

Voluntary Settlement and the Spirit of Independence: Evidence from Japan's "Northern Frontier"

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The authors hypothesized that economically motivated voluntary settlement in the frontier fosters independent agency. While illuminating the historical origin of American individualism, this hypothesis can be most powerfully tested in a region that is embedded in a broader culture of interdependence and yet has undergone a recent history of such settlement. The authors therefore examined residents of Japan's northern island (Hokkaido). Hokkaido was extensively settled by ethnic Japanese beginning in the 1870s and for several decades thereafter. Many of the current residents of Hokkaido are the descendants of the original settlers from this period. As predicted, Japanese socialized and/or immersed in Hokkaido were nearly as likely as European Americans in North America to associate happiness with personal achievement (Study 1), to show a personal dissonance effect wherein self-justification is motivated by a threat to personal self-images (Study 2), and to commit a dispositional bias in causal attribution (Study 3). In contrast, these marker effects of independent agency were largely absent for non-Hokkaido residents in Japan. Implications for theories of cultural change and persistence are discussed.

Keywords: culture and self, attribution, subjective well-being, dissonance, individualism

In the last 400 years, the United States has been a major magnet for immigrants from all over the world (Hong, Wan, No, & Chiu, in press; Suárez-Orozco, 2003). With the important exception of African Americans, who were forced to work as slaves, the vast majority of immigrants voluntarily settled in North America. Moreover, from its very beginning, the history of the United States was that of relentless expansion to the west. This westbound expansion was justified in terms of a mythology of manifest destiny, which proposes that it is a sacred mission of all Americans to extend the "boundaries of freedom" (J. A. Garfield, inaugural

address, March 4, 1881; Schlesinger, 1986). Over nearly 3 centuries, until the end of the 19th century, new lands of the West were continuously acquired, opened, exploited, and settled by Americans of mostly European descent, and the frontier rapidly moved westbound. What had once been the west of the territory was soon to become its midwest, for example.

The mentality, or cultural ethos, that was fostered by this collective social movement of immigration and subsequent settlement in the frontier is called the frontier spirit (Turner, 1920). This cultural ethos is composed of collective beliefs and practices of independent agency (Kitayama & Uchida, 2005; Markus & Kitayama, 2004). Importantly anchored in the idea of the "American dream" (Hochschild, 1995), independent agency is composed of strong orientations toward personal goal pursuit and personal choice. Many observers of American culture (e.g., Bellah, Madsen, Sullivan, Swindler, & Tipton, 1985; Dewey, 1930; Schlesinger, 1986; de Tocqueville, 1862/1969; Turner, 1920) have pointed out that the history of voluntary settlement in the frontier significantly contributed to American individualism as it is known today. The purpose of the present work is to examine this possibility. We argue that if voluntary settlement in the frontier is causally linked to American individualism, a similar cultural ethos of indepen-

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dence should be found in other regions of the world insofar as the regions share a similar history of voluntary settlement.

Voluntary Settlement Hypothesis

In analyzing cultural consequences of voluntary settlement, we must take three distinct processes into account. First, voluntary settlement in a frontier is motivated by desires for personal wealth and freedom, and, furthermore, it requires a major investment and personal sacrifice for anyone who engages in it. Accordingly, we hypothesize that voluntary settlers are likely to have a highly autonomous, independent, goal-oriented mental set. This goal-oriented mental set predisposes the individuals to seek novelty and to take risks. As Fredrick Jackson Turner (1920)—the first proponent of the frontier thesis for American individualism—noted, referring to early settlers who set out for westbound journeys from the East Coast cities and colonies of America,

Whenever social conditions tended to crystallize in the East, whenever capital tended to press upon labor or political restraints to impede the freedom of the mass, there was this gate of escape to the free conditions of the frontier. These free lands promoted individualism, economic equality, freedom to rise, [and] democracy. (p. 259)

Second, frontier life is often harsh, and every endeavor entails substantial risks—both economic and corporeal—and, thus, more often than not, mere survival is at stake. Westbound journeys were filled with immediate dangers of many sorts. Day after day, there was a dire need for self-protection and self-promotion.¹ Without the mental qualities of independent goal pursuit, self-directedness, and self-reliance (and some luck), a sure death was waiting for settlers along the way (Stewart, 1963). These life conditions of the frontier are likely to reinforce the goal-oriented mental set of independent agency (Schooler & Mulatu, 2004).

Third, a region that is composed of a large number of voluntary settlers with goal-oriented mental characteristics will soon develop a culturally shared lay theory of behavior as internally motivated and controlled. This dispositional lay theory of independence is ingrained into social practices, daily routines, modes of child rearing, daily discourses, and even explicit education. We suggest that, in the frontier, the lay theory of independence is often appropriated to foster social relations and social organizations.² In this way, the cultural environment is gradually structured to sustain the ethos of independence. In the process, the dispositional lay theory of independence becomes fully legitimized and normative; as a consequence, it is likely to be transmitted over generations, even when the frontier ceases to be a reality.³ Today, for example, the frontier and an associated image of the American dream might seem a myth from the past. In fact, however, many aspects of daily life and events, from personal narratives (McAdams, 2005) to American foreign policies and beyond (e.g., Faludi, 2003), are powerfully organized and given shape and force by various images of the frontier and the American dream (Hochschild, 1995).

When taken in combination, the three processes—self-selection for settlement, reinforcement of independence during settlement, and institutionalization of tacit beliefs and practices of independence—induce and maintain the ethos of independent agency.⁴ This culture of frontier is likely to be resilient and rapidly consolidated because it is created anew, “from scratch,” in a place that is relatively separated both from the rest of the world and from its own past.

Triangulation: Identifying Causally Active Elements of Culture

It goes without saying that many aspects of the contemporary American culture have their origins in the modern period in Western Europe. Furthermore, many of the ideas of the modern West can be traced back to Greek civilization (Nisbett, 2003). Reformation of the Catholic church and the resulting Calvinic varieties of Protestantism had a major influence (Sanchez-Berks, 2005; Weber, 1904/1930). So did numerous philosophers of the Enlightenment, including Rousseau, Locke, and Voltaire (B. Morris, 1991; Taylor, 1979). Yet the voluntary settlement hypothesis suggests that, in addition to the modern Western European influences and heritage, the initial emigration to the land of opportunity and the subsequent social movement of expanding the nation’s territory to the western frontier substantially fostered and reinforced the ethos of independence in North America. In the process, religious and many other ideational elements of the modern West must have been inseparably interwoven into the spirit of independent agency. Although cursory, this historical analysis reveals a serious problem in testing the voluntary settlement hypothesis: Many sociohistorical factors are confounded with the westbound expansion during the 17th through the 19th centuries; moreover, these factors initially seem impossible to disentangle.

One powerful tool for disentangling the history and identifying causally active elements of culture is the method of triangulation (Medin, Unsworth, & Hirschfeld, in press). Imagine Culture A and Culture B. Culture A is more independent than Culture B, and the task is to test the hypothesis that one significant cause for the independence of Culture A is its relatively recent history of voluntary settlement. One can critically test this hypothesis if one can identify a subculture in Culture B, Culture B’, that is like Culture B in all conceivable dimensions and aspects except for the hypothesized causal element—that is, voluntary settlement: Unlike Culture B, Culture B’ has undergone a recent history of voluntary settlement. If one could show that Culture B’ is more similar to Culture A than to Culture B in respect to independent agency, this would support the hypothesized role of voluntary settlement in producing the independent orientation.

¹ Although the westbound expansion was often subsidized by the federal government (Stegner, 1953), the social organizations of the living environments of the settlers were far more primitive than those in the East Coast cities.

² Hence, it is misleading to equate the frontier spirit with the popular images of “rugged individualism,” wherein humans are defined as “solitary island dwellers rather than as gregarious collaborators,” and governmental regulation is seen as an “unwarranted interference with the individual’s right to pursue self-interest” (Coontz, 1992, p. 52).

³ In other words, the dispositional lay theory will eventually attain the status of the most unquestionable and, thus, typically unspoken tacit assumption—or what Daryl Bem (1972) aptly called the “zero-order belief” (p. 6) of the society.

⁴ The notion of independent agency is close to what Kashima et al. (2004) called *agency*. Yet agency can also be interdependent (Kitayama & Uchida, 2005; Markus & Kitayama, 2004). Moreover, it is our working assumption that agency, in the sense of systems of behavioral regulation, is best assessed not by self-reflective judgments about it but rather by online measures of behaviors, both overt and covert (e.g., cognition).

Hokkaido: Japan's "Northern Frontier"

In an attempt to use the logic of triangulation in testing the voluntary settlement hypothesis, we identified one valuable "laboratory of nature" in Hokkaido, a northern island of Japan. Historically, Japan has received substantial influence from Buddhism, Confucianism, and other ideas of Asian origin. Hence, Japan (Culture B) is separated, not only geographically and historically but also culturally, from North America (Culture A). It is crucial that Japan has maintained its highly interdependent cultural ethos (Doi, 1973; Kondo, 1982; Lebra, 1976). Thus, people are motivated more toward interpersonal adjustment and social harmony than toward personal goals and personal choice. Moreover, people tend to share a nondispositional, more holistic lay theory of behavior as socially afforded and constrained (Kitayama & Uchida, 2005). For our present purposes, however, Hokkaido (Culture B') and North America share one incidental yet theoretically critical element, namely, the recent history of systematic immigration and settlement in the frontier. If we apply the logic of triangulation, the causal role of voluntary settlement would be strongly suggested if Hokkaido (Culture B') were more similar to the United States (Culture A) than to mainland Japan (Culture B) in respect to independent agency. To make a convincing case, however, it is crucial that we examine the recent history of Hokkaido in some detail.

Until the mid-19th century, the island of Hokkaido was largely a wilderness inhabited by indigenous people, the Ainu, the hunters and gatherers who engaged in commerce with Japanese (Fitzhugh & Dubreuil, 1999; Watanabe, 1972). The situation changed dramatically during the Meiji Restoration (in 1867), when the central feudal government collapsed and political power was "returned" from the shogun (the most powerful of the feudal lords) to the emperor. During the Meiji Restoration, Japan ended its national seclusion policy (which had lasted more than 200 years), opened its ports to the outside world, and started its path of intensive Westernization. This rapid societal change resulted in, among other things, a large number of samurais (feudal warriors) who lost their means of living. Around the same time, Russia had become a major threat to Japan's northern territories. In response, the Meiji government recruited the jobless samurais to create settlements in Hokkaido. These settlers opened new lands, expelled the Ainu or assimilated them to Japanese culture, built new roads and bridges, developed a network of railroad tracks, opened ports, and established industrial and commercial centers. Gradually, numerous others, especially farmers from all over Japan, followed suit and settled in Hokkaido in large numbers. Over the next several decades, Hokkaido was transformed from a sparsely populated wilderness to an important territory of Japan. During this period, the total population of Japanese in Hokkaido increased dramatically, from 120,000 in 1872 (Bureau of Statistics, Imperial Cabinet, Japan, 1993) to 2,360,000 in 1920 (Bureau of Statistics, Imperial Cabinet, Japan, 1924).

In the early days of settlement, the population was scattered and sparse. Moreover, the climate was harsh, especially in the winter, for those from the much warmer southern parts of Japan, and although the land was plentiful, it was not always fertile (Fitzhugh & Dubreuil, 1999; Watanabe, 1972). These and other conditions presented major challenges for settlers. A major industry was coal mining, although today all coal resources have already been exploited, and the mines have long been closed. To a substantial

degree, then, there is a close yet entirely incidental historical resemblance between Hokkaido and North America. Both have a history of voluntary settlement in the frontier.

Today, Hokkaido is largely inhabited by ethnic Japanese, with a total population of nearly 6,000,000. Indigenous Ainu people survive, but they have been largely assimilated, and thus they are virtually invisible in the mainstream society, accounting only for 0.5% of the entire population in Hokkaido. Hokkaido Japanese speak Japanese and watch national TV programs. School curriculums are centrally controlled and therefore largely equivalent in Hokkaido and elsewhere in Japan. There are numerous daily flights from Tokyo, Osaka, and other major cities of the main island of Japan to Sapporo, the primary gateway to Hokkaido. On the surface level at least, Hokkaido is fully integrated into the national culture of Japan. Below the surface, however, the voluntary settlement hypothesis suggests that there should be a spirit of independence in this northern island of Japan: Its relatively recent history of settlement in the frontier must have fostered tacit beliefs and practices of independent agency, and, moreover, these beliefs and practices must have been passed over generations among its residents. If true, such a finding would go far beyond Hokkaido *per se*.

In the present work, we test Hokkaido residents in respect to two central marker features of independent agency: (a) personal goal pursuit and choice (as revealed in correlates of happiness and cognitive dissonance) and (b) lay dispositionism (as revealed in causal attribution; Kitayama & Uchida, 2005; Markus & Kitayama, 1991, 2004; Nisbett, 2003). We predict that although Japan traditionally has been governed by a contrasting cultural ethos of interdependence, there will be a strong cultural ethos and spirit of independence in Hokkaido. In this particular respect, Hokkaido Japanese should be more similar to Americans than to mainland Japanese. With the logic of triangulation, such a finding could establish the causal role of voluntary settlement in fostering independent agency.

By testing these predictions, we set out to examine regional variations in a single national culture of Japan. Although similar inquiries into regional differences recently have been attempted in the United States (Nisbett & Cohen, 1996; Plaut, Markus, & Lachman, 2002; Vandello & Cohen, 1999), Europe (Knight, Varnum, & Nisbett, 2005), and other areas, such as Asia and Australia (Kashima et al., 2004), the present work is the first of its kind that is specifically designed to test the voluntary settlement hypothesis.

Mechanisms for Cultural Change and Cultural Persistence

In the present work, we also explore three specific mechanisms by which voluntary settlement fosters independent agency. For this purpose we examine Hokkaido residents who differ in where they were born and raised, either in Hokkaido or in the Japan mainland. The first hypothesis emphasizes the role of initial enculturation in mainland Japan. By *initial enculturation*, we mean the process by which individuals acquire their heritage culture. Through enculturation, most individuals acquire culturally sanctioned psychological features, and, once they make this acquisition, these psychological features may be quite stable. This process, if operating among settlers in Hokkaido, would work against cultural change in

the land of the frontier.⁵ In the present work, this hypothesis implies that non-Hokkaido-born residents of Hokkaido should be largely no different from mainland Japanese.

Second, in all cultures, there are deviants, for a variety of reasons. Thus, some small minority of people raised in mainland Japan may acquire certain psychological tendencies associated with independent agency. For example, some might be more inclined than the rest to pursue their personal goals or to engage in personal choice. These individuals may, in turn, be attracted to images of frontier associated with Hokkaido, and, in fact, they may actively and personally choose to move and settle in the Northern Frontier of the country. This possibility is called the *self-selection hypothesis*. The process of self-selection, if operating among settlers in Hokkaido, would facilitate cultural change in the direction of independence. In the present work, this hypothesis implies that non-Hokkaido-born residents of Hokkaido should be more similar to Hokkaido-born residents of Hokkaido than to mainland Japanese.

A third hypothesis we propose acknowledges the role of resocialization, or *acculturation*, that takes place in the frontier. That is, even though those mainland Japanese who decide to move to Hokkaido are initially no different than the rest of mainland Japanese, once settled in Hokkaido, they may be acculturated into the independently oriented culture of the frontier. This process, if operating, would also facilitate cultural change in the direction of independence insofar as the ethos of independence is increasingly common in the frontier over time. In the present work, this hypothesis implies that non-Hokkaido-born residents of Hokkaido should be similar to Hokkaido-born residents of Hokkaido, especially after some substantial period of acculturation.

Although both the self-selection hypothesis and the acculturation hypothesis would be suggested by similarities between Hokkaido-born Hokkaido residents and their non-Hokkaido-born counterparts, the two hypotheses differ in respect to what we might expect as a function of the length of stay in Hokkaido for the non-Hokkaido-born group. Whereas the acculturation hypothesis predicts that this group of people should be more similar to the Hokkaido-born group as they stay longer in Hokkaido, the self-selection hypothesis predicts that the similarities should be observed from the beginning—regardless of how long the non-Hokkaido-born individuals had stayed in Hokkaido.

Groups Compared

To test the voluntary settlement hypothesis and to explore the three mechanisms of cultural change and persistence, we included in our research design four groups of participants who were quite comparable except for the pertinent cultural background: American college students, Japanese college students in a university in the Japanese mainland, and both Hokkaido-born students and non-Hokkaido-born students in a university in Hokkaido.

We recruited Hokkaido participants from a paid participant pool of Hokkaido University. This university is located in Sapporo (the largest metropolitan center of Hokkaido). According to its enrollment statistics, Hokkaido University attracts its students from both within and outside of Hokkaido, with the out-of-Hokkaido students accounting for nearly 55% of the entire student body. This enabled us to divide the Hokkaido group into two subgroups depending on where the students were from (either Hokkaido born or non-Hokkaido born).

Mainland Japanese students were recruited from a paid participant pool of Kyoto University, in Kyoto (a large city in the western center of the Japan mainland). Both Kyoto University and Hokkaido University are among the top universities in Japan. The intellectual achievement and prowess of the student body are roughly equivalent. Moreover, both universities attract students largely from middle class socioeconomic strata. From the enrollment statistics of Kyoto University, we anticipated that a vast majority of students in Kyoto would be from southwestern regions of Japan. In fact, none of our participants were from Hokkaido.

American participants were recruited from the Universities of Michigan and Chicago. As two of the nation's top universities, they attract students primarily from middle and upper middle class socioeconomic strata. The two universities in Japan and the two universities in the United States are comparable in national reputation and the dominant socioeconomic status of their student body.

Study 1: Personal Goal Pursuit—Predictors of Happiness

One component of independent agency that we predicted to be associated with voluntary settlement was a strong tendency toward personal goal pursuit. We predicted a greater propensity toward personal goal pursuit in Hokkaido than in mainland Japan. We contrasted this tendency with a tendency toward more communal goals of social harmony and mutual help and support in a relationship. When accomplished, both of these goals—personal and communal—give rise to an experience of happiness (Kitayama, Markus, & Kurokawa, 2000; Oishi & Diener, 2001). Yet the relative significance of the two could vary across cultural groups. Thus, for people with independent agency, happiness should depend primarily on personal achievement, whereas for those with more interdependent orientations, happiness should depend more on social harmony.

To test this analysis, Kitayama et al. (2000) asked (non-Hokkaido) Japanese and American respondents to report how frequently they experienced a variety of emotions. For Americans, the reported experience of general positive emotions (e.g., happiness) was more strongly associated with the experience of disengaging positive emotions (e.g., pride)—a correlate of personal achievement—than with the experience of engaging positive emotions (e.g., friendly feelings)—a correlate of social harmony. In contrast, for Japanese, the reported experience of general positive emotions was more closely associated with the experience of engaging positive emotions (social harmony) than with the experience of disengaging positive emotions (personal achievement).

This general pattern was successfully replicated by Kitayama, Mesquita, and Karasawa (in press). It is also consistent with emerging evidence that predictors of subjective well-being and life satisfaction judgment are systematically different across cultures (Kitayama & Markus, 2000; Uchida, Norasakkunkit, & Kitayama, 2004). Diener and Diener (1995) found that self-esteem (analogous to socially disengaging positive emotions) was a more potent predictor of life satisfaction in individualist cultures, such as North

⁵ Moreover, if this were the only process that operated, there would never have been established a culture of frontier in Hokkaido. Nevertheless, this process might still be strongly operative among those who move to Hokkaido today.

America, than in collectivist cultures, such as Asian societies. In a study by Kwan, Bond, and Singelis (1997), life satisfaction judgment was predicted equally by both self-esteem and relationship harmony for Hong Kong Chinese, but it was predicted only by self-esteem for Americans.

Study 1 was designed to examine whether Hokkaido-born Hokkaido Japanese might hold a relatively strong orientation toward personal goals rather than orienting themselves to social harmony or interpersonal duties and obligations. Like Americans, Hokkaido-born Hokkaido Japanese should feel happiest when their personal goals are achieved. The pattern should be very different for mainland Japanese, who should feel happiest when social harmony and interdependence with others are established (Kitayama et al., 2000). Finally, we used data from non-Hokkaido-born residents of Hokkaido to test the three alternative hypotheses regarding cultural change and persistence. Although the initial enculturation hypothesis predicts this group to be no different from mainland Japanese, both the acculturation hypothesis and the self-selection hypothesis predict this group to be more similar to Hokkaido-born Hokkaido Japanese and Americans than to mainland Japanese.

Method

Participants. We recruited 68 Hokkaido participants (46 men and 22 women) from a paid participant pool of Hokkaido University. Thirty of the Hokkaido participants were born and brought up in Hokkaido. The remaining 38 were from the rest of Japan. Thirty-one Japanese (25 men and 6 women) were recruited from a paid participant pool of Kyoto University in Kyoto (a large city in the western center of the Japan mainland). All Japanese participants received 500 yen on completion of the study. Finally, 84 Americans (49 men and 35 women) were recruited from a participant pool of the University of Michigan. They received course credit for their participation.

Procedure. Participants were tested in groups of a few individuals. On arrival, participants were handed a questionnaire and told that the study was concerned with emotional experience. In the questionnaire, the participants were first asked to briefly describe the most emotional episode they had recently experienced. They then indicated how strongly they had experienced each of 20 emotions on a 6-point rating scale (1 = *not at all*, 6 = *very strongly*).

Drawing on our prior work (Kitayama et al., 2000, in press), we divided the 20 emotions into six categories that were defined by both pleasantness and social orientation. By *social orientation*, we mean the degree to which each emotion is associated with either independence or interdependence. In the positive domain, some emotions result from success in independence, such as personal achievement (e.g., pride, self-esteem, and feelings of superiority), whereas some others result from success in interdependence, such as social harmony and connectedness (e.g., friendly feelings, close feelings, and respect). Still others are general in that they have no unequivocal association with either independence or interdependence (e.g., happiness, calmness, elation, and a feeling of being relaxed). These three classes of emotions are called socially engaging, disengaging, and general, respectively. They had reasonable reliabilities in each of the four groups tested (all α s > .65; alphas did not vary systematically across the groups tested). Likewise, in the negative domains, some emotions result from failure in independence and motivate the person to restore independence (e.g., anger, sulky feelings, and frustration), whereas others result from failure in interdependence and motivate the person to restore interdependence (e.g., feelings of indebtedness, guilt, and shame). Moreover, still others have no clear associations with either independence or interdependence (e.g., unhappiness, depression, disgust, and boredom). In the present work, the three classes of negative emotions had reasonable reliabilities in all the four

groups tested (all α s > .72; alphas did not vary systematically across the groups tested).

Results

For each participant, the ratings for the emotions in each emotion type were averaged. For each cultural group, the mean intensity of experiencing general positive emotions (e.g., happiness) was regressed on the mean intensities for the two other types of positive emotions, namely, engaging positive emotions (e.g., friendly feelings) and disengaging positive emotions (e.g., pride). The results are summarized in Figure 1. For Americans, happiness was significantly predicted by both disengaging positive emotion (personal achievement) and engaging positive emotion (social harmony), $t(81) = 7.71$ and 4.63 , respectively, both $ps < .0001$. Replicating previous findings (Kitayama et al., 2000, 2005), however, the regression coefficient was greater for the disengaging positive emotion than for the engaging positive emotion, although the difference was only marginally significant in the present work. In contrast, for mainland Japanese, happiness was strongly predicted by engaging positive emotion but not by disengaging positive emotion. The difference between the two regression coefficients was significant. This finding also replicates the previous evidence obtained by Kitayama et al. (2000, 2005).

In the backdrop of this cross-cultural difference, we now evaluate the pattern shown by Japanese in Hokkaido. Overall, data for these Japanese fell between those of the other two groups. At first glance, the pattern appears to vary as a function of where the Hokkaido Japanese were born and raised. Whereas happiness was predicted equally by both the engaging positive emotion and the disengaging positive emotion for the Hokkaido-born group, it was predicted more reliably by the engaging emotion than by the disengaging emotion for the non-Hokkaido-born group. Thus, as compared with non-Hokkaido-born Hokkaido residents, Hokkaido-born Hokkaido residents showed a pattern that was more akin to the American pattern. However, in a regression analysis with a dummy variable that distinguished the Hokkaido-born Hokkaido residents from the non-Hokkaido-born Hokkaido residents (Aiken & West, 1991), neither the Culture \times Disengaging Emotion interaction nor the Culture \times Engaging Emotion interaction was statistically significant, $t(62) < 1$ and $t(62) = 1.63$, $p > .10$, respectively. Hence, there is no strong evidence that the pattern was reliably different among Hokkaido residents depending on their place of birth and initial enculturation. Moreover, when we used a dummy variable distinguishing Hokkaido-born Hokkaido Japanese from Americans and carried out another regression analysis, neither of the interaction terms was significant ($ts < 1$). Finally, in a regression analysis with a dummy variable that distinguished the non-Hokkaido-born Hokkaido Japanese from the mainland Japanese, the Culture \times Disengaging Emotion interaction proved significant, $t(63) = 2.02$, $p < .05$. The association between the disengaging positive emotion and happiness was significantly greater for the non-Hokkaido-born Hokkaido Japanese than for the mainland Japanese. The corresponding effect was absent for engaging emotions, with the Culture \times Engaging Emotion interaction failing to reach statistical significance ($p > .15$).

The emerging pattern, then, is one in which the American group and the two Hokkaido groups were mutually similar to one an-

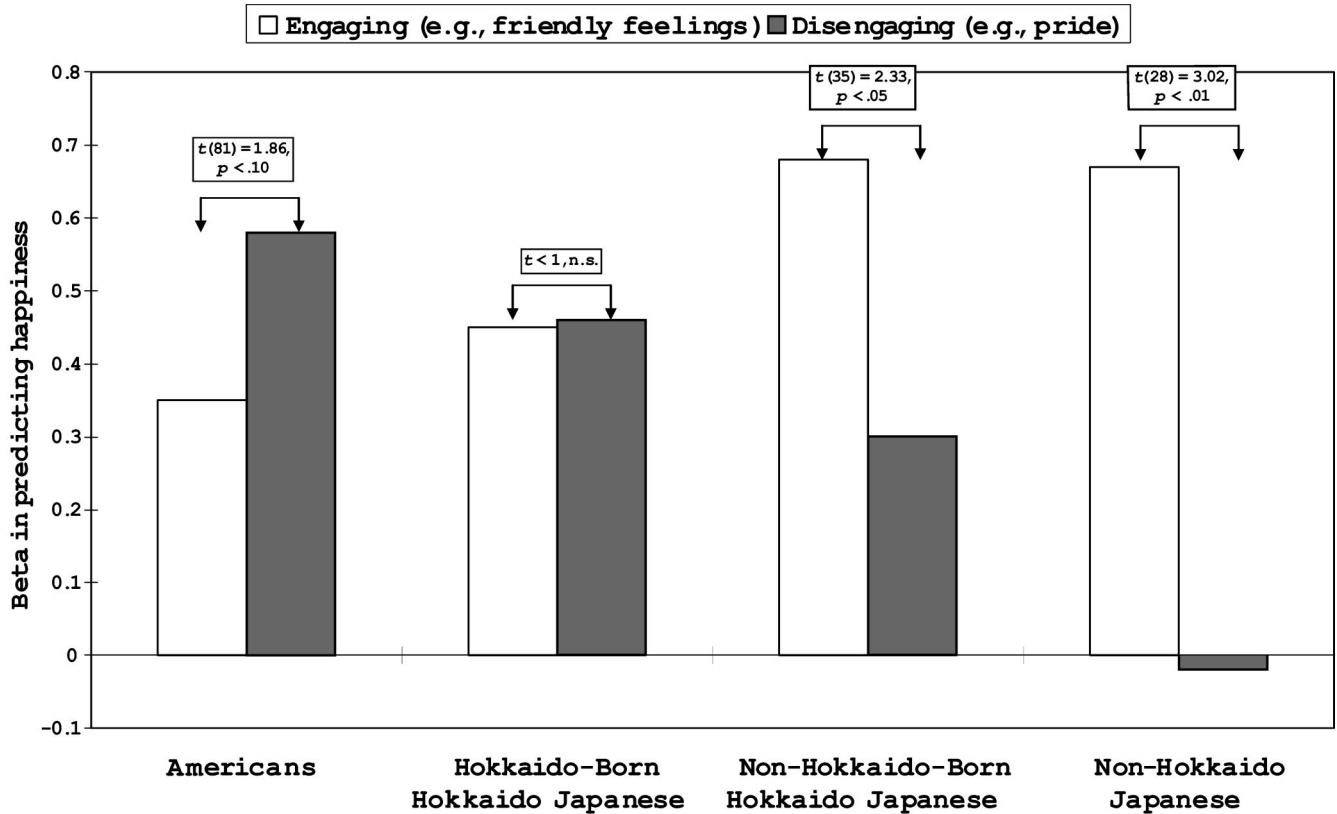


Figure 1. Standardized regression coefficients for engaging and disengaging positive emotions in predicting happiness (Study 1): Engaging positive emotions (e.g., friendly feelings) were more important for Japanese, and disengaging positive emotions (e.g., pride) were more important for Americans. Hokkaido residents from Hokkaido fell in between the two extremes.

other. Moreover, these groups, in turn, were reliably different from the mainland Japan group. Accordingly, the pattern is most consistent with the acculturation hypothesis, the self-selection hypothesis, or both. Nevertheless, caution is due, because, unlike their Hokkaido-born counterparts, the non-Hokkaido-born Hokkaido group was reliably different from the American group. In particular, in a regression with a dummy variable that distinguished between the Americans and the non-Hokkaido-born Hokkaido Japanese, the Culture \times Disengaging emotion interaction was negligible, $t(116) = 1.00, ns$, but the Culture \times Engaging Emotion interaction did prove significant, $t(116) = 8.16, p < .005$. Thus, it is difficult to completely discount the initial enculturation hypothesis.⁶

Discussion

Study 1 examined predictors of happiness and demonstrated a regional difference in Japan that is consistent with the voluntary settlement hypothesis. Like European Americans in the United States, Hokkaido Japanese embody the spirit of independent agency. These individuals put relatively equal weights on both personal achievement and social harmony. This is in sharp contrast with Japanese in mainland Japan, who appear to value social harmony substantially more than they value personal achievement. Unlike Hokkaido-born Hokkaido Japanese and Americans, the

mainland Japanese are oriented more toward social concerns and goals than toward personal ones.

It is interesting that non-Hokkaido-born residents of Hokkaido were statistically no different from their Hokkaido-born counterparts. This pattern of data is consistent with the acculturation hypothesis, the self-selection hypothesis, or both. Nevertheless, the data are equivocal on the role of initial enculturation. Moreover, the relatively small number of non-Hokkaido-born students in Study 1 prevented us from computing such correlations separately for subgroups that varied in the length of stay in Hokkaido. Hence, it was not possible to assess the relative merit of the acculturation hypothesis and the self-selection hypothesis.

⁶ For exploratory purposes, we carried out analogous analyses on the negative domain. As in recent work by Kitayama et al. (2005), there was no difference across cultures. In all groups, general negative emotion (unhappiness) was more reliably predicted by disengaging negative emotion (anger) than by engaging negative emotion (shame; $\beta_s = .73$ and $.19$, respectively), $t(180) = 7.22, p < .0001$. One conjecture is that, regardless of whether dominant cultural orientations are independent or interdependent, people may experience both greater frustration (a disengaging negative emotion) and general unhappiness when their dominant orientations are blocked.

Study 2: Personal Choice—Two Forms of Dissonance

Individuals in the frontier are likely to engage in personal choice. One consequence of choice that has been extensively studied by social psychologists during the last half century concerns cognitive dissonance (Brehm, 1956; Festinger, 1957; Harmon-Jones & Mills, 1999; Steele, 1988). Study 2 addresses the question of what forms dissonance might take in the Northern Frontier of Japan. Our analysis is based on a recent theoretical development designed to link culture to dissonance (Kitayama, Snibbe, Markus, & Suzuki, 2004). We anticipated that because a strong emphasis is given to personal choice in the frontier, cognitive dissonance in Hokkaido would take a unique form—the form we call personal (as opposed to interpersonal).

Drawing on theories of dissonance process that emphasize the role of the self (Aronson, 1968; Steele, Spencer, & Lynch, 1993), Kitayama et al. (2004) suggested that dissonance can take cross-culturally divergent forms because cultures emphasize different aspects of the self. In some cultural contexts, such as North American cultures, in which independence of the self in general and personal goal orientation in particular are emphasized, private self-images, such as the self's competence and moral integrity, are highlighted, and, as a consequence, individuals are hypothesized to experience dissonance when their behavioral choice poses a threat to a certain private self-image they wish to sustain. For example, a choice between two equally attractive cars can raise a threat to one's competence as a wise decision maker and consumer, because the chosen car might have negative features or the rejected car might have positive features. Kitayama et al. called this dissonance the *personal dissonance*. In contrast, in other cultural contexts, such as many Asian cultures, interdependence of the self in general and orientation toward social others in particular receive a far greater emphasis. In these cultures, public self-images, such as the self's reputation and social acceptance, are highlighted, and, as a consequence, individuals experience dissonance when their behavioral choice poses a threat to a certain public self-image they hope to maintain. For example, choosing to buy a luxurious German car might raise a concern about what one's colleagues and neighbors might think about one. This dissonance has been called the *interpersonal dissonance*.

Whether personal or interpersonal, dissonance is an aversive emotional state that motivates the person to justify the original choice (Festinger, 1957). Thus, once induced to experience dissonance, individuals are motivated to justify their choice by increasing their liking for the chosen item, decreasing their liking for the rejected item, or both. Nevertheless, depending on the cultural contexts of the person at issue, the dissonance should be aroused under quite different circumstances (Hoshino-Browne et al., 2005; Imada & Kitayama, 2005; Kitayama et al., 2004).

One critical variable is an awareness of "eyes of others" watching and closely monitoring the self (Imada & Kitayama, 2005; Kitayama et al., 2004). Because personal dissonance hinges on what one's choice means to one's private self-image, it should happen in total privacy, in the absence of any eyes of others. In contrast, interpersonal dissonance hinges on what one's choice might mean to one's public self-image. For this dissonance to arise, the choice has to be public—or at least perceived to be so. In fact, if the choice is made in complete privacy, it entails no ramification to one's public self-image, resulting in no dissonance.

To test these ideas, Kitayama et al. (2004; Imada & Kitayama, 2005) had both American (mostly White, middle class individuals) and Japanese participants (those living in Kyoto) make a choice between two equally attractive CDs and examined the degree to which the liking for the chosen CD was increased and the liking for the rejected CD was decreased. A key manipulation involved a poster that seemingly had been prepared for a conference presentation. The poster contained several schematic faces that were "watching" whoever was seated right in front of it. In an eyes-of-others condition, this poster was surreptitiously placed in front of the participant. No one raised any suspicions about the poster. In a control condition, no such poster was placed.

In support of the foregoing analysis, Japanese did not show any dissonance effect in the control condition, but they did show a reliable dissonance effect in the "eyes-of-others" condition. This suggests that, in making a choice, Japanese worry mostly about what the choice might mean to their public self-image. A dissonance effect for them therefore happens only when these public self-image concerns are experienced. In contrast, Americans showed a strong dissonance effect in the control condition. However, this effect was somewhat reduced in the eyes-of-others condition. Imada and Kitayama (2005) replicated this reduction of dissonance in the "eyes-of-others" condition and suggested that Americans assume that others are trying to influence them (Morling, Kitayama, & Miyamoto, 2002) and, as a consequence, perceive watching eyes of others to be constraining their choice. Choice under these conditions is therefore less free, entailing a lesser threat to one's private self-image and, thus, a lesser need for self-justification. This pattern of findings suggests that, in making a choice, Americans worry mostly about what the choice might mean to their private self-image. Only to the extent that they are anxious about their private self does a dissonance effect accrue for Americans.

Drawing on the foregoing research by Kitayama and colleagues (Imada & Kitayama, 2005; Kitayama et al., 2004), we conducted Study 2 to examine a dissonance effect in Hokkaido. We predicted that residents of Hokkaido would show a reliable dissonance effect in the absence of any eyes of others. Like North Americans, when exposed to eyes of others, they would show a weaker dissonance effect. In Study 2 we also examined non-Hokkaido-born Hokkaido Japanese to determine the relative merit of the three alternative hypotheses on cultural change and persistence (i.e., initial enculturation, acculturation, and self-selection).

Method

Participants. Eighty-one college students (57 men and 24 women) were recruited from a psychology paid participant pool of Hokkaido University. Forty-one (25 men and 16 women) were born and brought up in Hokkaido, and the remaining 40 (32 men and 8 women) were born and brought up in the Japanese mainland.

Procedure. The participants individually took part in the study. They were randomly assigned to either a control condition or a poster condition. These two conditions were identical, except that in the poster condition a poster that seemingly had been prepared for a conference presentation was surreptitiously placed in front of the participant. The poster depicted several schematic faces so that when the poster was placed right in front of the participant, these faces were "looking at" him or her (see Kitayama et al., 2004, for the poster that we used). No participant reported any suspicions about this manipulation. No poster was placed in front of the participants in the control condition.

The participants were told that the main part of the study concerned music preferences and were given a bogus music survey. As part of this survey, participants reported their birthplace and the length of their stay in Hokkaido. After a while, in keeping with studies by Heine and Lehman (1997) and by Kitayama et al. (2004), the experimenter presented the participants with 30 CDs and asked them to pick 10 that they wanted (and did not have). They rank ordered the 10 CDs according to their preferences and then rated their preferences on a 5-point rating scale ranging from “*I don't want it at all* (1)” to “*I want it very much* (5).” At this point, they were told that 2 CDs were available for them to take home after the experiment. They were given a choice between the 2. These 2 CDs were the ones that the participant had ranked 5th and 6th in the ranking task. The participants were given the CD that they chose and continued to work on the music survey for another 10 min, at which point the experimenter told the participants that he wanted them to report their preferences of the CDs again because “he wanted to see what people would feel toward the CDs when they were not looking at them.” The participants subsequently rank ordered the 10 CDs and also rated their likings for them. The participants were asked to indicate the preferences they felt right at that moment. After this, the participants were debriefed and dismissed.

Results

A dissonance reduction effect was indexed by both an upward rank change of the chosen CD and a downward rank change of the rejected CD. We added these two rank change scores to yield a measure of spread of alternatives (SA). A comparable measure based on rating measures of preference showed an identical pattern, so we report only the ranking data.

We examined the SA measure. In support of the prediction that Hokkaido residents are concerned with private self-images and, thus, experience dissonance even when they make a choice in private, there was a reliable dissonance effect in the control condition for Hokkaido residents from Hokkaido ($M = 0.90$), $t(20) = 2.19$, $p < .05$. Moreover, consistent with the hypothesis that, once exposed to the “eyes” of social others, individuals with independent agency would feel constrained or even influenced by these others, the dissonance effect was no longer statistically reliable for the Hokkaido residents from Hokkaido ($M = 0.60$), $t(19) = 1.06$, $p > .20$.

Next we examined non-Hokkaido-born residents of Hokkaido. The result was unequivocal. The pattern for these participants was no different from the pattern for the Hokkaido-born residents of Hokkaido. Thus, the SA was reliably positive in the control condition ($M = 1.26$), $t(18) = 2.29$, $p < .05$, and, moreover, it was reduced to be no different from zero in the eyes-of-others condition ($M = 0.57$; $t < 1$). If anything, the pattern was slightly more pronounced for the non-Hokkaido-born group than for the Hokkaido-born group, although the interaction between condition and birthplace was negligible ($F < 1$). This evidence lends support to the acculturation hypothesis, the self-selection hypothesis, or both. We can test these two hypotheses by examining whether the pattern we found might become more pronounced as a function of the length of stay of the participants in Hokkaido. That is, if the dissonance effect in the control condition became larger and the dissonance effect in the poster condition became smaller as a function of the length of stay, the acculturation hypothesis would be strongly supported. The absence of such correlations would be more consistent with the self-selection hypothesis. The length of stay had some reasonable variability (10 and 84 months, with a standard deviation of 14.77), yet the correlations were essentially

zero ($r_s = -.36$ and $-.05$, ns , for the control and the poster conditions, respectively).

One alternative possibility is that acculturation requires a minimal amount of time. That is, mere exposure (Zajonc, 1968) to an independent culture might be sufficient to produce a personal dissonance. In fact, many cultural priming effects (e.g., Gardner, Gabriel, & Lee, 1999; Hong, Morris, Chiu, & Benet-Martinez, 2000) might seem consistent with such a conjecture. Especially for dissonance, this conjecture has a difficulty, however.

Heine and Lehman (1997) examined a relatively representative group of mainland Japanese students temporarily attending a Canadian university and found an interpersonal pattern of dissonance among them. In particular, these researchers tested a group of mainland Japanese students who participated in an overseas exchange program. The nature of the program was such that there is no strong reason to believe that those who participated in the program were systematically different from those who did not. Hence, Heine and Lehman's data suggest that there is little or no acculturation effect in dissonance. Also consistent with this is a recent finding by Hoshino-Browne et al. (2005) that the interpersonal pattern of dissonance was just as strong among Asian Canadians as among Japanese in Japan. Clearly, a mere exposure to North American culture is not sufficient to produce a personal pattern of dissonance among those with Asian heritage.⁷

The procedure of the current study is identical to the procedure of Study 4 of Kitayama et al. (2004), wherein the researchers collected Japanese data in Kyoto and compared them with data collected from Caucasian Americans in the United States. For comparison purposes, we plotted the pertinent SA means in Figure 2. As can be seen, Japanese in Kyoto showed a substantially larger dissonance effect in the poster condition than in the control condition. In contrast, all the remaining three groups (Hokkaido residents from Hokkaido, non-Hokkaido-born Hokkaido residents, and North Americans) showed a larger dissonance effect in the control condition.

Discussion

Study 2 included a standard free-choice condition that was modeled closely after the procedure of the earlier studies (e.g., Heine & Lehman, 1997; Kitayama et al., 2004; Steele et al., 1993); we found that, unlike mainland Japanese in the previous work, Hokkaido resi-

⁷ This finding also suggests that immigrants from Asian cultures in North America might not have strong personal goal or choice orientations. Although these observations must be further examined in a more systematic study, they may be related to the fact that a vast majority of immigrants from Asia and South America arrived fairly recently (Suárez-Orozco, 2003). These “late immigrants” did not settle in new lands or frontiers. Instead, they moved into cultural and social institutions that had already been set up and held in place and were often similar to those available in the home country (e.g., Chinatown and Little Tokyo). One could presume that there was substantially less need for independence and self-sufficiency for these late Asian immigrants than for earlier immigrants in both North America and Hokkaido, who settled in literally new, unknown, and unexploited lands of opportunity wherein virtually no infrastructures or cultural systems had been laid out. Another possibility is that Asian immigrants are motivated to maintain their cultural identity by contrasting it against the individualistic ethos of the mainstream society in North America. No such identity concerns were supposedly involved for the original settlers in Hokkaido or for those in the United States.

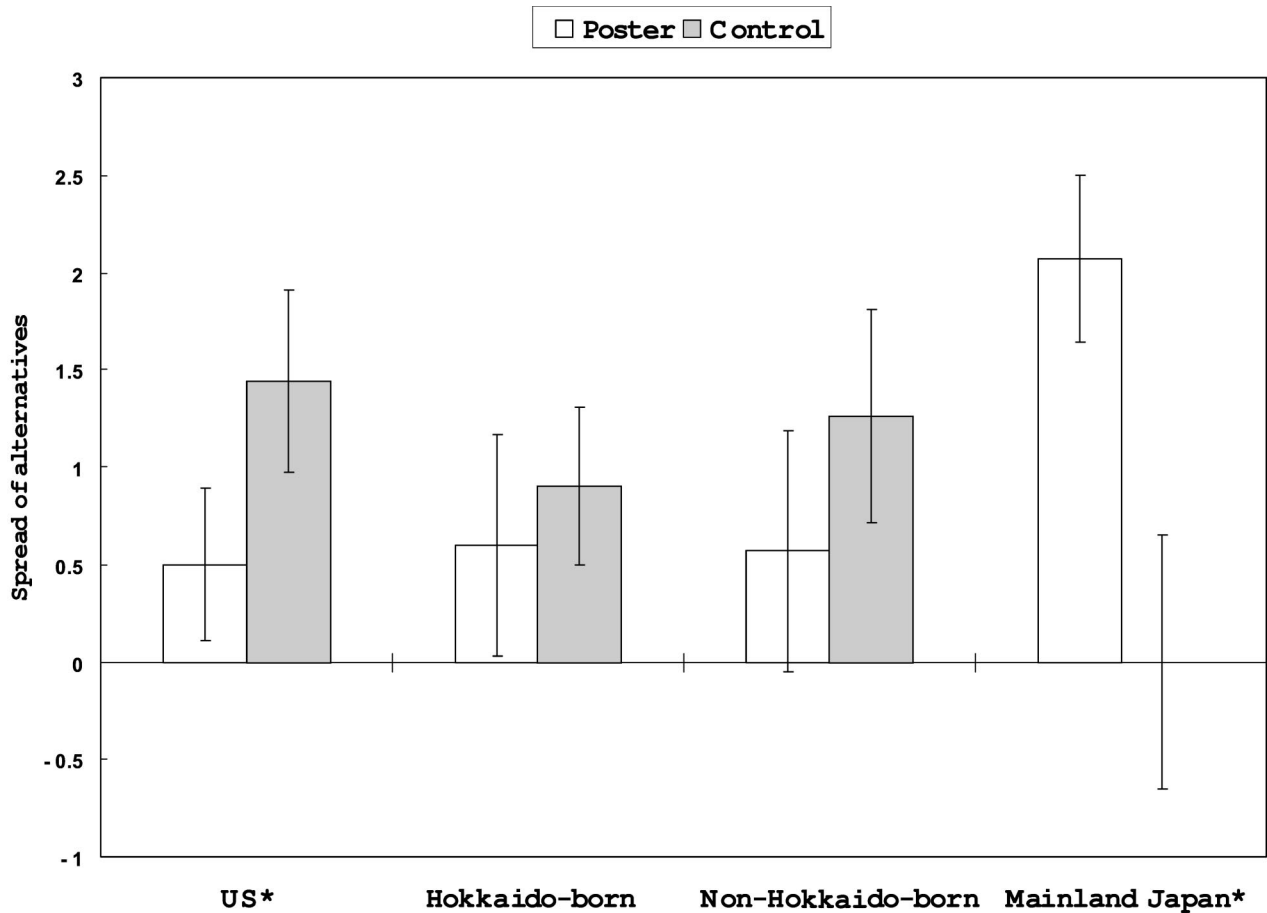


Figure 2. Dissonance effect in the two experimental conditions (Study 2): Hokkaido residents showed a dissonance effect in both of the conditions. This pattern is analogous to the pattern observed for Americans but not for non-Hokkaido Japanese in a previous study. The North American data and the mainland Japanese data in the figure (marked with an asterisk) are from Kitayama et al. (2004, Study 4). Error bars indicate standard errors of the mean.

dents showed a reliable dissonance effect when no watching eyes of others were present. When exposed to eyes of others, these individuals no longer showed a reliable dissonance effect. These findings are consistent with the hypothesis that our Hokkaido participants are concerned with their private self-image and thus experience a personal dissonance. This conclusion is bolstered by the fact that the pattern observed in Hokkaido is very similar to the one observed for North Americans in a study with the identical design and procedure (Study 4 in Kitayama et al., 2004).

One significant finding comes from the non-Hokkaido-born group in Hokkaido. The pattern for these individuals was no different from the pattern for either Hokkaido-born Hokkaido Japanese or Americans. Moreover, this was the case regardless of the length of stay of these individuals in Hokkaido. Null findings such as these are hard to interpret. Thus, we cannot entirely exclude the involvement of acculturation. However, taken as a whole, the current evidence pertaining to personal goal pursuit and personal choice is most consistent with the self-selection hypothesis, which states that some small proportion of mainland Japanese acquire a strong tendency toward personal choice and personal goal pursuit and, furthermore, that these mainland Japanese are especially strongly attracted to and, thus, likely to move to Hokkaido—Japan's Northern Frontier.

Study 3: Dispositional Lay Theory—The Fundamental Attribution Error

So far, we have found that Hokkaido Japanese are inclined toward personal goal pursuit (as revealed in the happiness measure) and personal choice (as revealed in the dissonance measure). Moreover, the data pattern suggests that the self-selection process plays a significant part in accounting for this observation. In Study 3, we examine whether the same pattern might be observed for dispositional lay theory.

Theoretically, a large group of people with behavioral proclivities toward personal goal pursuit and personal choice may be expected to develop a shared belief that action is internally motivated and controlled. Accordingly, Hokkaido Japanese may be expected to share a highly dispositional lay theory of the person. It is not clear, however, whether Hokkaido residents who were born and brought up in mainland Japan might also share such a belief. While growing up in mainland Japan, these individuals are surrounded by others who do not have any psychological proclivities toward personal choice or personal goals. It is therefore possible that these individuals acquire a nondispositional lay theory while in mainland Japan. Moreover, they may even keep this theory

when they move to Hokkaido.⁸ For this measure, therefore, there is a greater likelihood that the initial enculturation hypothesis will be supported. To address these questions, we examine a cognitive bias toward dispositional attribution, called the *fundamental attribution error* (Ross, 1977). According to this cognitive bias, when asked to explain another's behavior, people refer primarily to the person's internal attributes, such as traits and attitudes, in lieu of external factors that surround him or her. This bias is caused by a mental model of a person as independent and as organizing his or her own actions in terms of his or her own internal attributes, such as attitudes and goals.

Although this bias is extremely common and robust in North American cultural contexts (Jones, 1979; Ross, 1977), it is likely to be less so in other cultural contexts. Especially in East Asia, a collective belief that people are interdependent is dominant, which highlights the role of social contextual factors in guiding one's own behaviors. In these cultures, then, the dispositional bias, such as the fundamental attribution error, may be attenuated or even absent (Markus & Kitayama, 1991; Nisbett, Peng, Choi, & Norenzayan, 2001).

Since a pioneering study by Miller (1984), this cross-cultural prediction has received substantial support (Choi, Nisbett, & Norenzayan, 1999). M. W. Morris and Peng (1994), for example, presented both American and Chinese respondents various pictures of a number of fish swimming in different formations. When asked to account for the reasons for the movement of a target fish, Americans were more likely to refer to internal factors of the fish (e.g., its psychological dispositions) than to factors that were external to it (e.g., movements of other fish that were present) as causal factors underlying the movements. In contrast, Chinese were more likely to refer to external factors than to internal factors in the same task (see also Chiu, Hong, & Dweck, 1997). The same cross-cultural difference has been observed in content analyses of media materials (M. W. Morris & Peng, 1994), commentaries on professional sports events (Lee, Hallahan, & Herzog, 1996), and TV coverage of Olympics games (Markus, Uchida, Omoregie, Townsend, & Kitayama, 2006). It has also been documented in an attitude-inference paradigm (e.g., Masuda & Kitayama, 2004; Miyamoto & Kitayama, 2002).

In Study 3, we use a causal attribution task. We compare four groups of participants, namely, Hokkaido residents who were born in Hokkaido, those who were not born in Hokkaido, mainland (i.e., Kyoto) Japanese, and Americans in the United States (in Chicago). We predicted, first, that we would observe a strong emphasis on dispositional attribution among both Americans and Hokkaido Japanese socialized in Hokkaido. Second, we expected that this pattern would be either attenuated or even entirely nonexistent among non-Hokkaido Japanese. Third, we used the responses from non-Hokkaido-born Hokkaido Japanese to test the relative merit of the three hypotheses on cultural change and persistence. The initial enculturation hypothesis predicts that non-Hokkaido-born residents of Hokkaido will be similar to non-Hokkaido Japanese in the Japanese mainland. However, both the self-selection hypothesis and the acculturation hypothesis predict that the responses of non-Hokkaido-born residents of Hokkaido will be more similar to those of Americans and Hokkaido residents raised in Hokkaido than to those of mainland Japanese.

Method

Participants. Thirty-eight Japanese (19 men and 19 women) were recruited from a participant pool of Kyoto University. All received course credit for their participation. None of these participants were from Hokkaido. Forty-two more Japanese (28 men and 14 women) were recruited from a paid participant pool of Hokkaido University. All received 500 yen on completion of the study. Seventeen of these Hokkaido participants were born and brought up in Hokkaido, and the rest were originally from the rest of Japan and came to Hokkaido to attend the university. Thirty Americans (15 men and 15 women) were recruited from the University of Chicago. These American participants responded to fliers we distributed across the campus. On completion of the study, they received \$5 for their participation.

Procedure. Participants were tested in groups of a few individuals. On arrival, participants were told that the study was concerned with social judgment and were handed a questionnaire booklet. The booklet had six stories. Each story featured a protagonist who committed an action that was either desirable or undesirable. Following Miller (1984), we prepared both a desirable action version and an undesirable action version for each story. For example, the following are two versions of a story about a professional pitcher, Tom Lyons.

Desirable action version: Professional pitchers, like Tom Lyons, are very busy almost everyday during the regular season. The pitchers work hard practicing and playing in games. In the off-season, therefore, many professional pitchers take vacations. However, Tom Lyons holds several free baseball camps for kids living in poor neighborhoods instead of taking a vacation.

Undesirable action version: A pitcher for a professional baseball team, Tom Lyons, lost several games in the beginning of the season. Instead of spending extra time practicing, he used performance-enhancing drugs for the rest of the regular season. Tom Lyons continued to use the drugs, even though the use of performance-enhancing drugs is illegal and considered to be cheating.

Participants were then asked to indicate their agreement or disagreement with four statements on 7-point rating scales (1 = *strongly disagree*, 7 = *strongly agree*). In keeping with some earlier work (M. W. Morris & Peng, 1994), we included counterfactual judgments in addition to straightforward attribution judgments. Attribution judgments require the participant to report the extent to which each of the two sets of causes (internal and external) influenced the behavior at issue. Counterfactual judgments require the participant to report the extent to which he or she thinks the behavior would have changed if one or the other set of causes had been different. If participants perceived an internal (or external) factor as an important cause for the behavior, they should also report that the behavior would have been different if the internal (or external) factor had been different. We thus prepared the following four questions about Tom Lyons:

1. "Features of Tom Lyons (such as his character, attitude, or temperament) influenced his behavior" (internal attribution).
2. "Features of the environment that surrounds Tom Lyons (such as the social atmosphere, social norms, or other contextual factors) influenced his behavior" (external attribution).
3. "Tom Lyons would have acted differently if his features (such as his character, attitude, or temperament) had been different" (internal counterfactual judgment).

⁸ This analysis implies that voluntary settlers in Hokkaido are likely to be oriented toward personal goals and choice in their actions but believe in a nondispositional, more holistic lay theory. Such dissociation between belief and action is not uncommon (Nisbett & Wilson, 1977).

4. "Tom Lyons would have acted differently if features of the environment that surround him (such as the social atmosphere, social norms, or other contextual factors) had been different" (external counterfactual judgment).

All materials were developed by a team of two Japanese-English bilinguals and one native English speaker. They were translated and back-translated between the two languages. This process was repeated several times to ensure the semantic equivalence between the two languages. On completing the sixth story, participants were debriefed and dismissed.

For half of the participants, three of the six stories were presented in the desirable action version, whereas the remaining three stories were presented in the undesirable action version. These stories were presented in a single random order. For the other half of the participants, the desirability of each story was switched. For all six stories, there was no systematic difference between the desirable version and the undesirable version, so we dropped this variable from consideration. Finally, the Hokkaido participants reported how long they had lived in Hokkaido.

Results

Attribution judgment. Responses to the internal and external causal attribution questions were analyzed with an analysis of variance with two between-subjects variables (culture and gender

groups) and one within-subject variable (causal locus). The main effect of causal locus was significant. Overall, there was a greater tendency to attribute behaviors to internal factors than to external factors, $F(1, 102) = 30.34, p < .0001$. As predicted, however, the Culture \times Causal Locus interaction proved significant, $F(3, 102) = 4.04, p < .01$. For the relevant means, see the left panel of Figure 3. Replicating numerous American studies that have demonstrated the fundamental attribution error (Ross, 1977), American participants reported the internal factors to be more important than the external factors in producing the behaviors. Moreover, replicating more recent studies that showed a significant cross-cultural variation in causal attribution, this effect entirely vanished in our Kyoto sample, $t(102) = 1.63, ns$.

Within this general cross-cultural difference, data from our Hokkaido-born Hokkaido sample lend support to the voluntary settlement hypothesis. These participants were no different from Americans, showing a much stronger emphasis on the internal factors than on the external factors, $t(102) = 4.51, p < .01$. The difference between the internal score and the external score was the same for the two groups ($t < 1$). It is interesting that the pattern for non-Hokkaido-born Hokkaido Japanese was consistent with the fundamental attribution error yet was quite weak, $t(102) =$

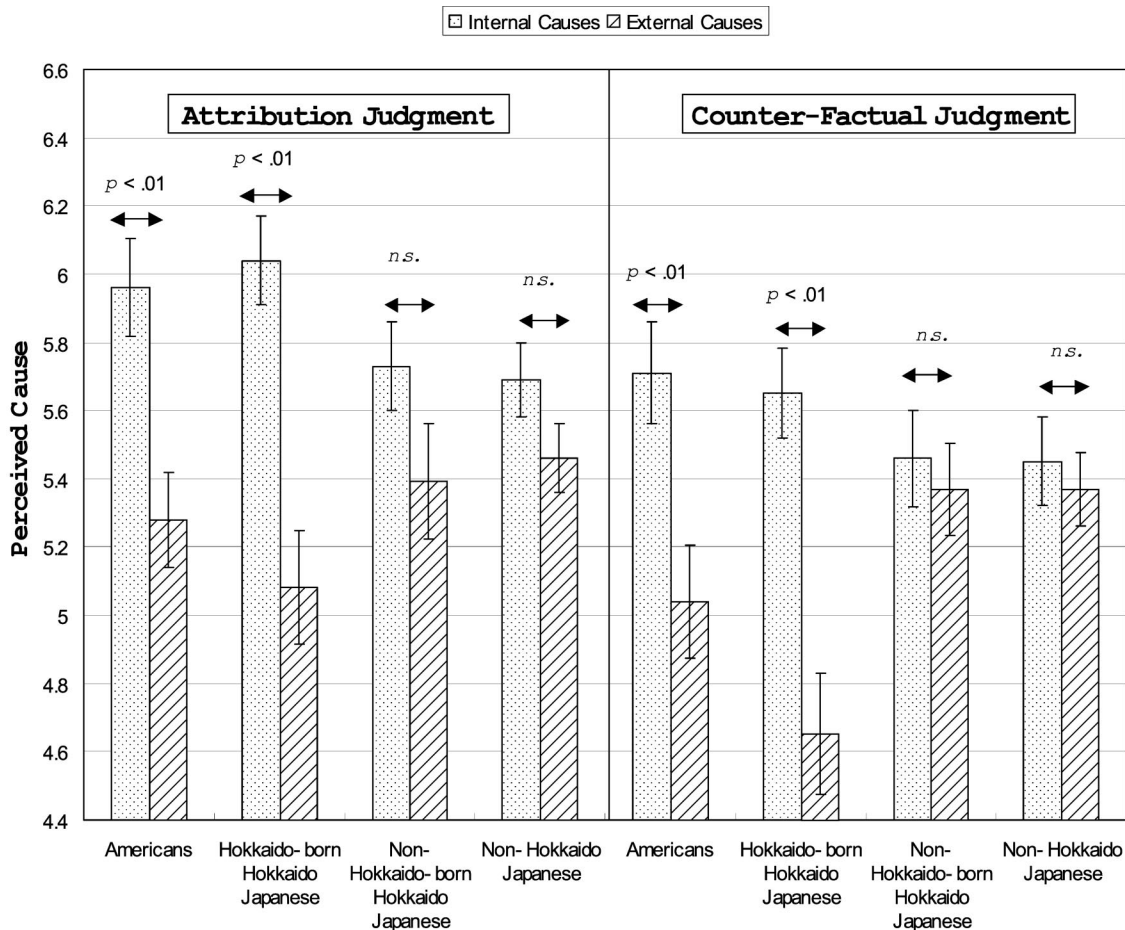


Figure 3. Attribution judgment and counterfactual judgment in Study 3: There was a reliable tendency to weigh internal factors more than external factors among North Americans and Hokkaido residents from Hokkaido. For non-Hokkaido Japanese, there was no such tendency. Error bars indicate standard errors of the mean.

1.93, $p < .10$. In fact, this pattern was more similar to the pattern observed for the mainland (Kyoto) Japanese. The difference between the internal score and the external score was no different between these two Japanese groups ($t < 1$). In contrast, the difference between the internal score and the external score for the Hokkaido-born Hokkaido Japanese group was significantly greater than the corresponding difference for the non-Hokkaido-born Hokkaido Japanese group, $t(102) = 2.25$, $p < .05$. This pattern clearly favors the initial enculturation hypothesis over the self-selection hypothesis or the acculturation hypothesis.

Counterfactual judgment. Results for the counterfactual measures, shown in the right panel of Figure 3, are quite similar to those for the causal attribution measures. As predicted, an analysis of variance performed on these data showed a significant causal locus main effect and its interaction with culture, $F(1, 102) = 25.94$, $p < .0001$, and $F(3, 102) = 6.77$, $p < .005$, respectively. Both Americans and Hokkaido-born Hokkaido Japanese reported that the behavior at issue was more likely to have changed with a change in internal factors than with a change in external factors, $t(102) = 4.41$, $p < .01$, and $t(102) = 4.94$, $p < .01$, respectively. There was no significant difference between the two groups, $t(102) = 1.29$, *ns*. In contrast, this bias—the fundamental attribution error—vanished entirely in both the non-Hokkaido-born Hokkaido Japanese and the Kyoto Japanese ($ts < 1$). Again, there was no significant difference between the two groups ($t < 1$). Finally, the difference between the internal score and the external score for the Hokkaido-born Hokkaido Japanese group was significantly greater than the corresponding difference for the non-Hokkaido-born Hokkaido Japanese group, $t(102) = 3.48$, $p < .01$.

Correlation with the length of stay in Hokkaido. The data we have reported for the non-Hokkaido-born Hokkaido Japanese are most consistent with the initial enculturation hypothesis. According to this hypothesis, once socialized in mainland Japan, these individuals acquire a nondispositional lay theory because they are surrounded by others who are quite interdependent and socially oriented. This may be the case even though they are behaviorally more oriented toward personal goal pursuit and personal choice (as indicated by Studies 1 and 2). Moreover, these individuals seem to retain the nondispositional lay theory even when they move to and are immersed in the culture of frontier, where a contrasting dispositional lay theory holds sway. Accordingly, we expected that there should be no systematic correlation between the tendency for dispositional attribution (endorsement of the internal causes minus endorsement of the external causes, with the two attribution measures combined) and the length of time these individuals had spent in Hokkaido when they participated in the study. The length of stay had some reasonable variability (3 and 36 months, with a standard deviation of 7.53), yet, as predicted, the correlation was essentially zero ($r = -.01$, *ns*).

Discussion

In Study 3, we have examined dispositional lay theory and have obtained evidence that Hokkaido-born Hokkaido Japanese are very similar to Americans. Both of these groups showed a strong bias toward dispositional (as opposed to situational) factors in causal inference. Given these findings and the evidence from the first two studies, we may conclude that there is a strong ethos of independent agency in Hokkaido. In stark contrast with the results in the first two studies (pertaining to personal goals and choice), how-

ever, according to this cognitive measure of independent agency (lay dispositionism), non-Hokkaido-born Hokkaido Japanese were more similar to mainland Japanese than to either Hokkaido-born residents of Hokkaido or Americans. This latter data pattern is most consistent with the initial enculturation hypothesis.

General Discussion

The Voluntary Settlement Hypothesis

Where does culture come from? How is it produced, maintained, and, in many cases, changed over time? Some theorists have emphasized ideational resources that are long stored and preserved in distinct geographical regions (e.g., Western civilization and Eastern civilization; e.g., Markus & Kitayama, 1991; Nisbett, 2003) or distinct groups, religious or otherwise (e.g., Protestants and Catholics; Sanchez-Burks, 2005). These and other theorists have also emphasized ecological conditions of living (Berry, 1976; Triandis, 1995). Of course, since Marx and Weber, modernization theorists have long argued that economy plays critical roles in the process (Inglehart & Baker, 2000; Schooler, in press).

The present hypothesis can be located squarely at the intersection of these proposals and analyses. We have hypothesized that American individualism owes importantly to voluntary settlement by Europeans in the formative years of the United States. This settlement was motivated initially by a quest for religious freedom and later more by a pursuit of personal wealth. Moreover, the subsequent expansion of the territory to the west also must have fostered the ethos of independence.

Although this hypothesis is difficult to test in North America because of myriad confounding sociohistorical factors, it does suggest that there should be elements of independent agency even outside of North America as long as there is a relatively recent history of voluntary settlement. We thus examined Hokkaido—a northern island of Japan—as a natural experiment for testing the voluntary settlement hypothesis. This island was intensively settled since the 1870s over several decades, primarily by jobless samurais and subsequently by numerous farmers from all over Japan. The motivations for the settlement were personal success and achievement in certain tangible terms. The dictum, “Boys, be ambitious!” (broadly attributed to an American educator, William S. Clark, who served as the first vice president of the Hokkaido University between 1876 and 1877) eloquently expresses the regional ethos of Hokkaido around that time, which we believe has since been deeply ingrained into the regional culture.

As predicted, in three different measures of independent agency, Hokkaido Japanese who were born and raised in Hokkaido were more similar to Americans than to mainland Japanese. Unlike happiness for the mainland Japanese, happiness for the Hokkaido Japanese was distinctly more personal. Moreover, the Hokkaido Japanese also showed evidence of personal dissonance. This finding on dissonance is in sharp contrast with typical findings for mainland Japanese (Hoshino-Browne et al., 2005; Imada & Kitayama, 2005; Kitayama et al., 2004), in which the dissonance effect is obtained only in the presence of certain social cues or contexts that evoke public self-image concerns. Finally, unlike the mainland Japanese, the Hokkaido Japanese exhibited clear evidence of the fundamental attribution error. Given these findings and the logic of triangulation, we may conclude that voluntary

settlement is a powerful causal factor in producing independent agency.

Enculturation, Acculturation, and Self-Selection

In an attempt to obtain new insights into the mechanisms underlying cultural change and persistence, we tested non-Hokkaido-born residents of Hokkaido. If these individuals were no different from the mainland Japanese, the initial enculturation hypothesis would be supported. This hypothesis holds that once they are socialized in the mainland Japan, individuals acquire an interdependent ethos; moreover, once acquired, this ethos is hard to change, even when the individuals are relocated and immersed in Hokkaido culture. If this group were more similar to the Hokkaido-born residents of Hokkaido, then the acculturation hypothesis or the self-selection hypothesis would be supported. Whereas the acculturation hypothesis proposes that once they are immersed in Hokkaido culture, mainland Japanese will change in the direction of independence, the self-selection hypothesis holds that a relatively small number of mainland Japanese who have acquired independent agency are especially likely to choose to move to Hokkaido.

The results are quite suggestive. Whereas the initial enculturation hypothesis was supported for lay theory (Study 3), the self-selection hypothesis was supported for personal goal pursuit (Study 1) and personal choice (Study 2). These findings suggest that self-selection operates primarily on psychological propensities toward personal goals and personal choice. That is, a relative small group of high school graduates in mainland Japan who have strong propensities toward personal goal pursuit and personal choice may be attracted to Hokkaido.⁹ In fact, this group of people might be quite similar in that particular respect to the original settlers who created the foundations of the present-day Hokkaido several generations ago. This being the case, the same cultural dynamic that created the frontier might still be at work today. Nevertheless, consistent with the idea that acquisition of lay theory depends primarily on behavioral patterns of others who surround the self, these individuals still showed evidence of a more interdependent, nondispositional lay theory. One may speculate that dispositional lay theory that is evident in contemporary Hokkaido was gradually developed by the original settlers and their descendants, whose behavioral propensities were quite suggestive of this lay theory.

The Role of Voluntary Settlement in Western Individualism

Future work should compare North Americans with Europeans in a similar set of social psychological tasks. Are Europeans equally prone to the fundamental attribution error? Do they also hold personal forms of happiness or dissonance? Given the evidently critical role of voluntary settlement in fostering these phenomena, we might predict that these effects are somewhat attenuated in Europe—especially in traditionally agrarian regions where people have undergone no history of settlement and resettlement. At present, critical data are missing because of the paucity of systematic cross-cultural work that compares North Americans with Europeans. Moreover, with a few notable exceptions (e.g., Knight et al., 2005; Markova et al., 1998; Semin & Rubini, 1990), within-Europe regional variations largely have been neglected. Yet

explorations into these variations are another important avenue of research for testing the voluntary settlement hypothesis.

Equally important, there may still remain regional variations within North America. For example, researchers could compare people who have lived in New England over many generations, since the days of the Pilgrims, with those in Montana whose great-grandparents settled there 150 years ago. There is ample reason to suspect that the Montanans might show a stronger ethos of independence than the New Englanders would. This, in fact, seems to be the case. In an attempt to map the distribution of individualistic traits across states in the United States, Vandello and Cohen (1999) created an amalgam index of individualism that was composed of several demographic indicators. These indicators included percentage of people who lived alone, ratio of divorce rate to marriage rate, percentage of older adults who lived alone, and percentage of self-employed people. Overall, there was an overarching tendency for the western states to be substantially more individualistic than the eastern states, with the Mountain West and the Great Plains (including Montana, Wyoming, and Colorado, among others) being especially high in individualism. Moreover, in a recent study on regional variation in various facets of well-being, Plaut et al. (2002) found that both the sense of mastery over the environment and perceived freedom from constraints were especially high in the Mountain West as compared with the rest of the country. These patterns would have been predicted by the voluntary settlement hypothesis. Indeed, Vandello and Cohen (1999) attributed the finding to the fact that “the West was the last remaining frontier of the United States, and even today some parts of the Mountain West remain largely uncultivated and wild” (p. 281).⁹

Notice that the foregoing quote from Vandello and Cohen (1999) would apply equally well to Hokkaido if the United States is substituted with Japan. In fact, the latest statistics from the National Census in Japan (Statistics Bureau, Ministry of Internal Affairs and Communications, 2000) suggest that the divorce rate is nearly two standard deviations higher in Hokkaido (2.50 per 1,000 persons) than the national mean computed from average rates for the 47 prefectures ($M = 1.96$, $SD = .28$). Only Okinawa and Osaka exceed Hokkaido in divorce rate. Moreover, extended families are relatively less common in Hokkaido than elsewhere in Japan. Thus, in terms of the proportion of households with at least

⁹ As Japan's foremost “frontier,” Hokkaido still is not popular as a place to choose for college education. A vast majority of graduates from high schools in mainland Japan attend universities in the mainland, not in Hokkaido. Moreover, most who dare to come all the way to Hokkaido do attend Hokkaido University—the region's premier institution. Accordingly, although the proportion of non-Hokkaido-born residents at Hokkaido University is substantial (approximately 55%), the proportion of such students in each high school is quite negligible. Self-selection may therefore be strongly suspected. That is, non-Hokkaido-born students at Hokkaido University might be systematically different from their majority counterparts who choose to attend universities in mainland Japan. Indeed, these students are among those most strongly attracted to the ideas of independence, frontier, and personal dream. In support of this conjecture, a biannual survey conducted by Hokkaido University on its new class of students (Hokkaido University official Web site, <http://www.hokudai.ac.jp/bureau/nyu/tottemol>) shows that “the cultural and natural climate of Sapporo and Hokkaido” is the most important reason for the out-of-Hokkaido students to have decided to come to Hokkaido.

one grandchild, Hokkaido is the fifth lowest (10%) of the 47 prefectures (the national average is 21%, $SD = 8.9\%$). Among the 13 largest metropolitan areas, Sapporo (5%) is the lowest of all ($M = 8\%$, $SD = 2.0\%$). Further support for the same conclusion comes from the proportion of older people (65 or older) living alone. Among the 47 prefectures, Hokkaido is the 10th highest. Although it is not compelling by itself, the meaning of this statistic changes once one recognizes that the 8 of the 9 prefectures that show higher averages on this statistic are concentrated in the southern island (Kyushu) of Japan, where a much milder climate throughout the year makes it relatively easy for older adults to live alone. The only exception is Tokyo—the largest metropolitan center of Japan. Among the prefectures that suffer a severe winter climate, Hokkaido rises to the top on this chart. Although preliminary, this review of the Japanese census data provides further evidence for the voluntary settlement hypothesis.

Concluding Remarks

The present work is one of the first attempts to specify the mechanisms and processes that have created American individualism (see Inglehart & Baker, 2000; Sanchez-Burks, 2005, for other notable attempts). The finding that voluntary settlement has the substantial effect of fostering an independent mental set even in an interdependent context suggests a causal impact of this variable in breeding and fueling an individualistic ethos throughout the history of North America.

Another important contribution of the present work is that it establishes the existence of significant regional variations within Japan, consistent with the voluntary settlement hypothesis. Although many anthropologists and sociologists have argued, quite reasonably, that cultural groups do not always correspond to any given nation state, the present work is one of the first clear demonstrations of regional variation. This work therefore makes the important methodological point that a careful, theoretically motivated examination of regional variations is just as informative and as important as more traditional approaches of examining macroscopic differences and similarities across broadly defined cultural regions, such as North America and Asia (see Cohen, 2001; Nisbett & Cohen, 1996, for important predecessors). Indeed, the logic of triangulation used in the present work should be used more often as an essential tool for identifying active causal factors of culture in producing a variety of psychological phenomena (Medin et al., in press).

We acknowledge some limitations of the present work. First, we examined college students in both the United States and Japan. There is reason to believe that a majority of participants in our studies were from middle or upper middle social classes. Because middle class social status seems to breed an independent ethos, especially in the United States (Schooler, in press; Snibbe & Markus, 2005), it is important to determine whether the same might also be the case in Hokkaido and in Japan or Asia more generally.

Second, although our measures of independent agency were quite inclusive and relatively representative of those that have been identified in the last 2 decades of cultural psychological work, future researchers should examine some others, such as attitude-behavior consistency (Triandis, 1989), the motivation-enhancing effect of choice (Iyengar & Lepper, 1999), and attentional sensitivity to relational cues, such as vocal tone (Ishii, Reyes, &

Kitayama, 2003). Moreover, it remains to be seen whether analogous regional variations could be found in nonsocial cognitions, such as analytic and holistic modes of thought (Nisbett, 2003).

Yet another limitation of the current work stems from the fact that we did not address questions about cultural practices and institutions that presumably mediate the psychological effects we observed. Careful ethnographic work of both the “Wild West” of North America and the “wild north” of Japan would be informative. In particular, ecological conditions of living in Hokkaido may deserve a careful scrutiny. Moreover, a systematic analysis of cultural products, such as ads and public discourses (e.g., Markus et al., 2006), would also be indispensable. Finally, all these questions must be couched in an overarching developmental framework (Greenfield, Keller, Fuligni, & Marnard, 2003).

One further research agenda for the future is to explore the relative importance of the three components of the voluntary settlement hypothesis—that is, self-selection (personality dispositions for emigration), reinforcement (ecological conditions for independence), and institutionalization (practices and meanings of independence). For example, are voluntary settlers systematically different from nonsettlers in certain personality dispositions? If so, is self-selection an integral part of cultures of independence? Although the current work provides some preliminary evidence for such a possibility (see also Chen, Burton, Greenberger, & Dmitrieva, 1999, for an intriguing correlation between migration and a genetic predisposition toward risk taking and Allik & McCrae, 2004, for a systematic geographic distribution of personality traits on the globe), the issue is far from settled. Likewise, does voluntary settlement encourage independent agency only when it is met with harsh ecological conditions? Might it even be safe to assume, as some evolutionary psychological reasoning might (Cosmides & Tooby, 1987), that such ecological conditions automatically “evoke” a culture of independence? In addition, precisely what roles does institutionalization have on independent agency? Is culture possible without institutionalization?

There is no easy answer to any of these questions. Yet, by bringing them to the fore, the voluntary settlement hypothesis will help us shed some further light on antecedent conditions of the human mind, such as ecology, society, and culture, insofar as these conditions are tightly intertwined in the frontier.

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