Why Is Student Deviance Lower in Japan than in the U.S.? Influences of Individual, Parental, Peer, Social, and Environmental Factor

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Abstract
Drawing on the cultural collectivism-individualism literature, we predict that Japanese students, compared to Americans, tend to commit fewer deviant acts because they are less inclined toward individualistic value-orientations, risk seeking, negative emotionality, and subjective stress; because they are exposed to greater parental discipline and have stronger parental attachment; because they have weaker peer attachment and associate with peers who react less favorably to deviance; because they have stronger bonds to conventional society and greater social support from significant others; and because they are exposed to fewer deviance opportunities. Analyses of comparable data from college students in Japan (N=469) and the U.S. (N=594) provided mixed support for our predictions. As expected, Japanese students committed fewer deviant acts during their high school days. Furthermore, consistent with expectations, Japanese students had lower scores on all four individual factors, the two peer factors, and the environmental factor of deviance opportunities. After controlling for these seven factors, the effect of Japan versus the U.S. decreased by one-third. The decrease was not greater at least partly because, in Japan, compared to the U.S., risk seeking had significantly less influences on student deviance, and subjective stress had significantly more influence on student deviance.

Keywords
comparative criminology, student deviance, collectivism-individualism, Japan-US comparison

Introduction

It is well known that Japanese, compared to Americans, commit fewer criminal and deviant acts (Bui & Farrington, 2019). It is also generally accepted that the stronger cultural orientation toward collectivism, which presumably forms the basis of personality traits, child-rearing methods, peer relationships, social control, and exposure to deviance opportunities, contributes to the lower levels of deviance in Japan. With few exceptions (e.g., Fukushima, Sharp, & Kobayashi, 2009; Kobayashi & Farrington, 2019; Kobayashi, Grasmick, & Friedrich, 2001), however, individual, parental, peer, social, and environmental influences on different levels of deviance between these two culturally diverse countries have not been directly examined and thoroughly tested, which is the main aim of this article.

Several comparative studies of Japanese and Americans concerning criminological theories have been conducted. Kobayashi et al. (2001), for example, used Japanese and English versions of an identical questionnaire to study the effects of formal and informal sanctions on workplace deviance among hospital employees in the two countries. Fukushima et al. (2009) tested the cross-cultural applicability of social bonding theory with comparable data from college students in the two countries. More recently, Kobayashi and Farrington (2019) assessed whether social learning theory could explain lower levels of deviance in high school among Japanese compared to Americans. These comparative studies were theoretically driven studies of the applicability of three criminological theories, extended deterrence (Grasmick & Bursik, 1990), social bonding (Hirschi, 1969), and social learning (Akers, 1985, 1998), across the two different cultures, Japan and the U.S. Consequently, these previous studies are not as broad in scope as the present article.

With our comparable survey data from college students in Japan and the U.S., we examine the extent to which cultural collectivism-individualism, which presumably is manifested in personality traits, child-rearing methods, peer relationships, social control, and deviance opportunities, can explain different levels of deviance during the high school days between the two countries. Specifically, we focus on the influences of personality traits such as individualistic

value-orientations and risk seeking which, according to Tittle and Paternoster (2000), are causes of deviance that are located internal to the individual and that, in most cases, are formed in early childhood and motivate deviance. We also pay attention to the influences of child-rearing methods, peer relationships, various forms of social control, and perceived deviance opportunities which, in Tittle and Paternoster's terminology, are causes of deviance that are external to the individual and that, in general, are learned in childhood socialization or upon entry to new situations. Therefore, we can extensively assess individual, parental, peer, social, and environmental influences on the different levels of deviance between Japan and the U.S., much like others previously have assessed these influences across categories of gender (Gilligan, 2003; see also Tittle & Paternoster, 2000, especially pp. 366-368).

Cultural Collectivism-Individualism: Implications for Personality Traits, Child-Rearing Methods, Peer Relationships, Social Control, and Deviance Opportunities

A large body of research on collectivism-individualism in Japan and the U.S. has suggested that American culture and American people are more individualistic than are Japanese (e.g., Gudykunst et al., 1996; Kobayashi, Kerbo, & Sharp, 2010; Takano & Osaka, 1999). Our framework for predictions concerning the individual, parental, peer, social, and environmental influences on lower levels of deviance in Japan, compared to the U.S., stems from this distinction. We argue that certain personality traits, child-rearing methods, peer relationships, social control, and deviance opportunities, which were identified by Tittle and Paternoster (2000) as causes of deviance, should be more or less prevalent depending on the extent to which the culture and the individuals in it are collectivistic or individualistic. These causes of deviance, in varying degrees, are then expected to account for at least some of the differences in levels of deviance between Japanese and Americans.

The most widely known statement that Japan, in contrast to the U.S., is more collectivistic is Benedict's (1946) *The Chrysanthemum and the Sword* (see also Abegglen, 1958). The idea that Japan tends more toward collectivism, while the U.S. tends more toward individualism also

gained popularity among Japanese scholars (e.g., Doi, 1971; Kawasaki, 1969, Nakane, 1970). In the 1980s, researchers, especially Hofstede (1980; Hofstede & Bond, 1984) in the field of cross-cultural psychology, began developing measures of cultural individualism-collectivism and using these measures to collect data from countries around the world. In his seminal empirical study of IBM workers in different countries, Hofstede (1980; Hofstede & Hofstede, 2005) reported that American workers in their work setting were significantly more individualistic than were Japanese workers.

"Individualism", in this context, means placing an emphasis on individual identity over group identity, individual needs over group obligations, and individual pleasure over adherence to group norms. "Collectivism," on the other hand, grants priority to group identity over individual identity, shared in-group beliefs over unique individual beliefs, and cooperation with in-group members over maximizing individual outcomes (see Gudykunst et al., 1996). In addition, it is observed that collectivistic cultures tend to be tight cultures whereas individualistic cultures tend to be loose cultures (Carpenter, 2000; Triandis, 1994). Due to the Confucian teachings, island geography, and cultural homogeneity, Triandis (1994) argued that Japan is a particularly tightly-structured society, which is manifested in the strength of sanctioning of deviation from societal norms. In fact, a majority of the Confucian teachings, which are closely tied to Buddhism and Shintoism, advocate the importance of "correct behavior." Therefore, Japanese, more so than Americans, are inclined to merge themselves into a tighter collectivistic society, and thus their culture is less likely to allow deviation from normative behavior.

Individual Influence

Since Hofstede's original formulation and research, others have modified his basic idea. Hofstede's scale items were unique to the workplace. In the tradition of theory and research on "value orientations" (Rokeach, 1973), Schwartz (1992) designed more global measures of individualism-collectivism as general value orientations. We argue, based on previous cross-cultural research and theories, that Japanese in a less individualistic culture, in contrast to

Americans, are oriented less toward individualistic values such as a sense of accomplishment and independence, because these values, in general, serve individual interests rather than strengthening cooperation among group members. This lower inclination toward individualistic values, in turn, might explain why deviance is less common among Japanese, compared to Americans.

A similar logic leads us to predict that risk seeking will tend to be lower among Japanese. According to Triandis (1988), members of individualistic cultures are more strongly encouraged to pursue individual pleasure and maximize individual potential. Conversely, members of collectivistic cultures, especially members of tight cultures like Japan, should have more pressure to avoid taking risks, because risk seeking is equivalent to deviation from normative behavior. Consequently, we would expect Japanese to score lower on risk seeking, thus leading to lower levels of deviance among Japanese than among Americans.

Negative emotionality, such as anger and resentment, is another suggested cause of deviance (see Agnew, 1992). However, these emotions might not be as common in Japan, which is less individualistic than the U.S., because Japanese may experience more pressure in their socialization to suppress their negative emotions in a manner that is not disruptive of the collectivity. If so, then Japanese, more so than Americans, will be expected to score lower on these negative emotions, perhaps accounting for the lesser likelihood for Japanese to participate in deviant acts.

Similarly, Agnew's (1992) conceptualization of strain from potentially stressful life events as a proposed cause of deviance, like negative emotionality in his general strain theory, might be less prevalent in Japan than in the U.S. (Roberts & LaFree, 2004). It is possible that individuals in both Japan and the U.S. are exposed to stressful life events, including exposure to negatively valued stimuli (e.g., unfair school treatment) and to the removal of positively valued stimuli (e.g., friendship breakups). However, the subsequent strain which individuals experience from such life events could be lower among Japanese, for whom emotional balance for the sake of group

harmony has a higher priority than the needs of their own emotions. These lower levels of subjective stress, in turn, might explain why deviance is less common among Japanese, compared to Americans.

Parental Influence

A large number of studies have suggested that collectivistic cultures, relative to individualistic cultures, should be more effective in applying controls or constraints in order to inhibit deviant behavior (e.g., Bui & Farrington, 2019; Kobayashi et al., 2001). Thus, in more collectivistic Japan, with a stronger emphasis on conformity to group expectations, parents should experience more pressure to induce conformity in their children during the socialization process (Rice, 2001). In the words of Gottfredson and Hirschi (1990, p. 97), Japanese parents, compared to Americans, should be more likely to (1) monitor their child's behavior, (2) recognize deviance when it occurs, and (3) punish such behavior.

In addition, because of the stronger emphasis on the importance of family and family relationships, individuals in collectivistic cultures should be socialized in families to have greater affectional identification and more intimate communication with their parents. Using Hirschi's (1969) terminology, Japanese should have stronger parental attachment. Consequently, this stronger parental attachment, along with greater parental discipline, would bind Japanese more to the conventional social order, thus leading to a lesser likelihood for Japanese to participate in deviance than Americans.

Peer Influence

Our expectations concerning the different levels of peer attachment and peer approval of deviance between Japanese and Americans are grounded in the literature on cultural variation in the tightness-looseness dimension, which is closely related to cultural collectivism-individualism. With increased cultural tightness comes stronger sanctioning of deviation from societal norms (Pelto, 1968), and thus weaker attachment to peers who tend to be delinquent rather than conventional in adolescence. If so, then Japanese, compared to Americans, would be expected to

score lower on peer attachment, perhaps accounting for their lower levels of deviant behavior.

A similar logic leads us to predict that peer reactions to deviance will tend to be less favorable among Japanese. In a more collectivistic and tighter setting like Japan, with a stronger emphasis on conformity to societal norms, children should experience more pressure to avoid interacting with delinquent friends during their socialization process. If so, we would expect Japanese to have peers who react less favorably to deviance than Americans, which, in turn, could account for the lower levels of deviance among Japanese.

Social Influence

According to Hirschi (1969), individuals who are weakly bonded to society lack social constraints against deviance, and thus they are freer to commit such deviant acts. However, because of the findings that Japan tends more toward collectivism and is more likely to value conformity than the U.S., we would reasonably infer that Japanese tend to have stronger bonds to society, which are apparent in their stronger attachment to conventional persons and institutions, greater commitment to socially valued goals, greater involvement in conventional activities, and stronger belief in the legitimacy of law. If so, then perhaps these stronger bonds to society would increase norm-conforming behaviors among Japanese, compared to Americans.

Furthermore, the presence or absence of social support from significant others may explain the conformity and deviance of individuals (Cullen, 1994). If a youth has more emotional support in their social network including, for example, siblings and teachers, these young people can obtain more means to cope with difficult situations. Thus, social support binds individuals to the conventional social order, which, in turn, could increase constraints against deviation from this social order. If so, then based on the findings that Japanese culture, relative to U.S. culture, places a greater emphasis on relationships with others, we would expect Japanese to have greater social support from significant others, which, in consequence, could account for lower levels of deviance among Japanese than among Americans.

Environmental Influence

As noted earlier, cultural collectivism-individualism is closely linked to the tightness-looseness dimension in many cultures, which is a distinction that has implications for individual perceptions of opportunities to commit deviance. Specifically, deviation from normative behavior is not tolerated in Japanese culture, which is more collectivistic and tighter than the U.S. Consequently, we would expect Japanese to perceive fewer opportunities for deviance, leading to a lesser likelihood for Japanese to eventually commit deviant acts than Americans.

Hypotheses

These speculations above, which we generate on the basis of existing literature, lead to the following hypotheses that our research is designed to test:

H1: The level of deviance is expected to be lower among Japanese students than among Americans.

H2: This expected difference may be attributable to differences between Japanese and American students in four personality traits (i.e., individualistic orientation, risk seeking, negative emotionality, and subjective stress), two child-rearing methods (i.e., parental discipline and parental attachment), two forms of peer relationships (i.e., peer attachment and peer reactions to deviance), five forms of social control (i.e., attachment to conventional persons/institutions, commitment, involvement, belief, and social support), and deviance opportunities. We expect that all four personality traits are less common among Japanese students than among Americans. We also expect Japanese students to have lower scores on peer attachment, favorable peer reactions to deviance, and deviance opportunities. Conversely, we expect Japanese students to score higher on both methods of child-rearing and all five forms of social control. These differences in personality traits, child-rearing methods, peer relationships, social control, and deviance opportunities are, in turn, expected to account at least to some extent for the lower levels of student deviance among Japanese that we expect to find.

Research Methods

Given available resources, we aimed to obtain analyzable samples of about 600 students in

each country. For reasons linked to race and ethnicity that are explained below, this required a larger initial sample in the U.S. than in Japan.

Samples and Data Collection

Data for this research were obtained from a larger cross-cultural study of deviance in Japan and the U.S. Identical survey questionnaires, in two different languages, were administered online to samples of students in two comparable public universities, one in the northwestern part of Japan and the other in the southeastern part of the U.S.[1] Initially, the questionnaire was designed in English by one of the authors. Through a series of pre-tests, it was then translated into Japanese using "back translation" (Matsumoto & Juang, 2016).

In Japan, this is a national university with a total enrolment (graduate and undergraduate) of approximately 11,000 students. In the U.S., this is one of the major state universities that are most comparable to national universities in Japan. The U.S. university has a total enrolment of approximately 52,500 graduate and undergraduate students. The Japanese questionnaire was administered in the Japanese university during April through May 2011, while the English questionnaire was administered in the U.S. university during January through March 2013. The enrollment in the Japanese university included about 1,800 freshmen, and the Japanese sampling frame contained a list of all of them with all 16 majors including, among others, education, economics, science and medicine.[2] In the U.S., students were enrolled in several lower-division courses that fulfilled one of the general education requirements at the university and were taken primarily by freshmen with various major interests.

A total of 812 students in the Japanese university and 1,149 students in the U.S. university agreed to participate in the online surveys, with a cover letter clearly stating that participation was voluntary and that all responses were anonymous.[3] To control for the possible effects of racial and ethnic differences among students in the U.S. (which essentially do not exist in Japanese universities), 407 non-white students in the American sample and 21 non-Japanese students in the Japanese sample, along with those who were 21 years old or over, were excluded.[4,

[5] These restrictions, plus missing data on key variables which are described below, resulted in an *N* of 469 for the Japanese sample and 594 for the American sample.[6] In the Japanese sample 48.4% were male and 51.6% were female, while in the American sample 44.6% were male and 55.4% were female.[7] Other potential differences between the two samples were considered that might need to serve as control variables and they are described in more detail below.

Measures

Questionnaire items measuring the outcome and intervening variables were drawn from the existing literature and, in most cases, the items were very similar to those used in previous research.

Student deviance. Our measure of student deviance included eight non-drug related behaviors during the high school days: Bullied physically or mentally, destroyed public or private property, took things from some place, cheated in school, hurt oneself on purpose, drove without a seatbelt or a helmet, exceeded the speed limit by 15mph or more, and drove under the influence of alcohol (see Fukushima et al., 2009; Kobayashi & Farrington, 2019). All of the behaviors have been typically included in tests of criminological theories in the U.S. To measure student deviance, students were asked how often they engaged in each of these behaviors while they were in high school. Responses were given on a five-point scale ranging from "never" (coded 1) to "very often" (coded 5).[8]

With these eight items, the eigenvalue from principal component analyses strongly suggested that there was only one underlying factor. Cronbach's *alpha* for the linear composite of the eight items was .76 and was greatest when all of these items were retained in the scale. The mean on the student deviance scale for the combined Japanese and American sample was 10.73 (*SD*=3.42).

Individual factors. In the analyses, four personality traits were included: (1) individualistic orientation, (2) risk seeking, (3) negative emotionality, and (4) subjective stress. The present study included questionnaire items from refinements of Schwartz's (1992) scales that were employed by Gudykunst et al. (1996) and were designed to measure individualistic orientation.

On a five-point scale ranging from "not at all important" (coded 1) to "extremely important" (coded 5), students were asked to indicate how important each of the following values was as a guiding principle in their lives. The three items that were identified as "individualistic values" were: (a) a sense of accomplishment, (b) self-respect, and (c) independence. A principal component analysis of these items for the combined sample clearly suggested a single factor. Cronbach's *alpha* for the linear composite was .79 and was greatest when all three items were included in the scale. The mean on individualistic orientation for the combined sample was 12.76 (*SD*=2.21).

For our measure of risk seeking, students were asked to agree or disagree along a four-point scale ranging from "strongly disagree" (coded 1) to "strongly agree" (coded 4) on the four items, which were drawn from the most commonly used measure of low self-control by Grasmick et al. (1993). The four items were: (a) I like to test myself every now and then by doing something risky; (b) Sometimes I will take a risk just for the fun of it; (c) I something find it exciting to do things I might get in trouble for; and (d) Excitement and adventure are more important to me than security. A principal component analysis of the combined sample yielded a single factor. The linear composite of the four items had an *alpha* of .83, which was greatest when all these items were in the scale. The mean on the risk seeking scale for the combined sample was 8.69 (*SD*=2.80).

Agnew's (1992) general strain theory attaches much importance to negative emotions, especially anger. In this study, students were asked how often they feel (a) angry, (b) frustrated, and (c) resentful when bad things happen to them (see Sharp et al., 2001). Responses were coded on a four-point scale ranging from "never" (coded 1) to "often" (coded 4). A principal component analysis of the combined sample indicated a single factor. Cronbach's *alpha* for the linear composite of the items was .70 and was greatest when all three items were included in the scale. The mean on the negative emotionality scale for the combined sample was 8.35 (*SD*=2.05).

Our measure of subjective stress was based on the following four events: (a) A parent lost a

job, (b) High school teachers treated students unfairly; (3) A boyfriend or girlfriend broke up with me; and (4) A friend broke off his or her friendship with me. Rather than asking students if they had experienced these events while growing up (i.e., objective strain), our measure followed Agnew's (2009) suggestion that strain from such events should be measured subjectively. Therefore, for each of the four events, students were asked how much they had been "bothered" by the event. Possible responses were "did not bother me at all," "did not bother me very much," "bothered me somewhat," "bothered me very much," and "did not occur" (see Fukushima, Sharp, & Kobayashi, 2015). Because of skewness in the distributions, responses were dichotomized, with 0 assigned to students who did not experience the event or were not bothered at all by it. A score of 1 was assigned to all other responses. The dichotomy for each of the four items was then summed to create the scale subjective stress, which was a count of the number of these four subjective stressful life events that had bothered the students at all while growing up. The mean on the subjective stress scale for the combined sample was 1.25 (*SD*=1.19).

Parental factors. In the analyses, two child-rearing methods were included: parental discipline and parental attachment. The three prenatal behaviors that Gottfredson and Hirschi (1990) identified as effective parenting formed the basis of a parental discipline measure. To measure parental discipline, students were asked, "While I was growing up, (a) my parents or guardians kept a pretty close eye on me; (b) my parents recognized when I had done something wrong; and (c) my parents or guardians punished me when they knew I had done something wrong. Responses were presented on a four-point scale ranging from "strongly disagree" (coded 1) to "strongly agree" (coded 4). A principal component analysis of the combined sample indicated a single underlying factor. The three item scale for parental discipline had an *alpha* of .78, which was greatest when all these items were in the scale. The mean on the parental discipline scale for the combined sample was 9.86 (*SD*=1.83).

Our measure of parental attachment had two dimensions: affectional identification and intimate communication. The items were very similar to those used in Hirschi's (1969) own

research. To measure affectional identification with parents, students were asked to answer the following two questions for each parent, using a four-point scale ranging from "strongly disagree" (coded 1) to "strongly agree" (coded 4): While I was growing up, (a) I would like to be the kind of person my mother/mother figure was; and (b) my mother/mother figure usually stuck by me if I got into really bad trouble. The variable affectional identification with parents was created by summing the values for father and mother for each of the two items. A principal component analysis of the combined sample indicated a single underlying factor. The linear composite of the items had an *alpha* of .71.

To measure intimate communication with parents, students were asked to answer the following four questions for each parent, using a four-point scale ranging from "strongly disagree" (coded 1) to "strongly agree" (coded 4): While I was growing up, (a) I usually shared my thoughts and feelings with my father/father; (b) I usually talked over my future plans with my father/father figure; (c) when I did not know why my father/father figure made a rule, he usually explained the reason; and (d) When I came across things I did not understand, my father/father figure usually helped me with them. As was the case with affectional identification with parents, the variable intimacy of communication with parents was created by summing the values for father and mother for each of the four items. A principal component analysis of the combined sample indicated a single underlying factor. The four item scale for intimate communication with parents had an *alpha* of .86.

With a goal of parsimony, we further examined the possibility of creating an overall scale of parental attachment with these two scales. The results of a reliability analysis of the linear composite of the two scales justified the creation of this single overall scale. Thus, the parental attachment scale was the sum of the scores of affectional identification with parents and intimate communication with parents, with an *alpha* of .90. The mean on the parental attachment scale for the combined sample was 38.21 (*SD*=6.80).

Peer factors. The analyses included two forms of peer relationships: (1) peer attachment and (2)

peer reactions. The peer attachment scale was created by combining the scores of the following three items, which were identical to those used in Hirschi's (1969) research: (a) I would like to be the kind of person my closest friends are; (b) I respect my closest friends' opinions about the important things in life; and (c) My closest friends would stick by me if I got into really bad trouble. Responses were coded on a four-point scale ranging from "strongly disagree" (coded 1) to "strongly agree" (coded 4). A principal component analysis of the combined sample yielded a single factor. The three item scale for peer influence had an *alpha* of .76, which was greatest when all these items were in the scale. The mean on the peer attachment scale for the combined sample was 9.56 (*SD*=1.88).

The items used to measure peer reactions were adapted from the Boys Town Study, which was conducted by Akers and his associates (see Akers et al, 1979). For our measure of peer reactions, students were asked, whether or not they engaged in each of the following behaviors, what most of their friends would have done if their friends had found out about their engagement in it. Responses were given for each of the eight behaviors with seven response options, which were then classified into three categories of "negative (or punishing) reactions" (e.g., my friends would have criticized my engagement in the behavior) (coded 1) or "positive (or rewarding) reactions" (e.g., my friends would have become close friends) (coded 3), with a neutral middle category of "no reaction" (my friends would have disapproved but would have done nothing) (coded 2). A principal component analysis of the combined sample indicated a single underlying factor. Cronbach's *alpha* for the linear composite was .87 and was greatest when all eight items were included in the scale. The mean on the peer reactions scale for the combined sample was 11.12 (*SD*=3.33).

Social factors. In the analyses, five forms of social control were included: (1) attachment to school; (2) commitment to socially valued goals; (3) involvement in conventional activities; (4) belief in the legitimacy of law; and (5) social support from significant others.

The items to measure the four components of social bonds (i.e., attachment, commitment,

involvement, and belief) were very similar to those used in Hirschi's (1969; see also Junger & Marshall, 1997) own research, and the questionnaire contained a total of fifteen items. Three items were used to measure school attachment: (a) I liked going to high school; (b) My high school teachers were willing to listen to my opinions and ideas; and (c) I cared what my high school teachers thought of me. Response options were coded on a four-point scale ranging from "strongly disagree" (coded 1) to "strongly agree" (coded 4). A principal component analysis of the combined sample indicated a single underlying factor. The linear composite of the items had an *alpha* of .69, which was greatest when all three items were included in the scale. The mean on the school attachment scale for the combined sample was 9.32 (*SD*=2.04).

Commitment to socially valued goals was assessed by the importance students placed on achieving three conventional goals: (a) making good grades at school; (b) acquiring useful skills and qualifications to get the job that I want; and (c) achieving material success. Response options ranged from "not very important" (coded 1) to "very important" (coded 4). Students also could respond by choosing an option that they had "no goals in this area," and those who chose the option were assigned a score of 1, which was equivalent to "not very important." A principal component analysis of the combined sample yielded a single factor. Cronbach's *alpha* of the linear composite was .64, which was greatest when all three items were in the scale. The mean on the commitment scale for the combined sample was 9.93 (*SD*=2.12).

The involvement variable was measured according to the overall time that students spent on conventional activities. Six types of activities were (a) working at a job, (b) participation in community organizations, (c) involvement in non-athletic school activities, (d) participation in athletic school activities; (e) attending non-academic classes outside of school, and (f) taking exam preparation classes. Students were asked how many hours per week they were involved in each of these activities. The involvement scale was created by summing the hours of participation in each of the six activities. The mean on the involvement scale for the combined sample was 15.35 (*SD*=10.08).

The scale for belief in the legitimacy of law was assessed with the following three items: (a) It is all right to get around the law if I can get away with it; (b) To get ahead, I have to do some things that are not right; and (c) People should let other people do what they want to do as long as nobody gets hurt, even if it is against the law. The response options were presented on a four-point scale ranging from "strongly disagree" (coded 1) to "strongly agree" (coded 4). A principal component analysis of the combined sample indicated a single factor. The three item scale for belief in the legitimacy of law was .79 and was greatest when all these items were included in the scale. The mean on the belief scale for the combined sample was 8.72 (*SD*=2.13).

In addition to these four measures of social bonding, we included items on the presence of social support from significant others. Students were asked how often they had talked over their future plans or problems with each of the following eight categories of people: (a) my mother/mother-figure; (b) my father/father-figure; (c) brothers and/or sisters; (d) other relatives; (e) people my age, (f) religious/spiritual leaders; (g) my teachers at elementary, junior high, and/or high school; and (h) other unrelated older adults (see Hirschi, 1969). Response options ranged from "never" (coded 1) to "often" (coded 4). A principal component analysis of the combined sample indicated a single underlying factor. The eight item scale for social support had an *alpha* of .79, which was greatest when all these items were included in the scale. The mean on the social support scale for the combined sample was 19.59 (*SD*=4.55).

Deviance opportunities. Our measure of perceived deviance opportunities was developed on the basis of Grasmick et al.'s (1993) self-reported delinquency scale. On a five-point scale ranging from "never" (coded 1) to "very often" (coded 5), students were asked to answer the following two questions: While you were in high school, (a) "how often did you have the opportunity to accomplish your goals by using or threatening to use force against someone?" and (b) "how often did you have the opportunity to get something you could not obtain otherwise by distorting the truth or falsely representing something?" A principal component analysis of the combined sample indicated a single underlying factor. The two item scale for deviance opportunities had

an *alpha* of .57. The mean on the deviance opportunities scale for the combined sample was 3.12 (*SD*=1.40).

Culture. Culture – i.e., Japanese versus American – is the key explanatory variable. In all analyses, culture was coded 1 for Japanese students and 0 for Americans.

Control variables. In all analyses, we controlled for five variables which typically have been included in studies of deviance and on which the Japanese and American samples might also differ. "Minority status" was not one of these variables since all such students were excluded from the analyses.

Gender. Gender was coded 0 for female and 1 for male. In the combined sample, 46.2% were male and 53.8% were female (*SD*=.50). Gender was not correlated with the Japan vs. U.S. variable (r=.04, p=.11), indicating that the proportion of male students, as well as female students, in the Japanese sample was not significantly different from the proportion in the American sample.

Age. Both samples had restricted age distributions because of the populations from which they were drawn. The current study limited the analyses to students who were 20 years of age or younger because they are still at a more deviance-prone stage of life (Hirschi, 1969). The mean ages of the Japanese and the American samples were 18.3 (*SD*=.53) and 18.8 (*SD*=.77), respectively. In the analyses, age was an interval scale variable with a correlation of -.36 (p<.001) with Japan, reflecting the younger mean age of the Japanese sample.

Parental education. Parental education was one of the two indicators of family socio-economic status.[9] Given the greater variety of family forms in Japan (Sugimoto, 2003), we chose to simply distinguish between students for whom at least one parent had a Bachelor's degree or higher versus all other students. The variable Parental Education, therefore, was a dichotomy coded 1 for students who had at least one parent with a Bachelor's degree or above and 0 for all others. In the Japanese sample, 62.3% of the students had at least one parent with a Bachelor's degree or higher, compared to 85.4% of American students. Thus, on this measure of socio-

economic status, the two samples were very different, with a correlation with Japan of -.27 (p<.001).

Parental employment. Parental employment was another indicator of family socio-economic status. Given the lower prevalence of mothers who have a full-time job in Japan (Sugimoto, 2003), we chose to simply distinguish between students for whom both parents were employed and students for whom at least one parent was not employed. The variable Parental Employment, therefore, was a dichotomy coded 1 for students where both parents were employed and 0 for otherwise. In the Japanese sample, 77% of the students had both parents who were employed, compared to 78.6% of American students. Thus, on this measure of socio-economic status, the two samples were not different, with a correlation with Japan of -.02 (p=.26).

Two adult household. Because single-parent families are less common in Japan (Statistics Bureau, 2015; U.S. Census, 2016a), a measure of family structure was included in all analyses. In order to develop a measure of family structure that was applicable to both countries (see Sugimoto, 2003, pp. 173-179 for types of families in Japan that are rarer in the U.S.), we classified students into two categories: those who were raised by one adult at any time in their lives, and those who were always raised by two or more adults. The exact question was phrased as follows: “While growing up, how would you describe your household?” From the various response categories that were provided, 96% of Japanese students and 85.4% of American students were never in a single-adult household. The variable Two Adult Household, therefore, was a dichotomy coded 1 for students who were never raised in a single-adult household and 0 otherwise. In the combined sample, 90% of the students were always with two or more adults (SD=.30), and the variable Two Adult Household had a correlation of .18 (p<.001) with Japan.

Results

The analyses were performed in three stages. First, Table 1 presents t-tests linked to our hypotheses that Japanese, compared to Americans, would score significantly lower on the student deviance measure and that Japanese would score significantly lower on all four measures of

personality traits, two measures of peer associations, and the deviance opportunities measure. Conversely, we expected that Japanese would score significantly higher on both measures of child-rearing methods and all five measures of social control. Table 1 also shows whether the individual, parental, peer, social, and environmental factors were significantly correlated with student deviance in the expected directions. Table 2 then examines whether the expected negative effect of Japan (versus the U.S.) on student deviance was mediated by the expected differences in these individual, parental, peer, social, and environmental factors as intervening variables.

***t*-tests**

Table 1 reports simple comparisons, with no controls, of the Japanese and American samples on the student deviance measure and on intervening variables. As expected, student deviance was lower for Japanese students than for Americans, and the difference was significant at the .001 level.

Table 1 about here

The findings on differences in the individual, parental, peer, social, and environmental factors were mixed. Japanese students were significantly different in all four personality variables in the direction that we expected, and the differences were all significant at the .001 level. Specifically, Japanese students scored significantly lower than Americans on individualistic orientation, risk seeking, negative emotionality, and subjective stress. Three other significant differences in the predicted direction were for peer attachment, peer reactions, and deviance opportunities. As expected, Japanese students scored lower on peer attachment, peer reactions, and deviance opportunities, and these differences were significant at the .001 level.

For the other variables, however, the differences between the two samples were in the opposite direction to our expectations. In contrast to our proposed hypotheses, Japanese students had significantly (p<.001) lower scores on the two child-rearing variables (i.e., parental discipline and parental attachment), all four social bonding variables (i.e., attachment, commitment, involvement, and belief), and social support. Overall, therefore, the predictions

that Japanese students tend to commit fewer deviant acts because their stronger cultural orientation toward collectivism leads to better child-rearing methods, stronger social bonds to conventional society, and greater social support from significant others were not supported.

Bivariate Correlations of Student Deviance with Intervening Variables

Table 1 also reports bivariate correlations of student deviance with the intervening variables. Our focus in this table is on confirming the expectation of positive relationships of student deviance with seven intervening variables (i.e., individualistic orientation, risk seeking, negative emotionality, subjective stress, peer attachment, peer reactions, and deviance opportunities), on which, in *t*-tests, Japanese students had significantly lower scores than Americans. Consistent with expectations, bivariate correlations revealed that the seven correlations were positive and significant, ranging in magnitude from .070 for peer attachment to .438 for peer reactions.

Regression Analyses of Determinants of Student Deviance

Table 2 considers the contributions of cultural differences in all four personality traits, peer attachment, peer reactions, and deviance opportunities to the lesser likelihood of student deviance in the Japanese sample. It is important to note that the contribution of the cultural difference in any one of the seven intervening variables (i.e., individualistic orientation, risk seeking, negative emotionality, subjective stress, peer attachment, peer reactions, and deviance opportunities) to this lesser likelihood of student deviance is a function of the magnitude of the cultural difference in the intervening variable and the magnitude of the effect of that intervening variable on student deviance.

Table 2 about here

For each equation in Table 2, the standardized OLS regression coefficient (*Beta*) was reported from the regression of student deviance on these seven intervening variables in the equation. In Equation 1, the significant ($p<.001$) negative *Beta* of -.451 for Japan reflected the difference, with no controls, between Japanese and American students in their commission of deviant behavior. The negative sign indicated that Japanese students were less likely to engage in

deviance during their high school days.

In Equation 2, the control variables of gender, age, parental education, parental employment, and single vs. two-adult household were added. The *Beta* of-.433 for Japan (versus the U.S.) remained significant (p<.001) but was reduced slightly compared to Equation 1. The tendency for Japanese students to commit fewer deviant acts not only was significant (p<.001) in our data but also was substantial. With controls for age, family socioeconomic status, and family structure, the effect of Japan was more than three times as strong as the effect of gender (*Beta*=.134, p<.001). Also, the direct effect of age was positive and significant (*Beta*=.087, p=.002), while none of the other three effects of parental education, parental employment, and single vs. two-adult household was significant.

Equations 3-9 addressed the extent to which each of the four personality traits, peer attachment, peer reactions, and deviance opportunities, when considered separately, accounted for the effect of Japan from Equation 2. In other words, to what extent was the tendency for Japanese students, taking account of the control variables, to be less inclined to commit deviance attributable to their lower levels of individualistic orientation, risk seeking, negative emotionality, subjective stress, and peer attachment, less favorable peer reactions to deviance, and fewer deviance opportunities?

In none of these equations did the addition of any of the seven intervening variables by itself reduce the effect of Japan to non-significance. However, inspection of the top row of the table revealed that the variable that by itself was most effective in accounting for the lesser likelihood of student deviance among Japanese, compared to Americans, was peer reactions to deviance. The *Beta* of -.433 for Japan in Equation 2 was reduced by 18% to -.355, although it remained significant (p<.001) after the addition of peer reactions in Equation 8. Furthermore, peer reactions had a significant (p<.001) positive effect (*Beta*=.322) on student deviance that was almost as large as the effect of Japan.

In Equations 3, 4, 5, 6, 7, and 9, when the other six intervening variables were considered

separately, the reduction in the effect of Japan was less than in Equation 8. Particularly, negative emotionality contributed very little to the lesser likelihood of student deviance among Japanese students. While the effect of negative emotionality on student deviance was positive, as expected, and significant (*Beta*=.055, *p*=.028), its inclusion did not much reduce the negative effect of Japan on student deviance. In fact, the *Beta* of -.418 for Japan in Equation 5 was essentially the same as that of -.433 in Equation 2. Additionally, in Equations 3 and 7, when individualistic orientation and peer attachment were considered respectively, the effects of -.472 and -.470 for Japan were greater in magnitude than in Equation 2, where only all five demographic and socioeconomic control variables were included. These increases in the magnitude of the effect of Japan in Equations 3 and 7, therefore, suggest that individualistic orientation and peer attachment actually were suppressing some of the tendency for Japanese students to commit fewer deviant acts. In fact, the effects of individualistic orientation and peer attachment were negative (*Betas*=-.070 and -.098), contrary to our predictions, and significant (*p's*=.028 and <.001).

When all seven intervening variables were added in Equation 10, the *Beta* of -.433 for Japan was reduced to -.315. In other words, individualistic orientation, risk seeking, negative emotionality, subjective stress, peer attachment, peer reactions, and deviance opportunities accounted for about 30% of the effect of Japan versus the U.S., but the *Beta* of -.315 for Japan remained significant (*p*<.001).

While potential cultural differences in the seven intervening variables seemed to explain about one-third of the effect of Japan, Equation 10 revealed that risk seeking (*Beta*=.182, *p*<.001), subjective stress (*Beta*=.052, *p*=.034), peer reactions (*Beta*=.259, *p*<.001), and deviance opportunities (*Beta*=.128, *p*<.001) had the expected positive effects on student deviance. Meanwhile, the effects of the other three intervening variables on student deviance are problematic in light of our hypotheses. The effects of individualistic orientation and peer attachment were negative, contrary to our expectations, although they were not significant. Also,

negative emotionality had the expected positive effect, but it was not significant. Thus, to some extent, the failure of the seven intervening variables to account for more of the effect of Japan on student deviance might be attributed, at least partly, to the absence of significant positive effects of individualistic orientation, peer attachment, and negative emotionality on student deviance.

Table 3 considers the contributions of cultural differences in risk seeking, subjective stress, peer reactions, and deviance opportunities, which, in Table 2, were reported to have the expected significant positive effects on student deviance, to the lesser likelihood for the Japanese students to be involved in deviance. The table also includes two control variables of gender and age, both of which had significant effects on student deviance in most of the equations of Table 2.

Table 3 about here

In Equation 1, the significant (p<.001) negative *Beta* of -.425 for Japan (versus the U.S.) reflected the difference, with controls of gender and age, between Japanese and American students in their commission of deviance during the high school days. The negative sign indicated that Japanese students were less likely to engage in deviance than Americans. Equation 2 included risk seeking, subjective stress, peer reactions, and deviance opportunities simultaneously. With these four variables as "intervening" between Japan and student deviance, the effect of Japan on student deviance was reduced to -.278. In other words, the four intervening variables explained about 35% of the effect of Japan on student deviance. The comparison of the *Betas* in Equation 2 of Table 3 and Equation 10 of Table 2 indicated that the effect of Japan decreased somewhat more without controls for individualistic orientation, negative emotionality, and peer attachment. Additional analyses not reported here led to the conclusion that, as was the case in Table 2, peer reactions reduced the *Beta* for Japan more than did any one of the other three intervening variables. The *Beta* of -.425 for Japan in Equation 1 was reduced by 18% in magnitude by peer reactions, even though the *Beta* of -.350 for Japan, without controlling for the other three intervening variables, remained significant at the .001 level.

While the lower levels of risk seeking and subjective stress in the Japanese sample, as well as the fewer deviance opportunities, contributed less than peer reactions to deviance to the tendency for Japanese to commit fewer deviant acts than Americans, risk seeking (*Beta*=.182, $p<.001$), subjective stress (*Beta*=.058, $p=.020$), and deviance opportunities (*Beta*=.134, $p<.001$), along with peer reactions (*Beta*=.264, $p<.001$), had the expected significant positive effects on student deviance in Equation 2. In other words, these four variables were significant predictors of student deviance, but these four variables (individually or collectively) did not entirely explain the tendency for Japanese to commit fewer deviant acts than Americans. In fact, the magnitude of the effect of Japan (versus the U.S.) on student deviance was larger than that of any one of the four intervening variables.

Given the unexpected findings in Table 3, we then explored the possibility that the effects of risk seeking, subjective stress, peer reactions, and deviance opportunities on student deviance might not be similar in magnitude for the Japanese and American samples, a possibility that could be masked in Table 3 when the two samples were combined. Table 4 reports the relative effects of these four intervening variables on student deviance separately for Japanese and Americans, with controls for gender and age. The table also includes a test of the significance of the difference between the Japanese and the American samples in the effect for each of the intervening variables (Paternoster *et al*., 1998).

Table 4 about here

Great discrepancies between the two samples were reported for risk seeking and subjective stress. Risk seeking had the expected positive and significant effect in both the Japanese and American samples (*Betas*=.101 and .224). However, as inferred from the difference in the magnitudes of these two effects, the *z*-test recommended by Paternoster et al. (1998) revealed that the effect of risk seeking on student deviance was significantly ($p<.001$) less among Japanese than among Americans. On the other hand, the difference in the effect of subjective stress between the two samples was significant ($p<.05$) in a direction which suggested that subjective

stress had more of an effect on student deviance in the Japanese sample (*Beta*=.187) than in the American sample (*Beta*=.034). In fact, the effect of subjective stress was positive, as expected, in both samples, but it was not significant among Americans.

The separate findings for Japanese and Americans for the other two intervening variables mirrored the findings for the sample as a whole. Peer reactions had the expected positive effect in both the Japanese and American samples (*Betas*=.232 and .308), and these two effects were significant at the .001 level. Likewise, deviance opportunities had a significant (p<.001) positive effect in both the Japanese and American samples (*Betas*=.141 and .139). In summary, it appears that the failure of these four intervening variables to account for more of the effect of Japan on student deviance can be attributed, at least partly, to the significant cultural differences in the magnitudes of the effects of risk seeking and subjective stress on student deviance.

Discussion and Conclusions

The aim of this article was to assess the influence of cultural collectivism on different levels of student deviance between Japanese and Americans and, in so doing, to try to explain why student deviance might be less prevalent among Japanese than among American students. To this end, we referred to Tittle and Paternoster's (2000) identification of causes of deviance and combined these causes with observations by others about greater collectivism in Japanese culture to predict that Japanese students, compared to their American counterparts, would be less likely to commit deviance, and that the lesser likelihood for the Japanese students to commit deviance could be attributed to their stronger inclination toward individualistic personality traits, better child-rearing methods, stronger relationships with peers, greater social control, and fewer deviance opportunities.

In fact, Japanese students were less inclined than Americans to participate in deviance during their high school days. While the types of student deviance were relatively less serious and violent, the analyses generally supported our hypothesis about cultural difference in the tendency to commit deviance between the two culturally diverse countries.

Our findings concerning the relative importance of the contributions of risk seeking, subjective stress, peer reactions, and deviance opportunities as motivations to deviate was consistent with previous researches. For student deviance as an outcome variable, in equations that included the control variables and all four intervening variables (i.e., Equation 10 of Table 2 and Equation 2 of Table 3), peer reactions had the strongest positive effect on student deviance. The greater power of peer reactions as a motivation to deviate was consistent with other comparative researches about other kinds of deviance. Meneses and Akers (2011) reported that the differential reinforcement variable, which consisted of peer reactions and rewards/costs for marijuana use, had a strong and significant effect on substance use in a combined sample of Bolivian and American college students. A similar conclusion was reached by Hwang and Akers (2003, 2006) concerning the use of alcohol among adolescents in South Korea. External motivations that are manifested in peer reactions to deviance in these previous comparative studies, as well as in ours, seem to be more important than other motivations that are located internal to the individual (i.e., risk seeking and subjective stress) and in the social environment external to the individual (i.e., deviance opportunities) in producing deviation from societal rules.

Furthermore, in our analyses, risk seeking, subjective stress, peer reactions, and deviance opportunities played important roles in explaining the lower levels of student deviance in Japan than in the U.S. For student deviance as an outcome variable, these four variables accounted for about 35% of the effect of Japan (versus the U.S.) on engagement in deviance during the high school days. However, the cultural difference in student deviance was robust and withstood statistically even after controlling for these four variables.

As shown in Table 4, risk seeking and subjective stress appeared to behave quite differently in the Japanese sample than the American sample in predicting student deviance. In Japan, compared to the U.S., risk seeking had significantly less influence on student deviance, and subjective stress had significantly more influence on student deviance. Consequently, these potential cultural differences in the magnitudes of the effects of these two variables on student

deviance could be one reason why, as reported in Table 3, risk seeking and subjective stress, along with peer reactions and deviance opportunities, did not account for more than one-third of the lesser likelihood for Japanese to be involved in deviance than Americans.

Finally, the significantly lower scores on both methods of child-rearing and all five forms of social control in the Japanese sample require further investigation. One possible interpretation of these contrary findings is that the prolonged recession in the Japanese economy, which started in the beginning of the 1990s, has produced a generation of young people which exhibits signs of apathy and detachment from their parents and the conventional social order (Cabinet Office, 2016; Nagayama, 2015). Future research needs to establish what contributed to these contrary results, as it continues to assess parental and social influences on different levels of deviance across cultures.

In conclusion, our research design certainly had limitations. First, our analyses, because of admission policies in Japanese national universities, were restricted to members of the dominant group in both countries (i.e., Japanese citizens in Japan and Caucasians in the U.S.). Accordingly, our samples of college students, while based on our best efforts to achieve compatibility in ways that were important for the analyses, should not be considered representative of each of the university populations, nor of the student populations in each country. Further consideration of additional cultural indicators (i.e., Japan vs. U.S.), such as individual genealogy or self-awareness of belonging to a national culture, might strengthen the analyses. Future research will benefit from improvements in the conceptualizing of culture and from refinements in its operational definition.

Second, due to the exploratory nature of this article, our measures of individual, parental, peer, social, and environmental factors were not numerous. However, there have been additional causes of deviance that direct attention to ways in which individuals in these considerably different two countries, in varying degrees, are constrained from violating or motivated to violate societal rules. The inclusion of other causes of deviance, such as threats of self-imposed shame,

socially-imposed embarrassment, and formal sanctions, which have consequences for different levels of norm-conforming behaviors between Japanese and Americans (Kobayashi et al., 2001), would strengthen the analyses.

Lastly, we recognize that, because the data were cross-sectional, we could not address controversies concerning causal order. In this preliminary study, causality was assumed mostly from the logic of the dominant criminological theories, which attach much importance to risk seeking and deviance opportunities in self-control theory (Gottfredson & Hirschi, 1990), negative emotionality and subjective stress in general strain theory (Agnew, 1992), peer attachment in social bonding theory (Hirschi, 1969), and peer reactions to deviance in social learning theory (Akers, 1985, 1998). However, with the large number of intervening variables, causal hypotheses can be better tested using longitudinal data. We encourage future cross-cultural researchers to collect comparable longitudinal data for firmer conclusions about individual, parental, peer, social and environmental influences on different levels of deviance across cultures.

Endnotes

[1] College undergraduate students were chosen as respondents for two reasons. First, we had easier access to them than to younger adolescents. Second, college undergraduate students, especially early in their academic years, are still in more deviance-prone stage of life, and the questions referred retrospectively to their high school days. We realize, of course, that people who did not attend college were excluded from our research design and might be more (or less) deviant than those who did attend college. However, the inclusion of only college students applied to both samples.

[2] Japanese students must declare a major before their admission to a university. Unlike universities in the U.S., there is no equivalent in Japan to general education courses taken by a large number of students outside their major.

[3] Some might question about the equivalence of self-report data in the two countries because self-disclosure in Japan, relative to the U.S., is usually (and often exaggeratedly) considered to be an inappropriate behavior (Gudykunst & Nishida, 1994). However, we made every effort to overcome the problem by informing the Japanese students that the name of the university would never be revealed and that there was no right or wrong answer to any of the questions.

[4] We had to address the wide discrepancy between Japanese national and American state universities in racial and ethnic diversity, a discrepancy so wide that "minority group" status could not be a variable in our analyses. Race/ethnicity is included as a control variable in tests of deviance theories in the U.S. We knew in advance, however, that this would be problematic in our research because of the racial and ethnic homogeneity of Japan. Whereas 77% of the U.S. population is white (U.S. Census, 2016b), typical estimates are that 98% of the Japanese population is racially and ethnically Japanese (Statistics Bureau, 2017). Had we included a variable for race/ethnicity, separating minority group members from others, that variable would have been collinear with the dummy variable for Japan, possibly masking the effect of Japan, independent of its racial/ethnic homogeneity. Consequently, our plan was to use only the questionnaires completed by Caucasian students in the U.S., excluding those who were self-identified minority group members. Likewise, we omitted from the analyses the few Japanese students who identified themselves as "non-Japanese."

[5] In fact, 98% of the students in the Japanese sample were 20 years old or younger and the comparable figure in the American sample was 80%.

[6] The large number of missing cases in the Japanese sample probably can be attributed to their lack of experience in answering a long list of survey questions and the absence of extra credits that could be earned in exchange for their participation in the survey.

[7] The gender composition of universities was another issue to be addressed. In the American university only about half (46%) of all students were male, a figure typical of state universities in the U.S. In contrast, Japanese national universities are overwhelmingly male. According to figures from the Japan Association of National Universities (2017), 69% of all students enrolled in all national universities are male. In the particular Japanese university from which we gathered data, 68% of all students enrolled were male. While our American sample reflects the overall distribution, the lower proportion of males in the Japanese sample indicates a greater unwillingness among Japanese male students to comply with requests to participate in this research.

[8] Clearly, the prevalence of student deviance was different between the two samples. The percent of Japanese students who reported having engaged in deviance was lower for seven of the eight deviant behaviors: 18% in Japan (N=83) and 12% in the U.S. (N=70) for bullying; 11% in Japan (N=51) and 16% in the U.S. (N=98) for destroying property; 11% in Japan (N=52) and 21% in the U.S. (N=122) for stealing; 22% in Japan (N=101) and 60% in the U.S. (N=359) for cheating in school; 7% in Japan (N=31) and 11% in the U.S. (N=68) for hurting themselves on purpose; 3% in Japan (N=14) and 37% in the U.S. (N=220) for driving without a seatbelt or a

helmet; 3% in Japan (*N*=15) and 77% in the U.S. (*N*=459) for exceeding the speed limit; 2% in Japan (*N*=10) and 24% in the U.S. (*N*=143) for drunk driving.

[9] We could not use family income as another indicator of family socio-economic status because we knew, in advance, that a high percentage of college students would not provide an answer. In our previous cross-cultural survey, 12% of American students and 38% of Japanese students did not provide an answer regarding parental income. The greater non-response rate for Japanese probably could be attributed to their greater reluctance to provide such information and/or the greater likelihood of not knowing their parental income. Consequently, parental income was not included in the present questionnaire, and parental education and parental employment were used as the indicators of family socio-economic status.

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Table 1. *t*-tests Comparing Japanese and American Samples and Bivariate Correlations with Student Deviance in the Combined Sample (*N*=1,063)

Variable	Japan (*N*=469)	U.S. (*N*=594)	*t*	*r*
Student Deviance	9.00	12.10	-17.69 ***	---
Individual factors				
Individualistic orientation	11.34	13.88	-21.77 ***	.210 ***
Risk seeking	8.00	9.23	-7.39 ***	.353 ***
Negative emotionality	7.67	8.89	-10.13 ***	.166 ***
Subjective stress	0.64	1.74	-17.57 ***	.290 ***
Parental factors				
Parental discipline	9.12	10.44	-12.34 ***	.067 *
Parental attachment	35.39	40.44	-12.95 ***	.031
Peer factors				
Peer attachment	8.76	10.19	-13.22 ***	.070 *
Peer reactions	10.12	11.92	-9.14 ***	.438 ***
Social factors				
School attachment	8.72	9.79	-8.89 ***	.002
Commitment	8.51	11.06	-23.41 ***	.174 ***
Involvement	8.98	20.37	-23.39 ***	.273 ***
Belief	8.35	9.01	-5.13 ***	-.255 ***
Social support	17.53	21.71	-17.15 ***	.126 ***
Environmental factors				
Deviance opportunities	2.81	3.36	-6.56 ***	.314 ***

Note: Two-tailed significance tests.

*Statistically significant at $p < .05$; **statistically significant at $p < .01$; ***statistically significant a

Table 2. OLS Regressions of Student Deviance on Japan, Individualistic Orientation, Risk Seeking, Negative Emotionality, Subjective Stress, Peer Attachment, Peer Reactions, Deviance Opportunities, and Control Variables (*N*=1,063)

	Equation 1		Equation 2		Equation 3		Equation 4		Equation 5		Equation 6		Equation 7		Equation 8		Equation 9		Equation 10	
Variable	***b***	***Beta***	***b***	***Beta***	***b***	***Beta***	***b***	***Beta***	***b***	***Beta***	***b***	***Beta***	***b***	***Beta***	***b***	***Beta***	***b***	***Beta***	***b***	***Beta***
Japan	-3.105	-.451 ***	-2.981	-.433 ***	-3.247	-.472 ***	-2.622	-.381 ***	-2.879	-.418 ***	-2.600	-.378 ***	-3.237	-.470 ***	-2.441	-.355 ***	-2.754	-.400 ***	-2.166	-.315 ***
Gender	-----	-----	.920	.134 ***	.907	.132 ***	.691	.101 ***	.973	.142 ***	1.010	.147 ***	.827	.121 ***	.536	.078 ***	.744	.109 ***	.380	.055 *
Age	-----	-----	.414	.087 **	.429	.091 **	.398	.084 **	.403	.085 **	.403	.085 **	.411	.087 **	.250	.053 *	.276	.058 *	.186	.039
Parental education	-----	-----	-.214	-.027	-.205	-.026	-.317	-.040	-.227	-.029	-.179	-.023	-.210	-.027	-.164	-.021	-.210	-.027	-.230	-.029
Parental employment	-----	-----	.017	.002	.014	.002	-.080	-.010	.049	.006	-.021	-.003	.001	<.001	.169	.021	.015	.002	.062	.008
Two adult household	-----	-----	.094	.008	.096	.008	.083	.007	.083	.007	.147	.013	.105	.009	.051	.004	.020	.002	.029	.003
Individualistic orientati	-----	-----	-----	-----	-.109	-.070 *	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-.068	-.044
Risk seeking	-----	-----	-----	-----	-----	-----	.313	.256 ***	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	.223	.182 ***
Negative emotionality	-----	-----	-----	-----	-----	-----	-----	-----	.091	.055 *	-----	-----	-----	-----	-----	-----	-----	-----	.047	.028
Subjective stress	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	.352	.123 ***	-----	-----	-----	-----	-----	-----	.149	.052 *
Peer attachment	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-.179	-.098 ***	-----	-----	-----	-----	-.041	-.023
Peer reactions	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	.330	.322 ***	-----	-----	.266	.259 ***
Deviance opportunities	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	.523	.215 ***	.312	.128 ***
R^2	.204		.229		.233		.290		.232		.241		.237		.321		.272		.382	
p	<.001		<.001		<.001		<.001		<.001		<.001		<.001		<.001		<.001		<.001	

Note: One-tailed significance tests.

*Statistically significant at $p < .05$; **statistically significant at $p < .01$; ***statistically significant at $p < .001$.

Table 3. OLS Regressions of Student Deviance on Japan, Risk Seeking, Subjective Stress, Peer Reactions, Deviance Opportunities, and Control Variables (*N*=1,063)

	Equation 1		Equation 2	
Variable	***b***	***Beta***	***b***	***Beta***
Japan	-2.921	-.425 ***	-1.909	-.278 ***
Gender	.918	.134 ***	.375	.055 *
Age	.415	.088 **	.180	.038
Risk seeking	-----	-----	.222	.182 ***
Subjective stress	-----	-----	.165	.058 *
Peer reactions	-----	-----	.270	.264 ***
Deviance opportunities	-----	-----	.326	.134 ***
R^2	.229		.379	
p	<.001		<.001	

Note: One-tailed significance tests.
*Statistically significant at $p < .05$; **statistically significant at $p < .01$;
***statistically significant at $p < .001$.

Table 4. Relative Effects of Explanatory Variables for Japanese and American Samples

	Japan (*N*=469)		U.S. (*N*=594)		difference
	b	***Beta***	***b***	**Beta**	***z***
Outcome Variable = Student Deviance					
Risk seeking	.074	.101 **	.291	.224 ***	-3.742 ***
Subjective stress	.406	.187 ***	.107	.034	2.025 *
Peer reactions	.138	.232 ***	.348	.308 ***	-4.179 ****
Deviance opportunities	.219	.141 ***	.343	.139 ***	-1.074

Note: One-tailed significance tests controlling for gender and age.
*Statistically significant at $p < .05$; **statistically significant at $p < .01$; ***statistically significant at $p < .001$; ****statistically significant at $p < .0001$.