoff-Bulman, 1978; for a review see Taylor & Brown, 1988). Optimistic expectancies are therefore characteristic of the typical North American's outlook.

The term "unrealistic optimism," however, has been applied specifically to the phenomenon represented by people's beliefs that they are more likely to experience positive events, and less likely to experience negative events, than similar others (Weinstein, 1980). It is difficult to ascertain at the individual level whether or not a particular person is demonstrating an unrealistically optimistic outlook on his or her future, as it is indeed possible that this person has a more promising future than average. However, at a group level, if the discrepancies between self- and other-estimates remain, then it must be the case that people are systematically predicting a rosier future for themselves than for others. Possible reasons that may justify a uniquely optimistic future for a given individual become untenable at a group level and thus the optimism is labeled "unrealistic" (Weinstein, 1980).

Evidence for the unrealistic optimism bias is impressive; it can be found across a wide variety of events, and is consistent across age and socioeconomic classes (Weinstein, 1987). For example, when college students were administered an insurance company longevity questionnaire which predicted their lifespan from actuarial data, they tended to estimate that they would live ten years longer than the actuarial prediction (Snyder, 1978). People also tend to believe that they are more likely than others to enjoy their job and are less likely

to be fired (Weinstein, 1980). Slovic, Fischhoff, and Lichtenstein (1978) reported that 75 to 90% of drivers felt that they were better than average drivers, suggesting that they believed they were less vulnerable to accidents than others (see also Svenson, 1981).

This optimism bias does not seem to be limited to any specific domain of events. Given a chance to compare themselves to an average other, people will usually conclude that their futures are relatively "better." However, in general, the more serious a negative event is perceived to be, the larger is the corresponding optimism bias (Kirscht, Haefner, Kegeles, & Rosenstock, 1966; Taylor et al., 1992). Hence, although unrealistic optimism may be characteristic of any type of event, at least in the case of negative events its magnitude appears to be dependent on its subjective threat (see also Kunda, 1987). This suggests that the foundation of the optimism bias is not simply cognitive, but is motivational as well.

Unrealistic optimism, similar to other self-enhancing biases, has been argued to be characteristic of the mentally healthy person's thought processes (Taylor & Brown, 1988). Mildly depressed people, or people low in self-esteem, maintain more realistic views of their futures (Alloy & Ahrens, 1987). Biases in one's outlook toward future events thus seem to be associated with the functioning of the healthy mind, at least for North Americans. Whether unrealistic optimism is similar to other self-serving illusions, in that it is subject to cultural determinism, remains an open, empirical question.

Although hundreds of articles have been written on the topic of optimism, I have been unable to find any such articles that have explored the extent to which unrealistic optimism, or even optimism in general, is universal or culturally specific. The central argument of this Master's thesis is that the optimism bias is culturally variant.

The Japanese Case

The literature reveals that, by far, the culture that is most represented in cross-cultural comparisons with North Americans is the Japanese. The fascination, and perhaps envy, of the world at their economic success, and their strikingly visible collective nature have probably contributed somewhat to the current interest in comparisons with the Japanese. In addition, Japan occupies a relatively distinct position among modern cultures of the world (Hofstede, 1980). The Japanese people will often be the first to say that their culture is different from any other in the world. Besides unique historical, geographical, and linguistic factors that support these claims of uniqueness (Reischauer, 1988), there is empirical, psychological evidence to corroborate this as well. In 1980, Geert Hofstede published a multi-cultural study of values. Drawing from a sample of workers in forty countries from IBM offices, he extracted four underlying value dimensions that reliably discriminated between cultures, namely: Power Distance, Uncertainty Avoidance, Masculinity, and Individualism. The Japanese are on the opposite side from Canada and the U.S. on all four of these dimensions, and they occupy the most extreme position in the world on two of them (Uncertainty Avoidance and Masculinity). Hence, they are in a particularly appropriate position to identify cross-cultural differences with North Americans.

Independence versus Interdependence

Markus and Kitayama (1991a) have provided a compelling model to interpret much of the cross-cultural research that has been conducted thus far. They argue that the various cultures of the world differentially emphasize two tasks relevant to everyday life: independence, i.e., tasks related to agency and autonomy *and* interdependence, i.e., tasks related to communion and affiliation (Kitayama, 1993). People of cultures in which the former process is primary are

said to have an independent construal of self, whereas those who live in cultures where the latter process dominates are said to have an interdependent construal of self.

Markus and Kitayama define the independent construal of self as being characterized by a bounded and autonomous sense of self that is relatively distinct from others and the environment. Those with an independent construal of self strive to assert their individuality and uniqueness, and stress their separateness from the social world. This construal of self, therefore, places demands on the individual to be self-sufficient and in control of the world with which it interacts. The social world and surrounding environs provide a stage for the self to perform on, and subsequently from which to be evaluated (Cousins, 1990). For the independent construal of self, others with whom one interacts serve as benchmarks for comparison, in an attempt to ascertain one's relative worth as an individual (Festinger, 1954). This view is best exemplified by North American and Western European cultures.

In contrast, the interdependent construal of self is characterized by an emphasis on the interrelatedness of the individual to others and to the environment. The self is not considered to be separate and autonomous, and it is only through the contextual fabric of one's social relationships, roles, and duties that the self gains meaning. The interdependent self does not remain a consistent and inviolate entity that is divorced from context: it must take on the form required by the social situation with which it interacts. As Hamaguchi (1985) put it, "(Selfness) is not a constant like the ego but denotes a fluid concept which changes through time and situations according to interpersonal relationships" (p. 302). The social environment does not act so much as a stage for evaluation, but instead is better construed as sustaining and forming the self.

This construal of self is most representative of Asian cultures, as well as many African, Latin-American, and Southern European cultures.

Markus and Kitayama (1991a) argue that since the self is central to many psychological phenomena, any phenomenon that implicates the self will be shaped accordingly by that culture's dominant construal of self. Hence, cultures characteristic of the independent construal of self will show evidence of motivations, cognitions, and emotions that affirm the independence and autonomy of the self. Psychological processes within cultures representative of the interdependent construal of self, on the other hand, will affirm the interrelatedness and belongingness of the self.

The Japanese culture is particularly appropriate to the definition of the interdependent culture. Many anthropological studies (see, e.g., Benedict, 1946; Reischauer, 1988) stress that one of the most characteristic features of the Japanese is the great deal of importance they ascribe to their in-groups. Nakane's (1970) classic sociological analysis similarly traces the Japanese psychological centre of gravity to the *ie*, the household, or in-group. As well, Hofstede's (1980) analysis demonstrated that the Japanese were on the collectivist side of his individualistic-collectivist dimension.

Numerous studies have demonstrated that the Japanese do respond differently from North Americans on a wide variety of psychological processes (e.g., Barnlund & Yoshioka, 1990; Cousins, 1989; Hamilton, Blumenfeld, Akoh, & Miura, 1990; Yamagishi, 1988). Most relevant to the present research are studies showing that a number of self-enhancing biases that are well-established with North American respondents do not hold for the Japanese (e.g., Kashima & Triandis, 1986; Markus & Kitayama, 1991b; Yamauchi, 1990). This apparent absence of self-enhancing biases on the part of the Japanese is suggestive of different motivational tendencies of the interdependent construal of self.

The notion that unrealistic optimism is primarily a product of "independent" cultures would gain plausibility if Canadians demonstrated a significantly stronger optimism bias than the Japanese. In contrast, similar patterns of responses between the two cultures might suggest that unrealistic optimism is based on cognitive or motivational constructs that are consistent between the two different construals of self, and is in some way different from other self-enhancing biases studied thus far.

Any difference in unrealistic optimism between cultures would, of course, not exist in a vacuum. It is not enough to demonstrate cultural variation in the optimism bias without simultaneously exploring the cultural variation of related constructs. This exploration of the contextual net sustaining the optimism bias offers possible explanations for why these differences exist. A review of the cognitive and motivational correlates of the optimism bias follows. In an attempt to highlight areas that are likely to constitute the basis of any cultural differences in the optimism bias, the review examines these associated constructs in the context of cross-cultural comparisons between North Americans and Japanese.

Cognitive and Motivational Correlates of the Optimism Bias

Weinstein (1980) was the first to systematically study the underlying cognitive and motivational factors that could account for the optimism bias over a large subset of future life events. Since that paper, Weinstein and numerous other researchers (e.g., Perloff & Fetzner, 1986; Zakay, 1984) have further explored these correlates of unrealistic optimism. As the present study is apparently the first to examine the cultural generality of unrealistic optimism, predictions were based on indirect evidence suggestive of cultural differences.

Hence, this thesis examined two sets of literature: 1) The cognitive and motivational constructs that have been shown to be associated with the optimism bias, and 2) the cross-cultural literature that has examined these same

constructs within the Japanese people. The constructs to be discussed are social comparison, psychological control, availability of stereotypes, and positive self-construals. As well, self-enhancement as a means of coping with stress is also discussed in a cross-cultural context.

Social Comparison For four decades a fundamental tenet of social psychology has been that because many psychological characteristics cannot be easily evaluated against an objective standard, people instead evaluate themselves by making comparisons with similar others in their social environment (Festinger, 1954). People often make downward comparisons, that is, they compare themselves to relatively disadvantaged others, as this has self-enhancing benefits (Taylor, Wood, & Lichtman, 1983; Wills, 1981). Wills argues that as the level of psychological threat increases, people are more likely to make downward, self-enhancing comparisons, rather than self-evaluative comparisons with equal or better off others. This is reflected in the findings of Kirscht et al. (1966), who found that the discrepancy between self- versus other-estimates for vulnerability to diseases increased with the perceived severity of the disease. This suggests that motivational factors are involved with downward comparisons, such that they provide the means to cope with feelings of inadequacy and vulnerability.

Perloff and Fetzer (1986) argue that people exhibit an unrealistically optimistic view of their own vulnerability to victimization because they typically evoke downward comparison strategies. In the prototypic optimism study, respondents are requested to estimate their perceived chances of experiencing future life events *relative to the average comparable other*, usually the average same-sex student at their university. Perloff and Fetzer found that when respondents compared themselves to this vague concept of an average other, they usually brought to mind someone relatively disadvantaged.

This is consistent with other findings that North American respondents tend, in general, to consider themselves to be above average on a wide variety of abilities (Myers & Ridl, 1979). For instance, 25% of college students estimated that they were in the top 1% of the population regarding the ability of getting along well with others (Myers, 1987). Perloff (1987) suggested that "insofar as people tend to view themselves as better than average and as more intelligent than their average peer, the average person may be seen as someone who is almost by definition, less advantaged, less intelligent, and generally worse off than oneself" (pp. 222-223). The standard unrealistic optimism paradigm is framed in such a way that comparing themselves with a vague "average other" will apparently lead most "better-than-average" North Americans to engage in downward comparisons.

In sharp contrast, the cross-cultural literature has shown that the tendency to see oneself as better than average does not hold for cultures typical of the interdependent construal of self. For example, Markus and Kitayama (1991b) found that when given a task of estimating one's position relative to the population on a variety of abilities, Japanese students did not view themselves as better than others. In fact, the Japanese estimates were generally consistent with what would be expected of realistic estimates that did not involve self-enhancing evaluations. On average, the Japanese consider themselves to be about average. Perhaps, when comparing themselves to an average student, the Japanese are not as likely as North Americans to employ downward comparison strategies. In general, others are seen as existing at an equal, rather than a disadvantaged, level. Markus and Kitayama argue that this is because the motivation of the interdependent self is not to stick out from the crowd, even in a positive way. The motive to fit in, and to belong, is relatively

stronger than it is in the West, so downward comparison strategies might not yield the same psychological satisfaction as has been argued for Westerners.

Takata (1992) has provided preliminary evidence to support the claim that Japanese employ different social comparison strategies than those used by North Americans. Schwartz and Smith (1976) showed that American subjects readily believed feedback indicating that their performance was superior to that of another, while they were more reluctant to accept feedback that their relative performance was inferior. Using methods identical to those used by Schwartz and Smith, Takata found that Japanese subjects responded in a manner opposite to Americans. That is, Japanese subjects were reluctant to believe that they outperformed someone else, but they were more easily convinced about their relative inferior performance. This tendency to trust failure information more than success information remained even when the Japanese were told that they were competing against a computer program, rather than against a fellow student. Takata argues that this self-deprecatative tendency, much like self-enhancing biases for Westerners, is a self-esteem maintenance mechanism for the Japanese. The Japanese are motivated to perceive themselves "not as a 'figure,' but as a 'ground'" (Takata, 1992, p.5), because it is more favorable to "harmonize" with other people than to be an outstanding individual. Self-enhancing comparisons therefore might be limited to self-esteem maintenance motivations only for cultures typical of an independent construal of self.

The importance of downward comparison to unrealistic optimism, as argued by Perloff and her colleagues, suggests that the relative absence of downward comparison strategies in the Japanese, as demonstrated by Takata, will be reflected in lower unrealistic optimism in the Japanese.

Psychological Control A second factor that has been argued to be of importance in explaining unrealistic optimism is that of psychological control. If an event is perceived to be controllable, then a person can bring to mind the series of steps necessary to increase the likelihood of a desirable outcome (Weinstein, 1980). When an event is perceived to be under a person's control, and is thus potentially attainable, one exerts efforts at achieving his or her goal. If the goal is viewed as beyond one's control, the person may give up and turn away (Scheier & Carver, 1987). In this regard the level of perceived control affects one's expectancies of the future.

Perloff (1987) argues that people have an illusion of control whereby they exaggerate their ability to avoid negative outcomes. Insofar as this tendency makes the future appear to be under one's control, one should be able to maintain an optimistic point of view. Similarly, the tendency for nonvictims to perceive themselves as being uniquely invulnerable to threatening events may reflect a need for personal control (Perloff, 1983). In support of this, Langer (1975) has demonstrated that people typically have an "illusion" of control over chance events. She argues that individuals are motivated to avoid the negative consequences that are associated with a perceived loss of control. This illusion of control might result in people overestimating their likelihood of achieving positive events, and underestimating their likelihood of experiencing negative events (Perloff, 1983). Self-serving biases that lead people to believe that they are more intelligent (Wylie, 1979), and in general "better" than the average person (Myers & Ridl, 1979), may be reflected in similar beliefs that one is in more control of his or her life than the average person.

Evidence for the role of control is found consistently in unrealistic optimism studies (Weinstein, 1982; Zakay, 1984). Weinstein (1980), for example, found that perceived controllability correlated significantly with the

degree of unrealistic optimism that a person maintained for avoiding negative events. The contributing role that control plays in unrealistic optimism was further demonstrated in another study by Weinstein (1984). He attempted to delineate the risk factors that people take into account when they are making likelihood judgments. He found that respondents were unbiased when they considered hereditary or environmental risk factors. These factors, Weinstein argued, operate outside people's perceived control. However, when respondents considered their actions and psychological risk factors, there was a significant correlation with their optimism bias. Both actions and psychological factors are associated with perceived controllability, so people appear to believe that if they can control factors that affect their future, they have a lesser likelihood of experiencing negative events than do others. This suggests that people succumb to the optimism bias, in part, because they tend to note their controllable, and henceforth risk-decreasing factors, but they tend to downplay any uncontrollable hereditary or environmental risk-increasing factors that might be involved.

Weisz, Rothbaum, and Blackburn (1984) argue that Japanese society promotes a different sense of psychological control than what we are accustomed to in the West. They argue that in Japan the primary emphasis is on adapting oneself to the demands of an impassive environment. Kojima (1984) suggested that "the Japanese do not think of themselves as exerting control over an environment that is utterly divorced from the self...Rather, they attempt to regulate the relationship between the self and a complex, often conflicting set of environmental demands" (p. 973). Weisz et al. called this focus on controlling one's responses to the environment "secondary control." In contrast, they argue that the main emphasis in North American culture is on

attempting to change the environment to suit one's internal demands. This sense of internal agency was labeled "primary control."

The primary-secondary control distinction is similar to Rotter's distinction between internal and external locus of control. Both primary control and an internal locus of control imply that an individual can exert control on events in the environment. Secondary control is similar to an external locus of control in that it is believed that the outcomes of events is dependent upon forces in the environment. Although Weisz et al. only provided sociological and anthropological evidence to support their claims of cultural differences in primary and secondary control, there is empirical evidence of cultural differences regarding internal and external loci of control which lend support to their arguments. The Japanese have been shown to demonstrate a significantly stronger external locus of control, and a significantly weaker internal locus of control, than Americans (Bond & Tornatzky, 1973; Mahler, 1974). As perceived control has been shown to be correlated with unrealistic optimism, it is expected that the more externally oriented Japanese will show a lower optimism bias than North Americans.

Availability of Stereotypes The variable correlated most strongly with unrealistic optimism in Weinstein's first (1980) study was the availability of a stereotype for the event. For many events, particularly negative ones, people may have a conception of the kind of person to whom the event is likely to happen. Weinstein argues that stereotypes associated with negative events have an ego-defensive function, as people would rarely consider themselves to be representative of the type of person that is vulnerable to misfortune.

The correlation between unrealistic optimism and the availability of stereotypes also suggests the presence of a cognitive basis for unrealistic optimism. Weinstein (1980) suggests that the "representativeness" heuristic

(Kahneman & Tversky, 1972) may account for the relation between optimism biases and stereotype salience. This heuristic signifies the process of judging whether an individual fits into a particular category or not by judging the extent to which the individual possesses the salient characteristics associated with the stereotype, while ignoring information regarding the base rates of the category. For example, people may have an image of the stereotypical person likely to have an early heart attack. This image might be of someone who is grossly overweight and overly stressed at work. Indeed, these are risk factors for an early heart attack, however, early heart attacks can, and often do, happen to people who do not fit this stereotype at all. Most importantly, people fail to realize that relatively few victims of negative events actually fit a given stereotype, and thus erroneously conclude that they themselves are relatively invulnerable to the event because they do not view the stereotype as descriptive of themselves (Weinstein, 1980).

Westerners have a richly defined conception of themselves, so it is difficult to impose a stereotype on oneself. A relative lack of information about others, on the other hand, makes the stereotypes appear more appropriate in categorizing these others (see, e.g., Nisbett, Krantz, Jepson, & Kunda, 1983, Study 2; Quattrone & Jones, 1980). Thus, North Americans seem relatively immune to self-categorization of a negative stereotype, rendering them more susceptible to unrealistic optimism.

The role of stereotypes for the Japanese is arguably less important in their consideration of others. For example, Kitayama, Markus, Tummala, Kurokawa, and Kato (1990) found that, compared to Americans, Hindu respondents demonstrated a greater awareness of others relative to themselves. This suggests that the cognitive function of stereotypes for Hindu Indians might be moderated. Insofar as this finding is typical of people of Eastern cultures in

general, it implies that people with an interdependent construal of self have a relatively impoverished conception of themselves, and the application of a stereotype to themselves may consequently appear more fitting than it would for those of an independent self-construal. In contrast, their relatively more detailed conception of others, resulting from their greater attendance to information from the social environment, would suggest that stereotypes are not as applicable to others. If this is the case, then negative stereotypes may appear more self-defining, and less other-defining, for the Japanese than for Canadians. The perception of invulnerability that one maintains by avoiding stereotype classification should thus be moderated for the Japanese rendering them less susceptible to unrealistic optimism. Since Weinstein (1980) found a significant correlation between stereotype salience and optimism bias only for negative events, the hypothesized tendency for the Japanese to see stereotypes as being more self-defining, and less other-defining, than North Americans, should be associated with a particularly lower optimism bias in the case of negative events. Therefore we anticipate that the difference in unrealistic optimism between Canadians and Japanese will be more pronounced for negative events than for positive events.

Self-Esteem and Positive Construals of the Self Alloy and Ahrens (1987)

provided evidence that depressives and people with lower self-esteem were less unrealistically optimistic than were normal individuals. This is consistent with the arguments of Taylor and Brown (1988) who suggest that the use of self-enhancing biases is characteristic of the mentally healthy person. It appears that positive construals of self, i.e., high self-esteem and low depression, are associated with the creation of self-enhancing biases that place one in a favorable position relative to others.

Positive construals of the self, however, seem to be culturally variant. Kitayama and Markus (1992) argue that because people in Western cultures are encouraged to identify their own unique features that are desirable, self-evaluative schemata become particularly sensitive to positive information. This positivity bias is highly instrumental in discovering and expressing positive attributes of the self that are necessary in attaining the cultural imperative of independence. In contrast, they argue, people in interdependent cultures are conditioned to become particularly sensitive to information about their own deficiencies, or potential mistakes, so that these "problems" can be corrected and they can maintain and deepen their relationships with others. The role of the interdependent individual requires that they adapt and change themselves in order to foster the harmony of their in-group. People in interdependent cultures thus learn to be particularly aware of negative self-information.

Kitayama and his colleagues have provided some empirical support for these views. A recent study explored the structural complexity for situations in which self-esteem was enhanced or reduced for both Americans and Japanese (Kitayama, Markus, Takagi, Sugiman, & Matsumoto, 1992). They found that while Americans have a more differentiated schema for accepting positive information, Japanese had greater structural complexity for negative situations that reduced self-esteem (see also Takata, 1992). In line with this, in an earlier study we found that the Japanese scored significantly lower on the Rosenberg Self-Esteem measure than did Canadians (Heine, Lehman, Okugawa, & Campbell, 1992).

Taylor and Brown (1988) argue that self-serving biases are generally associated with positive construals of the self. Since there are reasons to believe that the Japanese have a less "positive" construal of self, it makes sense to assume that they should employ fewer self-serving biases. We expect that

the Japanese in this study will again have lower self-esteem scores than Canadians, and that this will be associated with a lower unrealistic optimism bias.

Self-Enhancement, Psychological Threat, and the Japanese

One of the apparent purposes which self-enhancing biases serve for North Americans is aiding in coping with stress (Taylor et al., 1992). In the face of threatening events, self-enhancing evaluations that place the self in a more favorable position than that ascribed by an impassive reality can relieve the self of some of the stress associated with these events. Often, this means making downward comparisons with others. Moreover, the more severe the threat, the greater the need may be for these "positive illusions" to counter the stress of the threats (Taylor et al., 1992; Wills, 1981).

The psychological benefits of self-enhancement, however, might be limited to those with an independent construal of self. The motivations for the independent self are to maintain the autonomy of the sacrosanct self, to confirm to the individual that they are a worthy person. If this sense of self-sufficiency is threatened, or worse, if the very existence of the individual is not secure, then self-enhancing biases might help the individual restore his or her sense of autonomy and security. Therefore, in the case of the present investigation, we anticipate that Canadians will show more unrealistic optimism for events which they perceive as particularly threatening.

However, self-enhancing biases might not provide the same palliative reassurances for the interdependent construal of self. Given that the individual in an interdependent society is but a fraction, and does not become whole until they have fit in and occupied their proper place within a social unit (Lebra, 1976), individuals ought not be motivated to separate themselves from their secure position in the group, regardless of the positive reasons for their

separation. Separation from the group might actually imply alienation from the self. Kitayama et al. (1991) found that, while for Americans feelings of pride and sense of achievement were positively correlated with their sense of well-being, for Japanese these were actually *negatively* correlated with their sense of well-being. Their sense of acceptance from others, on the other hand, was what was most highly correlated with their feelings of well-being. Self-enhancement, i.e., distinguishing oneself as better than others, might similarly be in opposition to the well-being of the Japanese. Hence, we would not expect self-enhancing biases to be as common for Japanese as they are for Canadians, nor would they necessarily be as effective for coping with stress.

In support of this, a number of studies have shown that certain self-enhancing biases that are robust in North America exist in an attenuated form within cultures typical of an interdependent construal of self. The false uniqueness bias (Markus & Kitayama, 1991b), the tendency to internalize success and externalize failure, (Chandler, Shama, Wolf, & Planchard, 1981; Kashima & Triandis, 1986; Yamauchi, 1990), and the tendency to have more confidence in information that is favorable to the self, than that which is unfavorable (Takata, 1992), have all been shown to either be absent, or reversed for Japanese samples. This evidence suggests that self-enhancing tendencies may be essentially absent in the Japanese motivational repertoire. Whether this tendency is specific to the above biases, or is indicative of a general trend, remains an open question until other self-enhancing biases are examined with Japanese samples.

Self-enhancement, then, apparently does not bring the same psychological satisfaction to the Japanese as it does to North Americans. Self-enhancing evaluations may only serve to isolate the Japanese individual from his or her interdependent network. In the face of threat this isolation could

hardly be seen as a coping mechanism. On the contrary, if anything, threat ought to motivate the interdependent Japanese to affirm their *belongingness* to the group. Rather than helping the Japanese individual to cope with threat, self-enhancement might even exacerbate the negative consequences of the threatening event. Hence, in contrast to what has been argued for Canadians, we do not expect the Japanese to self-enhance more in the case of particularly threatening events.

The Present Study

The present investigation examines whether unrealistic optimism exists at a comparable level between Canadian and Japanese respondents. In addition, constructs that have been shown to be related to unrealistic optimism for North Americans were examined with the Japanese as well. Specifically, the constructs of locus of control, the availability of stereotypes, self-esteem, and defensive self-enhancement were considered in relation to unrealistic optimism.

Unrealistic optimism was assessed in two ways. The most common paradigm used for unrealistic optimism studies thus far has been a within-groups comparison, in which respondents make an estimate of the relative likelihood that they will experience a future life event in comparison to a similar other (see Weinstein, 1980, 1982, 1984, 1987). The present study employed this methodology. In addition, we employed a between-groups paradigm similar to the method used by Kirscht et al. (1966). Respondents were divided into two groups. One group made absolute likelihood estimates about *their* chances of experiencing a future life event and the second group made estimates for the chances of a *similar other*. The average estimates were then compared between the two groups with significant differences representing unrealistically optimistic or pessimistic tendencies. The between-groups methodology provides a "hidden" measure of self-enhancement, because respondents are unaware that

discrepancies between self- and other-estimates are being assessed across experimental groups. The results of these two methodologies were compared.

Based on the preceding arguments about differences between the natures of the independent and interdependent construals of self, we anticipated that: 1) Japanese would show less of an optimism bias overall than Canadians; 2) the lower level of optimism bias for the Japanese would be particularly pronounced for negative events; 3) perceived threat would be less strongly linked to unrealistic optimism for Japanese than for Canadians; and 4) the relative lack of optimism bias for the Japanese would be associated with: a) a less internal, and a more external, locus of control, b) fewer available stereotypes corresponding with each life event, but a greater tendency to see oneself as fitting a stereotype, c) lower self-esteem, and d) lower dispositional optimism.

Method

Respondents

A total of 510 respondents participated in the study. They came from four different sources: 1) a class of introductory psychology students from Nagasaki University, a public university in southern Japan (n=112; these students received course credit for participating in the study); 2) a class of introductory research methods students from Ritsumeikan University, a private university in Kyoto, in western Japan (n = 84; the study was administered at class time, and was included as part of the lecture); 3) a class of introductory social psychology students from the University of British Columbia¹ (n=174; the study was administered at class time, and the objectives and results were discussed later as part of the course material); and 4) students enrolled in the University of

¹The data were collected in the second class period of the year, so the students had not yet studied anything relating to self-enhancement, unrealistic optimism, or the like.

British Columbia introductory psychology courses that were contacted through the subject pool ($n=140$; these students received course credit for participating in the study).

As the primary aim of this study was to compare the self-enhancement tendencies of people of Eastern and Western cultures, the cultures of the samples were polarized. That is, the Canadian sample was separated by ethnic background, such that respondents who had the most exposure to Western culture could be contrasted with a homogenous Japanese sample. To obtain membership in the Westernized Canadian sample, respondents had to meet each of the following criteria: 1) The respondent had to be born in either Canada or the United States; 2) both of the respondent's parents had to be born in Canada, the United States, or in a European country; 3) the respondent had to declare his or her ethnic descent to be that of a European culture; and 4) the respondent had to be between the ages of 18 and 25. A total of 90 respondents satisfied all of these criteria, and formed the "Canadians of European descent" sample, or "Canadians," for short. Respondents in the Japanese sample were all between the ages of 18 and 25, and apart from a few students born in other East Asian countries, the rest of the sample was Japanese-born. A total of 196 students are included in this sample.

The Canadian sample consisted of 62.2% females ($n=56$) compared to 66.3% ($n=130$) for the Japanese sample. As the present study was concerned primarily with examining cultural differences, and not gender differences, the female and male respondents were pooled into one composite sample.

Materials

All respondents completed a questionnaire packet that consisted of the following measures, some of which are exploratory and are not included in this Master's thesis:

- 1) Demographic information (6 items)
- 2) Rosenberg's (1965) Self-Esteem measure (10 items)
- 3) Campbell, Trapnell, Katz, and Lavalley's (1992) Self-Concept Confusion measure (12 items)
- 4) Cheek's (1982) Aspects of Identity scale (20 items)
- 5) Levenson's (1972) Locus of Control measure (24 items)
- 6) A measure of modesty calculated by the respondent's total self-rating of a diverse number of ambiguous attributes (8 items)
- 7) Scheier and Carver's (1985) Life Orientation Test (a measure of dispositional optimism) (12 items)

Future Life Events Scale

- 8) Controllability of future life events (15 items).
- 9) Availability of stereotypes for future life events (15 items).
- 10) Applicability of self-stereotypes for future life events (15 items).
- 11) Ranking of the desirability (5 items) and the severity (10 items) of the positive, and negative, future life events respectively.
- 12) Unrealistic optimism events (15 of them) which were measured in the following manner:

Within-Groups Measure A design identical to Weinstein (1982) was used.

Respondents were asked "Compared to other UBC/Ritsumeikan/Nagasaki students--same sex as you--what do you think are the chances that the following events will happen to you?" Beneath the description of each event a seven-point rating scale with the following choices appeared: Much below average, below average, slightly below average, average for other UBC/Ritsumeikan/Nagasaki students of your sex, slightly above average, above average, and much above average. For purposes of analyses these seven responses were assumed to form an equal interval scale and were assigned the

values -3 (much below average) through +3 (much above average). An optimism or pessimism bias was noted whenever the estimates for a particular event deviated significantly from zero. A significant negative value implies that an optimism bias is operating, and a significant positive value implies the presence of a pessimism bias.

The list of future events is a subset of the events that Weinstein has used in his various studies, plus a few additions that were of interest for the present study.

Positive events

- 1) Enjoy your chosen career.
- 2) Live past 80 years old.
- 3) Own your own home.
- 4) Leave your company for a better job offer.
- 5) Starting salary greater than \$30 000/ 2 500 000 yen.

Negative events

- 6) Have a drinking problem.
- 7) Attempt suicide.
- 8) Contract skin cancer.
- 9) Get divorced a few years after marriage.
- 10) Have a nervous breakdown.
- 11) Get AIDS.
- 12) Drop out of university before graduating.
- 13) Do something that will make your family ashamed of you..
- 14) Have a heart attack before the age of 50.
- 15) Become senile with old age.

Items 4 and 13 were added because we expected them to be viewed differently across the two cultures: Item 4, "Leave your company for a better job offer," was

expected to be a more positive event for Canadians, given the strong loyalty element in Japanese work organizations. Item 13, "Do something that will make your family ashamed of you," was expected to be considered more threatening to the Japanese, due to the important role of family in the Japanese self-concept. Item 11, "Getting AIDS," was seen as a more current item than the item "Getting venereal disease," as originally used by Weinstein. All of the events adopted from Weinstein's studies have produced significant unrealistic optimism biases in past research.

Between-Groups Measure To measure the between-groups factor, two different versions of the questionnaire were used. In the first version, beneath each future life event that the respondent made a *relative* likelihood estimate for, they were also asked to estimate the absolute percentage chance that this event would occur to *them*. In the second version of the questionnaire, beneath each future life event the respondent was asked to estimate the absolute percentage chance that this event would occur to the *average same-sex student from their university*. An optimism or pessimism bias was calculated for the between-groups factor whenever the self-estimates were significantly different from the corresponding other-estimates.

The same methods as Weinstein (1980) were employed to assess control and the availability of stereotypes. Respondents were asked on a scale from 1 (very controllable) to 5 (not at all controllable) how controllable they felt each event was, and they were asked on a scale from 1 (very clear image) to 3 (no image at all) the extent to which they could imagine a typical person likely to experience each event. In addition, the applicability of a self-stereotype was measured by asking respondents on a scale from 1 (not at all like me) to 5 (just like me) the extent to which they felt that they themselves were the type of person likely to experience the event. As well, the desirability and severity (i.e.,

threat) of the events were measured by asking respondents to rank the five positive events in order of their perceived desirability, and to rank the ten negative events in order of their perceived severity.

Translation of Materials

Questionnaires were produced both in English and Japanese, and respondents completed them in their native language. The original English version was translated into Japanese, and then back-translated into English by a second translator. Any discrepancies between the two English versions were noted, and three translators worked together on the discrepancies until a consensus was reached regarding their equivalency.

Results

Comparability of the samples

A one-way Manova was conducted on all the major scales included in this study to determine whether the two Japanese samples (i.e., those from Ritsumeikan and Nagasaki Universities) could be pooled into a single sample. The results of this analysis ($F = 1.36$, $p > .10$) indicate that the two Japanese samples did not differ statistically, and thus could be combined.

A t -test analysis revealed that the average age of the Japanese sample was significantly younger than that of the Canadians' (Japanese $M = 19.43$, Canadian $M = 20.97$, $t(284) = 4.74$, $p < .001$). A correlational analysis, however, indicates that there were no significant relations between age and total optimism bias for either the Japanese or Canadian samples, $r_s = 0.09$, and 0.13 , respectively, $p > .10$ for both), and thus the age difference should not confound a comparison of the optimism bias between cultures.

Optimism bias for individual events

For the within-group analyses, respondents indicated whether they felt that their likelihood of experiencing the individual future life events was greater

than, less than, or about the same as that of their peers. An event that has an average value that is significantly less than zero demonstrates an optimism bias: that is, respondents feel that they are less likely than their peers to experience the negative event (or more likely than their peers in the case of positive events). If the event's average value is significantly greater than zero, it demonstrates a pessimism bias, i.e., respondents feel that they are more likely than their peers to experience the negative event (or less likely to experience the positive event).

With respect to the between-groups design, an optimism bias is demonstrated when respondents receiving the self-estimate version estimate that their likelihood of experiencing a negative event is significantly lower (or higher in the case of positive events) than the estimates of the respondents receiving the other-estimate version (i.e., estimates of the percentage chance that the given event will happen to the average same-sex student from the respondent's university).

The t -tests representing the significance of an optimism bias for each of the 15 events in both the within- and between-groups designs are presented for both cultural groups in Table 1. Caution should be used when comparing the magnitude of the t -values between cultures, as the Japanese sample is over twice as large, and hence more powerful, than the Canadian sample.

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Insert Table 1 about here

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For the Canadians, 14 of the 15 items in the within-groups design revealed a significant optimism bias, thereby replicating Weinstein's earlier studies with Americans. The one item which did not demonstrate a significant optimism bias was "Develop skin cancer." In the case of the Japanese

respondents, 12 of the 15 items showed a significant optimism bias.

Interestingly, though, 2 of the 15 items, "Live past 80 years old," and "Your starting salary will be greater than \$30 000/ 2 500 000 yen," showed a significant pessimism bias.

The Canadian results from the between-groups design showed a significant optimism bias in 9 of the 15 items. Two of the items, "Develop skin cancer" and "Become senile with old age," showed a pessimistic tendency but these did not reach significance. For the Japanese sample, only 3 of the 15 between-group items exhibited a significant optimism bias: "Enjoy your career," "Own your own home," and "Have a nervous breakdown." Five of the 15 items were answered in the pessimistic direction, with one of these, "Live past 80 years old," resulting in a significant pessimism bias.

Optimism Bias for Item Aggregates

We next aggregated the items by their valence (5 positive, and 10 negative items), and conducted *t*-tests. Again caution should be taken in comparing the magnitude of the *t*-values because of the considerably greater power of the Japanese group.

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Insert Table 2 about here

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For the aggregated totals, in the within-group analyses, the Canadians showed a strong optimism bias for each of the positive, negative, and total item aggregates (see Table 2). In the between-group analyses, the Canadians demonstrated a similarly strong optimism bias across all aggregates. Canadians thus showed a consistent and robust optimism bias for all the types of future life items in this study.

The Japanese did not demonstrate such a consistent optimism bias across item types. They demonstrated a strong optimism bias for the negative within-group aggregate, and correspondingly this resulted in a strong optimism bias for the total within-group aggregate as well. However, they showed virtually no bias whatsoever in the positive within-group aggregate. In contrast, in the between-group analyses they showed an optimism bias for the positive aggregate, and a non-significant pessimistic tendency for the negative aggregate, which resulted in a non-significant optimism bias for the total item aggregate. Even though the Japanese exhibited a significant optimism bias for the positive aggregate in the between-groups condition, only 2 of the 5 items showed a significant optimism bias, and 1 item showed a significant pessimism bias. The significant effect for this aggregate is due to the unusually large optimism bias demonstrated for the item "You will enjoy your chosen career." Thus, the Japanese only appear to be unrealistically optimistic for negative within-group items, and, to a questionable extent, positive between-group items.

Cultural Differences in the Optimism Bias per Event

The following analyses reveal differences between Canadians and Japanese regarding the magnitude of the optimism bias for each of the events in the study. A summary of the means for all the events is presented in Table 3.

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Insert Table 3 about here

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For the within-groups design, Canadians were significantly more optimistic than the Japanese on 12 of the 15 items. On only 1 of the 15 items, "You will develop skin cancer," were the Japanese respondents more optimistic than the Canadians, but this did not approach significance.

For the between-groups design, Canadians were significantly more optimistic than the Japanese on 5 of the 15 items. On only 1 of the 15 items, "You will become senile with old age," was the Japanese mean more optimistic than the Canadian mean, but this did not approach significance.

Cultural Differences in the Optimism Bias for Aggregated Items

Table 4 presents the aggregates of the items on the basis of valence, and their means are compared across the two cultures. The values in the within columns represent the average optimism bias per event. Negative numbers represent optimistic responses. The values in the between columns represent the average difference between self and other estimates. Again, negative numbers represent optimistic responses.

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Insert Table 4 about here

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Canadians showed a significantly greater tendency to exhibit an optimism bias compared to the Japanese in all aggregates in both the within- and between-groups designs. Canadians were consistently more unrealistically optimistic than Japanese in all conditions.

To better understand between-groups results, the respondents' actual percentage estimates were compared for the aggregated items (see Table 5).

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Insert Table 5 about here

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Canadians believe that positive future events are significantly more likely to happen to themselves than do Japanese. Canadians also believe that positive future events are significantly more likely to happen to others than do Japanese. As well there is a significant interaction which shows that Canadians' estimates

for others are more similar to the same estimates of the Japanese than are their self-estimates. Hence, the significant difference in the optimism bias between cultures for the positive events in the between-groups analysis is mostly the result of Canadians expecting positive events to happen to themselves more than the Japanese did.

With respect to negative events, a significant interaction emerged. The Japanese believe that negative events are marginally more likely to happen to themselves than do Canadians, whereas they believe that negative events are significantly less likely to happen to others than do Canadians. Thus, compared to the Japanese, there is a marginal tendency for the Canadian self-estimates to be more favorable to themselves, whereas their estimates for others are significantly less favorable.

Control, Availability of Stereotypes, and Self-stereotypes

Respondents indicated on a 5-point scale the extent to which they felt that each event was under their control. Corroborating the theoretical suggestion of Weisz et al. (1984), Canadians viewed 14 of the 15 events to be significantly more under their control than did the Japanese. The Japanese reported significantly more control for 1 of the 15 events: "You will become senile with old age." The aggregated items show that Canadians demonstrated significantly more control than the Japanese across all aggregates (see Table 6).

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Insert Table 6 about here

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Replicating Weinstein (1980), control was significantly correlated with unrealistic optimism for negative events for both Japanese and Canadians (within-respondent $r_s = -0.35$, and -0.30 , respectively, $p < .01$ for each), although to a lesser degree than he had found ($r = -0.67$).

The availability of stereotypes was measured by asking respondents to indicate on a 3-point scale the extent to which they could imagine a typical person likely to experience the event. Canadians were significantly more able to imagine the type of person likely to experience the events for 13 of the 15 events. Consequently, Canadians showed a significantly greater tendency to imagine stereotypical people across all aggregates (see Table 6). In contrast to the highly significant correlation between stereotype availability and optimism bias for negative events ($r = -0.76$) found by Weinstein (1980), the within-respondent correlations did not reach significance for either of the cultural groups in this study ($r_s = -0.11$, and -0.04 for Japanese and Canadians respectively, $p > .10$ for each).²

Self-stereotypes were measured by asking respondents to indicate on a 5-point scale the extent to which they felt that they were the type of person likely to experience a particular event. Canadians made significantly more self-stereotypes than the Japanese for each of the 5 positive events. The Japanese made significantly more self-stereotypes than Canadians for 7 out of the 10 negative events. Table 6 shows that Canadians demonstrated significantly more self-stereotypes for positive events, while Japanese demonstrated significantly more self-stereotypes for negative events. The within-respondent correlation between self-stereotypes and optimism bias was significant for both cultural groups, and for both positive and negative events ($r_s = -0.66$ and -0.62 for Japanese and Canadians respectively for positive items, and $r_s = 0.68$ and 0.75 for negative items, $p < .01$ for each).

²These figures were calculated by averaging the correlations obtained for each respondent. Weinstein's correlations were calculated by correlating the mean values for bias, control, and stereotype salience for each item. In the present study, there were only 10 negative events, as opposed to 24 events in Weinstein's study, so the method used by him would not be reliable for this study. The correlations obtained using his method for the Canadians are -0.50 , and 0.07 for control and stereotype salience respectively).

*Correlations between Desirability/Severity and Unrealistic Optimism,
Stereotypes, Self-Stereotypes, and Control*

A within-respondent's correlational design was used to correlate the rankings of desirability and severity for the positive and negative items, respectively with unrealistic optimism, stereotype availability, tendencies to self-stereotype, and perceived controllability. The average within-respondents' correlations for each culture were compared.

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Insert Table 7 about here

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Both Japanese and Canadians show a significant within-respondent correlation between the ranking of desirability and an optimism bias ($z = -0.53$ and -0.45 respectively, $p < .01$ for each; see Table 7). Thus, the more desirable the event, the more likely respondents show an optimism bias. These correlations were not significantly different. However, given that there was considerable consensus on the desirability rankings between respondents, and that these correlations are based on only 5 items, it is possible that the correlations merely reflect unrealistically optimistic tendencies associated with particular items, and thus one must be careful in drawing conclusions.

The Japanese show no correlation ($z = -.01$, $p > .10$) between the ranking of severity and an optimism bias, while the Canadian correlation ($z = -0.18$, $p < .01$) is significant; the more severe the event is perceived by Canadians, the more likely they are to respond in an unrealistically optimistic manner. The difference between the correlations of the two cultures is also significant ($F(1, 269) = 8.22$, $p < .01$), indicating that the magnitude of Canadians' optimism bias is tied to the perceived severity (or threat) of the event, while this is not true for the Japanese.

In the case of stereotype availability, both Japanese and Canadians demonstrated a significant within-respondent correlation between desirability and the salience of a stereotype ($z = -.30$ and $-.40$ respectively, $p < .01$ for both). These correlations are not significantly different. The Japanese show a small yet significant correlation between severity and stereotype availability ($z = -.05$, $p < .05$), while the Canadian correlation is also significant ($z = -.22$, $p < .01$). The Canadian correlation is significantly larger than the Japanese ($F(1, 260) = 10.99$, $p < .01$), indicating that the more severe an event is perceived to be by Canadians the more likely they are to report that they possess a clear image of the type of person likely to experience it, whereas this tendency is less pronounced for the Japanese.

With respect to self-stereotypes, both Japanese and Canadians demonstrate a significant within-respondent correlation between desirability and the tendency to see oneself as likely to experience the event ($z = -.47$ and $-.39$ respectively, $p < .01$ for both). These correlations are not significantly different. The Japanese showed no correlation between perceived severity and self-stereotyping ($z = .03$, $p > .10$), while the Canadian correlation is significant ($z = .23$, $p < .01$). The difference between these correlations is also significant ($F(1, 272) = 10.58$, $p < .01$). Hence, the more severe an event is perceived to be by Canadians the less likely they are to report that they are the type of person likely to experience it, whereas this tendency is absent for the Japanese.

Lastly, with regards to the correlations with control, both Japanese and Canadians show a significant correlation between desirability and the perceived controllability of the event (both Japanese and Canadian $zs = -.32$, $p < .01$ for both). The Japanese showed a small yet significant correlation between perceived severity and controllability ($z = -.08$, $p < .01$), while the Canadian correlation is also significant ($z = -.33$, $p < .001$). The Canadian correlation is

significantly larger than the Japanese correlation ($F(1, 274) = 24.68, p < .001$) indicating that both cultural groups, but especially the Canadians, will state that they have more control for particularly threatening events.

Cultural Differences on the Remaining Scales

Respondents also completed the Scheier and Carver (1985) Life Orientation Test, Rosenberg's (1965) Self-Esteem scale, Campbell et al.'s (1992) Self-Concept Confusion scale, and Levenson's (1972) IPC control scale.

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Insert Table 8 about here

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Canadians scored significantly higher on the dispositional optimism, self-esteem, and internal locus of control scales than did the Japanese. The Japanese scored significantly higher on the self-concept confusion, external and luck control scales than did Canadians. These differences were robust for each of the scales (see Table 8). Table 9 shows the correlations of these scales with each other and with the total within-groups optimism bias.

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Insert Table 9 about here

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Discussion

Unrealistic Optimism

The results of this study support the hypothesis that unrealistic optimism occurs to a greater extent with Canadian students than it does with Japanese. However, Japanese respondents did show a significant optimism bias in localized areas. As the results for the within-group analyses of the individual items in Table 1 indicate, the unrealistic optimism effect documented by

Weinstein in his series of studies with American respondents (1980, 1982, 1984, 1987) was replicated with Canadian respondents. One single item, "Sometime in the future you will develop skin cancer" failed to replicate with the Canadian sample. This is perhaps a reflection of the growing concern of Canadians, as frequently reported in the media, that everyone is potentially at risk for this disease. The fact that this item had the highest mean for Canadians for the statement "I am the type of person likely to experience this event," further supports this reasoning. Overall, then, the within-group results show a consistent and reliable unrealistic optimism bias for Canadians.

The between-groups analyses similarly confirm a strong optimism bias for the Canadians. The lower power of this test makes it difficult to assess whether the optimism bias is different for Canadians in between-group analyses than it is for the standard within-group analyses, yet as the aggregated item analyses in Table 2 show, it too is a highly reliable effect. The unrealistic optimism bias, then, does not require direct comparisons of self versus other to elicit an effect. Canadian respondents do not simply operate with an unrealistically optimistic social comparison heuristic that dictates that one's future is relatively better than that of a given comparison other. Table 5 shows that their *absolute* likelihood estimates are similarly formatted to fit an unrealistically optimistic template. Thus, Canadians seem to view the world as a place where good things are likely to happen to them, and bad things will most likely not, while a similar optimism is not as strong for the fate of their peers.

The demonstration of an unrealistic optimism bias for the Japanese was not as unambiguous. On the one hand, in the within-groups paradigm, 12 of the 15 items showed a significant optimism bias for the Japanese. However, an examination of the aggregated items reveals that the Japanese only showed an optimism bias in the case of negative events. They demonstrated virtually no

bias for positive events. Conversely, in the between-groups comparison the reverse pattern emerged. Only 3 of the 15 items showed a significant optimism bias, and the aggregated analyses reveal that in the between-groups paradigm it is the positive items, not the negative items, that demonstrate a significant optimism bias³. Moreover, even the optimism bias for the positive aggregate is largely the result of one extreme item, "Enjoy your career," and is thus possibly unreliable. The overall similarities between the self- and other-estimates for the Japanese show that they are not viewing the world in a way that makes them consistently appear better than average. This indirect comparison reveals that the Japanese think of themselves, for the most part, to be about average.

In contrast to Markus and Kitayama's (1991b) study of false uniqueness, and Takata's (1992) study of success orientation, then, it must be noted that the Japanese did demonstrate some self-enhancing tendencies in that they exhibited significant optimism biases in certain conditions. Nevertheless, the inconsistent pattern of the Japanese optimism ratings suggests that their estimates were not indiscriminately influenced by a reflexive self-enhancing tendency, as those of the Canadians appear to be, but rather, that in specific situations, unrealistically optimistic judgments are made. These situations are not ones in which the events are particularly threatening (see Table 7), nor are they consistently positive or consistently negative events. And they are not consistent within relative or absolute likelihood estimates either. The erratic pattern of the Japanese optimism bias suggests that although they *can* act in a self-enhancing manner, they do so only in certain situations, the parameters of which remain unclear.

³The Canadians demonstrated a similar pattern to this reversal: namely, in the within-groups design they show more bias for negative than for positive events, but for the between-groups design they show more bias for the positive events. This is apparently because the base rates for the negative events are lower such that the absolute differences between self- and other-estimates for the negative events are smaller.

Cultural Differences in Unrealistic Optimism

The main hypothesis of this study, that the Japanese would show less unrealistic optimism than Canadians, was strongly supported. In 12 out of the 15 within-group comparisons the Canadians exhibited significantly more of an optimism bias. In no case did the Japanese demonstrate a significantly stronger bias. There was a highly significant difference for the aggregated items, both for positively and negatively valenced items. With respect to the between-group comparisons, while only 5 of the 15 items showed a significantly greater optimism bias for Canadians, in 9 out of the remaining 10 comparisons, the mean of the Canadian optimism bias was nonsignificantly higher than that of the Japanese. In sum, whether the items were positive or negative, and whether the design was within- or between-groups, Canadians were significantly more unrealistically optimistic than Japanese.

Control, Stereotypes, and Self-Stereotypes

We found that the lower optimism bias in the Japanese sample was indeed associated with a lower internal locus of control. The Japanese demonstrated a significantly lower degree of internal locus of control, and likewise, a higher degree of external locus of control, both with respect to powerful others and to luck. An internal locus of control was significantly correlated with the total optimism bias for both cultural groups ($r_s = -.26$ and $-.34$ respectively, $p < .001$ for each), however, neither of the two external locus of control measures demonstrated a significant correlation with the total optimism bias for either Japanese or Canadians. As well, in 14 out of the 15 optimism items, the Canadians indicated that they felt that the events were significantly more under their control than did the Japanese, and this measure of control was also significantly correlated with unrealistic optimism.

We argued that the Japanese should be less able to imagine stereotypical people associated with future life events because the other-oriented nature of the interdependent construal of self means that they should possess a more refined conception of others, and thus not be as likely to impose stereotypes over this detailed image (Nisbett et al. 1983, Study 2; Quattrone & Jones, 1980). Conversely, we argued that since the attention of the Japanese should be more focused toward others, they should have a relatively impoverished self-conception, thus making the employment of a self-stereotype more likely for them, compared to Canadians. The hypothesis that Canadians would be more likely to imagine stereotypical people associated with particular events was strongly supported by the data. Canadians were significantly more likely than the Japanese to hold stereotypes in 13 out of the 15 events. This resulted in a highly significant difference in stereotype salience compared with the Japanese, across both positive and negative aggregates.

Interestingly, then, whether an event is positive or negative the Japanese report that they are less able to imagine a typical person likely to experience it. This is consistent with the notion that the Japanese have a surplus of information about others compared to Canadians, and that this reduces their tendency to employ stereotypes. The Japanese apparently are relatively resistant to the imposition of simplifying stereotypes over the elaborate images that they possess of others. This is in line with Markus and Kitayama's (1991a) portrayal of the interdependent self which suggests that the Japanese do indeed focus more attention toward others. It is also in line with the findings of Kitayama et al. (1990) who found that Hindu Indians appear to have a greater cognitive awareness of others, compared to Americans.

Regarding self-stereotypes, the results were not as straightforward. The Japanese had significantly higher self-concept confusion scores, indicating a

less clear and consistent self-conception. Although, compared to Canadians, the Japanese were much more likely to endorse self-stereotypes for the negative items, they were much less likely to endorse self-stereotypes for the positive items. This measure of self-stereotypes thus seems confounded with the valence of the items, and might more appropriately be seen as measuring self-enhancing tendencies. To agree with the statement that you are the type of person who is likely to experience a positive event, and to disagree that you are the type of person likely to experience a negative event, is in itself a self-enhancing way of thinking. The strong correlations between self-stereotypes and the optimism bias are evidence of this relation. Given the argument that the Japanese should be less likely to self-enhance than Canadians, the results are highly consistent. It does not appear possible to measure the tendency to hold self-stereotypes without introducing the confound of self-enhancement in the manner in which the question was framed in the present study.

These results indicate that for positive events, Canadians are better able to imagine a stereotypical person likely to experience that event, and they also feel that they are a person similar to that stereotype. Conversely, for negative events, although Japanese are less able to imagine a stereotypical person likely to experience the event, they still are more likely to state that they are similar to that stereotypical person.

Cultural Differences in the Optimism Bias for Positive vs. Negative Events

In Weinstein's studies, both control and stereotype salience were highly correlated with the tendency to be unrealistically optimistic for negative future life events. Because the Japanese were predicted to have a moderated sense of internal control, and of stereotype availability, it was expected that they would be particularly less optimistic than Canadians with regards to negative events. In fact, the comparison of the magnitude of the difference in optimism bias

between positive and negative items is not straightforward. In the within-groups analysis, the Japanese demonstrated no optimism bias for positive events, whereas they showed a substantial optimism bias for negative events, thus contradicting the above prediction. In the between-groups analysis, however, the Japanese demonstrated a significant, albeit unreliable, between-groups optimism bias for positive events, but no optimism bias for negative events. This pattern contrasts with the Canadians' highly significant optimism bias in all areas, thus lending some support to the above prediction. There does not appear to be a consistent pattern, however, of the optimism bias difference between positive and negative events.

One potential explanation for why the optimism bias between the two cultures was not consistently larger for the negative events as predicted involves the obtained correlations between optimism bias and control, and between optimism bias and stereotype salience, for negative events. Because we expected the Japanese would have lower control and stereotype salience scores than Canadians, we anticipated that their optimism bias would be particularly lower than Canadians in the case of negative events, given the substantial relation that Weinstein (1980) had obtained for these events. In the present study there was no relation between stereotype availability and unrealistic optimism for negative events for either cultural group, and the relations between control and unrealistic optimism for negative events were much smaller than those found by Weinstein. It is thus not surprising that the significant differences between Canadians and Japanese on control and stereotype salience were not associated with greater differences between the cultures on negative events as compared to positive events.

Unrealistic Optimism as a Form of Coping with Threat

This study confirms the prevalence of an unrealistically optimistic way of thinking, especially for North Americans, and to a limited extent for Japanese as well. Taylor and Brown (1988) argue that the optimism bias is adaptive, and that it aids the ability to cope effectively with stress (see also Taylor, 1989).

Unrealistic optimism has been linked to effective coping, in part, because the bias is correlated with the degree of threat of the event (see Kirscht et al., 1966). Taylor et al. (1992) state that "while illusions of invulnerability may be generally adaptive and protect people from the minor negative experiences of daily life, illusions may become especially important and exaggerated in people facing severe threats as a method of dealing with the threat" (pp. 469- 470). The optimism bias has thus been argued to be a defense mechanism -- being able to imagine that one's future is better than the average other means that one will not be struck by the same calamities as the average other. In the present study, a significant correlation was obtained for Canadians between the ranked severity of a negative event and its corresponding optimism bias. This provides evidence that the optimism bias is a means of coping with threat. In the case of the Japanese, however, the correlation was virtually nil. Regardless of the perceived severity of the event, the Japanese were equally likely to show, or not show, an optimism bias. In hindsight, it would have been preferable to measure perceived severity on an absolute, as opposed to a ranking, scale, so that the comparisons between cultures could have been based on the same standard. Nevertheless, the Japanese did not show any correlation between ranked severity and bias, suggesting that the optimism bias is not activated by threat for them. It appears that unrealistic optimism does not serve as a defense mechanism for the Japanese.

The correlations between severity and stereotype availability, self-stereotyping, and control provide additional support to this possibility. As

perceived threat increased, Canadians were more likely than the Japanese to imagine stereotypical people associated with future negative life events. Threat is apparently a sufficient motivator for Canadians to conjure up images of vulnerable others -- others who are distinctly different from themselves, as their tendency to avoid self-stereotyping for negative events indicates. This tendency was significantly less pronounced for the Japanese, suggesting that the Japanese are not as motivated to seek vulnerable others in the face of threat.

Similarly, when perceived threat increased Canadians were less likely to report that they felt that they were the type of person likely to experience future negative life events. This tendency was also absent for the Japanese. Last, as perceived threat increased, Canadians were more likely than the Japanese to state that the event was under their control. Canadians are thus more motivated than the Japanese to believe that they have control over threatening events. Perhaps by possessing "illusions of control" over threatening events one is able to dispel the anxiety that one is potentially vulnerable to those events. Given the more external locus of control of the Japanese, it follows that they are not as likely as the Canadians to report that these threatening events are under their control.

Hence, the above correlations indicate that the Japanese do not respond to threat in the same manner as Canadians. They do not tend to view these threatening events as things that are highly controllable and only happen to stereotypical victims. Apparently, in contrast to Canadians, threat does not induce the Japanese to engage in a defensive self-protective way of thinking.

Self-Enhancement and Construals of Self

Self-enhancing comparisons are the norm for individuals with an independent construal of self, especially when their self-esteem is threatened (Wills, 1987). They provide the self-flattering information necessary to bolster a

sagging ego. However, for those with an interdependent construal of self, the threats to self-esteem are likely to be of a different nature. Threats to the self may often suggest that the individual is different in ways that are preventing him or her from intertwining with the social fabric of the group. Comparisons that exacerbate this difference could hardly be of much help in restoring a sense of belonging. The interdependent self is expected instead to seek confirming instances of his or her belongingness with the group. Thus information that suggests that one is average, as opposed to "better than average," is likely to do more to support self-esteem.

The results of the present study are in support of this argument. Unrealistic optimism did not increase in the face of threat for the Japanese, as it did for the Canadians. It appears to be unrelated to self-protection for the Japanese. Perhaps these types of threat do not jeopardize the integrity of the interdependent self in the same manner that they do for the independent self. A threat to the individual amounts to a threat to the self, for people in independent cultures. It might be the case for Japanese, that a threat to the individual, does not threaten the interdependent network sustaining the Japanese self, and thus self-protective measures are not invoked. We might find that the Japanese engage in self-protective measures instead when their sense of belongingness to the group is threatened. Further research that explores the kinds of events that are most threatening to the interdependent self, and their reactions to that threat, is necessary to resolve this issue.

Unrealistic Optimism and Positive Construals of the Self

Past research has demonstrated that positive construals of the self and self-esteem are associated with both unrealistic and dispositional optimism (Alloy & Ahrens, 1987; Scheier & Carver, 1985). Similarly, in the present study significant correlations were obtained between self-esteem and both unrealistic

optimism and dispositional optimism for both cultures (Japanese $r_s = 0.53$, and 0.40 , Canadian $r_s = 0.77$, and 0.46 , for correlations between self-esteem and the Life Orientation Test, and between self-esteem and the total within-groups optimism bias, respectively). These relations are reflected in the significantly higher self-esteem, dispositional optimism, and unrealistic optimism scores of the Canadians compared to the Japanese. The Japanese do appear to have a less positive construal of their self than that of the Canadians. The Japanese are apparently more likely to admit to negative information about themselves. Self-esteem, or more specifically, what the Rosenberg measure assumes reflects self-esteem, appears to flourish in a Canadian cultural environment, whereas its growth is relatively hampered in Japanese culture. A positive construal of self, then, seems representative of cultures characteristic of independent selves.

In addition, Canadians felt that each of the positive future life events were more likely to happen to themselves than did the Japanese. The aggregate total of the positive events shows that the Canadians also felt that these positive events were more likely to happen to *others* than did the Japanese. The different base rates of the occurrences of these events in the two cultures requires us to interpret these differences with caution, but base rates alone cannot account for the resultant distribution. For example, the Japanese have the longest life expectancy in the world, and on average outlive Canadians by more than 2 years (United Nations, 1991), yet for the item "You will live past 80 years old," the Canadians estimated a greater likelihood of this event happening both for themselves and for others. Hence, apparently the drama of subjective Canadian life is, to a greater extent than the Japanese, a series of positive events for themselves, and even for others.

These results provide further empirical support that the interdependent construal of self is not as likely to pursue positive information, or shun negative information, as is the independent construal of self. Kitayama (1993) argues that the experience of good feelings, i.e. the kind associated with optimism, is akin to identifying positive features of the self, and is thus highly self-affirming for those with independent selves. Western culture encourages people to seek positive aspects of their identity, to establish their worth as individuals, and thereby accomplish the cultural task of independence. In contrast, the demands for the interdependent construal of self are to be as harmonious a member of the in-group as possible, and thus people are encouraged to become particularly sensitive to information that suggests that they as individuals are interfering with the integrity of the group. Negative information about the self is highly instrumental in allowing the interdependent individual to correct his or her deficiencies, thereby deepening relations with others, and achieve the cultural imperative of interdependence (Kitayama & Markus, 1992).

In one sense, the results of this study provide further support to Taylor and Brown's (1988) contention that positive illusions are associated with psychological well-being. The Japanese demonstrated less unrealistic optimism as well as a less positive construal of self. Insofar as a positive construal of self is associated with "well-being," this may be evidence for the relation between illusions and well-being at the cultural, as opposed to the individual, level.

However, it is extremely difficult to accept the notion that Western culture has a monopoly on psychological well-being. A more reasonable conclusion is that the measures of "well-being" used in this and other studies are based on Western conceptions of mental health and do not generalize well to Eastern cultures. The cultural differences in self-enhancing tendencies and positive construals of self that were found in this study suggest a different way to

interpret Taylor and Brown's argument. Perhaps the components of "well-being" (e.g., happiness, positive affect), discussed by Taylor and Brown, and others, are achieved when the individual satisfies the cultural standards of selfhood. For people with an independent construal of self, realization of the cultural ideal requires that one believes that he or she is competent as an individual. Without any objective standards of competence, social comparison theory suggests that we determine our worth by sizing ourselves up to others (Festinger, 1954). Hence, believing that one is better than the average other (or in the case of this study, believing that one's future is better than the average other), is tantamount to believing that one has self-worth in an independent culture. Self-enhancing biases might thus be seen as the necessary tools to construct the sense of self valued by Western culture, thereby achieving well-being.

However, for the interdependent self, well-being is not based on feelings of individual competence, but on feelings of belongingness (Kitayama et al., 1991). Since well-being is not as tied to individual competence, it is also less bound to self-enhancing assessments of one's competence. Therefore, although the pattern of results in this study shows self-enhancing tendencies and measures of well-being going hand in hand for both cultural groups, this may be due to the fact that our definition of "well-being" was derived in a Western context. If we used measures of "well-being" based on feelings of belongingness we might be able to show that it is self-effacement, and not self-enhancement, that is critical to "mental health." Further research on the relation between well-being and positive illusions, employing different cultural definitions of "well-being," will prove fruitful.

General Conclusions and Future Directions

The hypotheses of the present study, as formulated by contrasting the unrealistic optimism literature with the cross-cultural literature, were, for the most

part, supported by the results. The Japanese were less unrealistically optimistic than Canadians, and this was associated with lower self-esteem, lower dispositional optimism, a more external locus of control, and less of an ability to associate stereotypical people with optimism events. Unrealistic optimism has thus been shown to be, similar to other self-enhancing biases researched thus far, influenced by the cultural environment of the respondent. Cultures that foster an interdependent construal of self (e.g., Japan) greatly curtail the manifestation of an optimism bias. In addition, while Canadians demonstrated a significant tendency to be more unrealistically optimistic in the face of particularly threatening events, the Japanese were unaffected. Thus, while unrealistic optimism appears to be a defense mechanism for the Canadians, it apparently does not serve this purpose for the Japanese.

Given our questionnaire format, a possible confound between culture and response set exists. It is possible that a modesty tendency, or a tendency to endorse responses towards the centre of a scale on the part of the Japanese could be responsible for the significant differences in unrealistic optimism. However, there are a number of indicators that cast doubt on this interpretation. First is the absence of any reliable correlations for the Japanese sample between threat and optimism bias, stereotypes, self-stereotypes, and control. If the obtained differences in unrealistic optimism were solely the result of response sets, then we would expect that their optimism judgments would parallel those of the Canadians, but at a lower level. However, the Canadians exhibited an increase in unrealistic optimism, availability of stereotypes, and perceived control, along with a decrease in self-stereotypes, as perceived threat increased, but this was not the case for the Japanese. In addition, the constructs associated with unrealistic optimism, i.e., internal locus of control, availability of stereotypes, and positive construals of self, were all less

pronounced for the Japanese. This pattern would also not be expected if response sets were the only factors behind the obtained differences in unrealistic optimism scores. Last, behavioral experiments, such as Takata's (1992) work on social comparison, show that the Japanese reluctance to self-enhance is not limited to questionnaire data, but extends to the behavioral realm as well. Further research that demonstrates behavioral differences between cultures is necessary to dispel arguments that differences in cross-cultural questionnaire studies are merely the result of cultural differences in response sets.

On the basis of the present findings, future research on the presence of unrealistically optimistic tendencies in the Japanese might be improved by directing attention to five specific issues: First, a more extensive list of positive and negative items should be employed to spotlight any types of events that might consistently show a particularly pronounced bias. This list should be generated by Japanese respondents to ensure that the events are all of considerable importance to them. Second, an absolute measure of the perceived desirability and severity (or threat) of the events should be employed to avoid correlations based on a forced distribution of rankings. This, in conjunction with an expanded list of events, would result in more reliable measures of the relation between threat and optimism bias. Third, it is necessary to explore the types of events that are perceived to be threatening by those with interdependent construals of self. Once this is established, the self-protective measures employed by the interdependent self could be examined and compared to the self-protective measures (e.g., self-enhancement), used by North Americans. Fourth, the presence or absence of other self-enhancing biases not yet explored with the Japanese (e.g., false-consensus effect, hindsight bias) should be established, to determine the circumstances under which the Japanese do or do not self-enhance. And fifth, it is crucial to explore

other cultural notions of well-being, and their relation to self-enhancement, or self-effacement.

References

- Alicke, M. D. (1985). Global self-evaluation as determined by the desirability and controllability of trait adjectives. *Journal of Personality and Social Psychology*, 49, 1621-1630.
- Alloy, L. B., & Ahrens, A. H. (1987). Depression and pessimism for the future: Biased use of statistically relevant information in predictions for self versus others. *Journal of Personality and Social Psychology*, 52, 366-378.
- Barnlund, D. C., & Yoshioka, M. (1990). Apologies: Japanese and American styles. *International Journal of Intercultural Relations*, 14, 193-206.
- Benedict, R. (1946). *The Chrysanthemum and the Sword*. Boston: Houghton Miller.
- Bond, M. H., & Tornatzky, L. G. (1973). Locus of control in students from Japan and the United States: Dimensions and levels of response. *Psychologia*, 16, 209-213.
- Brickman, P., Coates, D., & Janoff-Bulman, R. (1978). Lottery winners and accident victims: Is happiness relative? *Journal of Personality and Social Psychology*, 35, 917-927.
- Campbell, J. D., Trapnell, P. D., Katz, I., & Lavalley, L. (1992). Personality and self-knowledge: Development of the self-concept confusion scale and examination of its personality correlates. Unpublished manuscript, University of British Columbia.
- Chandler, T. A., Shama, D. D., Wolf, F. M., & Planchard, S. K. (1981). Multiattributational causality: A five cross-national samples study. *Journal of Cross-Cultural Psychology*, 12, 207-221.

- Cheek, J. M. (1982). *The Aspects of Identity Questionnaire: Revised scales assessing personal and social identity*. Unpublished manuscript, Wellesley College.
- Cousins, S. D. (1989). Culture and selfhood in Japan and the U.S. *Journal of Personality and Social Psychology*, 56, 124-131.
- Cousins, S. D. (1990). *Culture and social phobia in Japan and the United States*. Unpublished doctoral dissertation, University of Michigan.
- Crary, W. G. (1966). Reactions to incongruent self-experiences. *Journal of Consulting Psychology*, 30, 246-252.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117-140.
- Freedman, J. (1978). *Happy people: What happiness is, who has it, and why*. New York: Harcourt Brace Jovanovich.
- Gonzales, A., & Zimbardo, P. G. (1985, March). Time in perspective. *Psychology Today*, pp. 21-26.
- Greenberg, J., Pyszczynski, T., & Solomon, S. (1982). The self-serving attributional bias: Beyond self-presentation. *Journal of Experimental Social Psychology*, 18, 56-67.
- Greenwald, A. G. (1980). The totalitarian ego: Fabrication and revision of personal history. *American Psychologist*, 35, 603-618.
- Hamaguchi, E. (1985). A contextual model of the Japanese: Toward a methodological innovation in Japan studies. *Journal of Japanese Studies*, 11, 289-321.
- Hamilton, V. L., Blumenfeld, P. C., Akoh, H., & Miura, K. (1990). Credit and blame among American and Japanese children: Normative, cultural, and individual differences. *Journal of Personality and Social Psychology*, 59, 442-451.

- Heine, S. J., Lehman, D. R., Okugawa, O., & Campbell, J. D. (1992). The effects of culture on self-implicated processes: A comparison of Canadians and Japanese. *Ritsumeikan Social Sciences Review*, 28, 3, 29-38.
- Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage.
- Isen, A. M. (1984). Toward understanding the role of affect in cognition. In R. Wyer & T. Srull (Eds.), *Handbook of social cognition* (pp. 174-236). Hillsdale, NJ: Erlbaum.
- Jahoda, M. (1958). *Current concepts of positive mental health*. New York: Basic Books.
- Jourard, S. M., & Landsman, T. (1980). *Healthy personality: An approach from the viewpoint of humanistic psychology* (4th ed.). New York: Macmillan.
- Kahneman, D., & Tversky, A. (1972). Subjective probability: A judgement of representativeness. *Cognitive Psychology*, 3, 430-454.
- Kashima, Y., & Triandis, H. C. (1986). The self-serving bias in attributions as a coping strategy: A cross-cultural study. *Journal of Cross-Cultural Psychology*, 17, 83-97.
- Kirscht, J. F., Haefner, D. P., Kegeles, S. S., & Rosenstock, I. M. (1966). A national study of health beliefs. *Journal of Health and Human Behavior*, 7, 248-254.
- Kitayama, S. (1993). Sociocultural influences in basic psychological processes. NIMH Behavioral Science Task Force, Socio-Cultural Influences Subcommittee, Position Paper.
- Kitayama, S., & Markus, H. R. (1992). Construal of the Self as Cultural Frame: Implications for Internationalizing Psychology. Paper presented at the Symposium for Internationalization and Higher Education.
- Kitayama, S., Markus, H. R., & Kurokawa, M. (1991). Unpublished manuscript.

- Kitayama, S., Markus, Takagi, Sugiman, & Matsumoto. (1992). Unpublished data.
- Kitayama, S., Markus, H., Tummala, P., Kurokawa, M., & Kato, K. (1990). *Culture and self-cognition*. Unpublished manuscript.
- Kojima, H. (1984). A significant stride toward the comparative study of control. *American Psychologist*, 39, 972-973.
- Kunda, Z. (1987). Motivated inference: Self-serving generation and evaluation of causal theories. *Journal of Personality and Social Psychology*, 53, 636-647.
- Langer, E. (1975). The illusion of control. *Journal of Personality and Social Psychology*, 32, 311-328.
- Lebra, T. S. (1976). *Japanese patterns of behavior*. Honolulu: University of Hawaii Press.
- Levenson, H. (1972). Distinctions within the concept of internal-external control: Development of a new scale. *Proceedings of the 80th Annual A.P.A. Convention*, 7, 259-260. (summary)
- Lewinsohn, P. M., Mischel, W., Chaplin, W., & Barton, R. (1980). Social competence and depression. The role of illusory self-perceptions. *Journal of Abnormal Psychology*, 89, 203-212.
- Mahler, I. (1974). A comparative study of locus of control. *Psychologia*, 17, 135-139.
- Markus, H., & Kitayama, S. (1991a). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224-253.
- Markus, H., & Kitayama, S. (1991b). Cultural variation in the self-concept. In G.R. Goethals & J. Strauss (Eds.), *Multidisciplinary perspectives on the self*. New York: Springer-Verlag.
- Myers, D. (1987). *Social psychology* (2nd ed.). New York: McGraw-Hill.

- Myers, D. G., & Ridl, J. (1979). Can we all be better than average? *Psychology Today*, 13, 89-98.
- Nakane, C. (1970). *Japanese society*. Los Angeles: University of California Press.
- Nisbett, R. E., Krantz, D. H., Jepson, C., & Kunda, Z. (1983). Study 2: The use of statistical heuristics in everyday inductive reasoning. *Psychological Review*, 90, 339-363.
- Perloff, L. S. (1983). Perceptions of vulnerability to victimization. *Journal of Social Issues*, 39, 41-61.
- Perloff, L. S. (1987). Social comparison and illusions of invulnerability to negative life events. In C. R. Snyder & C. E. Ford (Eds.), *Coping with negative life events: Clinical and social psychological perspectives*. New York: Plenum.
- Perloff, L. S., & Fetzer, B. K. (1986). Self-other judgements and perceived vulnerability to victimization. *Journal of Personality and Social Psychology*, 50, 502-510.
- Quattrone, G. A., Jones, E. E. (1980). The perception of variability within in-groups and out-groups: Implications for the law of small numbers. *Journal of Personality and Social Psychology*, 38, 141-152.
- Reischauer, E. O. (1988). *The Japanese Today: Change and Continuity*. Harvard: Belknap.
- Rosenberg, M. (1965) *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology*, 4, 219-247.

- Scheier, M. F., & Carver, C. S. (1987). Dispositional optimism and physical well-being: The influence of generalized outcome expectancies on health. *Journal of Personality*, 55, 169-209.
- Schwartz, J. M., & Smith, W. P. (1976). Social comparison and the inference of ability difference. *Journal of Personality and Social Psychology*, 34, 1268-1275.
- Slovic, P., Fischhoff, B., & Lichtenstein, D. (1978). Accident probabilities and seat belt usage: A psychological perspective. *Accident Analysis and Prevention*, 10, 281-285.
- Snyder, C. R. (1978). The "illusion" of uniqueness. *Journal of Humanistic Psychology*, 18, 33-41.
- Svenson, O. (1981). Are we all less risky and more skillful than our fellow drivers? *Acta Psychologica*, 47, 143-148.
- Takata, T. (1992, June). Self-Deprecative Social Comparison in Japan. Paper presented at the Conference on Emotion and Culture, Eugene, OR.
- Taylor, S. E. (1989). *Positive illusions: Creative self-deception and the healthy mind*. New York: Basic Books.
- Taylor, S. E., & Brown, J. D. (1988) Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, 103, 193-210.
- Taylor, S. E., Kemeny, M. E., Aspinwall, L. G., Schneider, S. G., Rodriguez, R., & Herbert, M. (1992). Optimism, coping, psychological distress, and high-risk sexual behavior among men at risk for AIDS. *Journal of Personality and Social Psychology*, 63, 460-473.
- Taylor, S. E., Wood, J. V., & Lichtman, R. R. (1983). It could be worse: Selective evaluation as a response to victimization. *Journal of Social Issues*, 39, 19-40.

- United Nations (1991). Life expectancy at birth. In *United Nations Demographic Yearbook*. New York: United Nations.
- Weinstein, N. D. (1980). Unrealistic optimism about future life events. *Journal of Personality and Social Psychology*, 39, 806-820.
- Weinstein, N. D. (1982). Unrealistic optimism about susceptibility to health problems. *Journal of Behavioral Medicine*, 5, 441-460.
- Weinstein, N. D. (1984). Why it won't happen to me: Perceptions of risk factors and susceptibility. *Health Psychology*, 3, 431-457.
- Weinstein, N. D. (1987). Unrealistic optimism about susceptibility to health problems: Conclusions from a community-wide sample. *Journal of Behavioral Medicine*, 10, 481-500.
- Weisz, J. R., Rothbaum, F. M., & Blackburn, T. C. (1984). Standing out and standing in: The psychology of control in America and Japan. *American Psychologist*, 39, 955-969.
- Wills, T. A. (1981). Downward comparison principles in social psychology. *Psychological Bulletin*, 90, 245-271.
- Wills, T. A. (1987). Downward comparison as a coping mechanism. In C. R. Snyder & C. E. Ford (Eds.), *Coping with negative life events: Clinical and social psychological perspectives*. New York: Plenum.
- Wylie, R. C. (1979). *The self-concept: Theory and research on selected topics*. (Vol. 2). Lincoln, NB: University of Nebraska Press.
- Yamagishi, T. (1988). Exit from the group as an individualistic solution to the free rider problem in the United States and Japan. *Journal of Experimental Social Psychology*, 24, 530-542.
- Yamauchi, H. (1990). Actor and observer attributions by Japanese subjects for success and failure in non-competitive situations. *Psychologia*, 33, 212-219.

Zakay, D. (1984). The influence of perceived event's controllability on its subjective occurrence probability. *The Psychological Record*, 34, 233-240.

Table 1

T-Tests for Individual Optimism Events

Item	Japanese		Canadians	
	Within	Between	Within	Between
1 Become an alcoholic	14.6**	0.92	9.56**	2.93**
2p Enjoy Career	8.56**	3.87**	12.19**	5.75**
3 Attempt suicide	13.11**	0.29	15.68**	1.52
4 Develop skin cancer	2.20*	<u>-1.86(P)</u>	<u>-0.40(P)</u>	<u>-0.47(P)</u>
5p Live past 80	<u>-6.6** (P)</u>	<u>-2.51* (P)</u>	3.09**	0.90
6 Get divorced	6.39**	<u>-0.27(P)</u>	11.12**	5.60**
7p Own your own home	3.62**	2.20*	8.59**	5.88**
8 Have nervous breakdown	5.48**	2.15*	6.06**	0.54
9 Get AIDS	11.2**	0.89	13.85**	3.12**
10 Drop out of university	11.9**	0.04	14.02**	3.57**
11p Leave company for better job	<u>-1.28(P)</u>	1.63	6.33**	3.08**
12p Starting salary > \$30 000	<u>-5.23** (P)</u>	0.91	2.23*	2.74**
13 Make family ashamed	11.27**	<u>-0.52(P)</u>	8.88**	3.83**
14 Have early heart attack	4.07**	<u>-0.24(P)</u>	9.17**	0.32
15 Become senile	2.33*	1.05	5.72**	<u>-0.58(P)</u>

Note: **(P)** - indicates that the item was responded to in a pessimistic manner

* - $p < .05$

** - $p < .01$

Table 2

T-Tests for Aggregated Events

Item	Japanese		Canadians	
	Within	Between	Within	Between
Positive (5)	0.223	2.11*	10.63**	5.57**
Negative (10)	15.53**	<u>-0.46(P)</u>	18.28**	3.26**
All (15)	13.94**	0.63	19.56**	5.89**

Note: **(P)** - indicates that the items were responded to in a pessimistic manner.

** - $p < .01$

* - $p < .05$

Table 3

Anova and Means per Future Life Event

Item	Japanese		Canadians	
	Within	Between	Within	Between
1 Become an alcoholic	-1.55	1.96	-1.56	9.52
2p Enjoy Career	-0.82	-10.47	-1.27**	-19.12
3 Attempt suicide	-1.49	0.7	-2.07**	4.44
4 Develop skin cancer	-0.16	<u>-5.33(P)</u>	<u>0.06(P)</u>	<u>-1.88(P)</u>
5p Live past 80	<u>0.51(P)</u>	<u>6.78(P)</u>	-0.45**	-4.44*
6 Get divorced	-0.66	<u>-0.72(P)</u>	-1.52**	21.50**
7p Own your own home	-0.29	-6.50	-1.12**	-21.69**
8 Have nervous breakdown	-0.59	<u>-5.52(P)</u>	-0.99*	2.34
9 Get AIDS	-0.92	2.37	-1.81**	7.60
10 Drop out of university	-1.36	0.10	-1.98**	13.42**
11p Leave company for better job	<u>0.13(P)</u>	-5.14	-0.75**	-14.01
12p Starting salary > \$30 000	<u>0.42(P)</u>	-2.96	-0.32**	-13.67
13 Make family ashamed	-1.18	<u>-1.10(P)</u>	-1.29	14.86**
14 Have early heart attack	-0.34	<u>-0.60(P)</u>	-1.29**	1.05
15 Become senile	-0.16	2.97	-0.76**	<u>-2.47(P)</u>

Note: The numbers in the within columns represent the average relative likelihood estimates for each respondent on a (-3 to +3) 7-point scale. Negative numbers represent an optimistic tendency. The numbers in the between columns represent the mean percentage estimates of the average same-sex student from the respondents' university less the mean percentage estimates for self. Positive values represent optimistic tendencies for the negative events, and pessimistic tendencies for the positive events. Stars in any column represent a significantly greater optimistic tendency than the other cultural group for that particular event.

(P) - indicates that the items were responded to in a pessimistic manner.

** - Anova between cultures is significant at $p < .01$

* - Anova between cultures is significant at $p < .05$

Table 4

Anova for Aggregated Future Life Events and Means

Item	Japanese		Canadians	
	Within	Between	Within	Between
Positive (5)	-0.01	-3.64	-0.77	-14.79
Negative (10)	-0.84	0.30(P)	-1.32	-7.23
All (15)	-0.56	-0.65	-1.15	-9.43

Note: **(P)** - indicates that the items were responded to in a pessimistic manner.

Positive	Within:	$F_{(1,279)} = 93.588, p < .001$
	Between:	$F_{(1,272)} = 14.056, p < .001$
Negative	Within:	$F_{(1,280)} = 26.610, p < .001$
	Between:	$F_{(1,275)} = 7.728, p < .01$
All	Within:	$F_{(1,279)} = 65.391, p < .001$
	Between:	$F_{(1,270)} = 21.899, p < .001$

Table 5

Anova for Self/Other Estimates

Item	Japanese		Canadians	
	Self	Other	Self	Other
Positive	47.07	43.46*	67.60	52.81**
Negative	20.68	20.39	18.06	25.29**

* (Within culture analysis) self \neq other, $p < .05$

** (Within culture analysis) self \neq other, $p < .01$

Between culture analyses:

Positive: Self: $F_{(1,139)} = 110.538$, $p < .001$
 Other: $F_{(1,133)} = 17.214$, $p < .001$
 Interaction: $F_{(1,276)} = 11.743$, $p < .001$

Negative: Self: $F_{(1,139)} = 1.8$, $p > .10$
 Other: $F_{(1,136)} = 6.852$, $p < .01$
 Interaction: $F_{(1,278)} = 7.760$, $p < .01$

Table 6

Anova and Means for Aggregated Control, Stereotype, and Self-Stereotype Items

	Japan	Canada	
Positive Control	15.36	18.89	$F_{(1,277)} = 93.004, p < .001$
Negative Control	31.85	37.05	$F_{(1,277)} = 52.04, p < .001$
Total Control	47.23	56.04	$F_{(1,277)} = 82.852, p < .001$
Positive Stereotype	9.19	11.74	$F_{(1,275)} = 91.182, p < .001$
Negative Stereotype	16.91	20.54	$F_{(1,273)} = 55.35, p < .001$
All Stereotypes	26.08	32.30	$F_{(1,272)} = 84.218, p < .001$
Positive Self-Stereotype	14.76	19.42	$F_{(1,276)} = 267.32, p < .001$
Negative Self-Stereotype	22.65	19.87	$F_{(1,277)} = 20.935, p < .001$

Note: The positive and negative self-stereotypes are not combined because their valences are in the opposite direction, and would thus confound any comparisons.

Table 7

Anova for Average Adjusted+ Correlations Between Desirability/Severity, Stereotypes, Self-Stereotypes, Control, and the Optimism Bias

Positive Events

	Desirability	Stereotypes	Self-Stereo.	Control	Opt. Bias
Desirability	1.00	-0.30**	-0.47**	-0.32**	-0.53**
Stereotypes	<u>-0.40**</u>	1.00	0.51**	0.59**	-0.34*
Self-Stereo.	<u>-0.39**</u>	<u>0.20</u>	1.00	0.59**	-0.62**
Control	<u>-0.32**</u>	<u>0.68**</u>	<u>0.68**</u>	1.00	-0.40**
Opt. Bias	<u>-0.45**</u>	<u>-0.63*</u>	<u>-0.62**</u>	<u>-0.43**</u>	1.00

Negative Events

	Severity	Stereotypes	Self-Stereo.	Control	Opt. Bias
Severity	1.00	<u>-0.05*</u>	<u>0.03</u>	<u>-0.08**</u>	<u>-0.01</u>
Stereotypes	<u>-0.22**</u>	1.00	-0.12**	0.40**	-0.11*
Self-Stereo.	<u>0.23**</u>	<u>-0.07</u>	1.00	-0.39**	0.68**
Control	<u>-0.33**</u>	<u>0.39**</u>	<u>-0.40**</u>	1.00	-0.35**
Opt. Bias	<u>-0.18**</u>	<u>-0.04</u>	<u>0.75**</u>	<u>-0.30**</u>	1.00

Note: Correlations in the upper right triangle are for the Japanese sample, and correlations in the lower left triangle are for the Canadian sample. Underlined correlations are significantly different between cultures ($p < .01$).

+ - Correlations were first converted to Fisher Z-scores to approximate a normal distribution.

* - $z \neq 0$, $p < .05$

** - $z \neq 0$, $p < .01$

Table 8

Anova and Means for the Remaining Scales

Scale	Japan	Canada	
Life Orientation Test	24.64	28.00	$F_{(1,281)} = 34.9, p < .001$
Rosenberg Self-Esteem	32.26	39.37	$F_{(1,258)} = 86.14, p < .001$
Self-Concept Confusion	36.99	32.60	$F_{(1,258)} = 25.66, p < .001$
IPC - Internal Control	27.18	29.29	$F_{(1,258)} = 15.25, p < .001$
IPC - External Control	21.72	18.80	$F_{(1,258)} = 37.90, p < .001$
IPC - Luck Control	23.95	19.36	$F_{(1,258)} = 84.77, p < .001$

Table 9

Correlations of Remaining Scales with the Optimism Bias

	Opt. Bias	Self-Esteem	SCC	LOT	Int. Control	Ext. Control
Opt. Bias	1.00	-0.40**	0.38**	-0.24**	-0.26**	<u>0.05</u>
Self-Esteem	-0.46**	1.00	<u>-0.46**</u>	<u>0.53**</u>	0.29**	-0.29**
SCC	0.52**	<u>-0.63**</u>	1.00	<u>-0.24**</u>	-0.23**	0.32**
LOT	-0.32**	<u>0.77**</u>	<u>-0.50**</u>	1.00	0.20**	-0.29**
Int. Control	-0.41**	0.40**	-0.40**	0.36**	1.00	-0.12
Ext. Control	<u>0.41**</u>	-0.46**	0.47**	-0.36**	-0.23*	1.00
Luck Control	<u>0.34**</u>	<u>-0.40**</u>	0.44**	<u>-0.37**</u>	<u>-0.44**</u>	0.56**

Note: Correlations in the upper right triangle are for the Japanese sample, and correlations in the lower left triangle are for the Canadian sample. Underlined correlations are significantly different between cultures ($p < .06$).

* - $r \neq 0, p < .05$

** - $r \neq 0, p < .01$