

Differentiating Autonomy From Individualism and Independence: A Self-Determination Theory Perspective on Internalization of Cultural Orientations and Well-Being

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On the basis of self-determination theory (R. M. Ryan & E. L. Deci, 2000) and cultural descriptions drawn from H. C. Triandis (1995), the authors hypothesized that (a) individuals from different cultures internalize different cultural practices; (b) despite these differences, the relative autonomy of individuals' motivation for those practices predicts well-being in all 4 cultures examined; and (c) horizontal practices are more readily internalized than vertical practices across all samples. Five hundred fifty-nine persons from South Korea, Russia, Turkey and the United States participated. Results supported the hypothesized relations between autonomy and well-being across cultures and gender. Results also suggested greater internalization of horizontal relative to vertical practices. Discussion focuses on the distinction between autonomy and individualism and the relative fit of cultural forms with basic psychological needs.

The manifest variability in values and behaviors across different cultures has led many theorists interested in personality and well-being to adopt cultural relativism as an approach to understanding what fosters well-being. In this view, different cultures engender different goals, motives, and values, and these, in turn, are assumed to be differentially associated with how one pursues and attains well-being and social integration (Markus, Kitayama, & Heiman, 1996; Triandis & Gelfand, 1998).

Recently, a number of theorists have attempted to combine this appreciation of cultural differences with a more universalistic position regarding basic needs and well-being (e.g., Inghilleri, 1999; Kagitcibasi, 1996; Ryan & Deci, 2001; Ryff & Singer, 1998; Sheldon, Elliot, Kim, & Kasser, 2001). Theorists embracing such perspectives claim that amid the considerable surface diversity in cultural goals and values, there nonetheless exist certain universal or invariant aspects of human nature in the form of basic developmental propensities and psychological needs, supports for which are essential to well-being.

In particular, self-determination theory (SDT; Deci & Ryan, 1985; Ryan & Deci, 2000) argues that people from all cultures share basic psychological needs for autonomy, competence, and relatedness. The theory posits that when these three needs are

supported by social contexts and are able to be fulfilled by individuals, well-being is enhanced. Conversely, when cultural, contextual, or intrapsychic forces block or frustrate the fulfillment of these basic needs, well-being is diminished. SDT acknowledges that the specific means of expressing and satisfying basic needs can vary considerably by context and culture, but it maintains that these underlying psychological needs are functionally relevant across these surface variations (Deci & Ryan, 2000). Further, although the attainment of other goals may enhance a person's happiness or hedonic satisfactions, gratification of these basic psychological needs constitutes a necessary condition for sustained well-being and healthy development (Ryan & Deci, 2001).

Among the three needs postulated by SDT, the primary controversy has concerned the need for *autonomy*. That is, although few people have doubted the universality of the need to feel relatedness (Baumeister & Leary, 1995; Ryan, 1993) or competence (Csikszentmihalyi, 1988; Deci & Ryan, 1985), a basic need for autonomy has been widely disputed. For example, Iyengar and Lepper (1999), in a widely cited article, suggested that cultural values for autonomy are opposed to those for relatedness and group cohesion. In their review, they equated SDT's constructs of autonomy and self-determination with making choices independently from one's reference group. They then provided experimental evidence showing that the imposition of choices by an experimenter relative to personal choice undermined intrinsic motivation in Asian Americans and Anglo Americans alike, replicating previous SDT-based findings (e.g., Zuckerman, Porac, Lathin, Smith, & Deci, 1978). However, they also showed that adopting choices made by trusted others uniquely enhanced intrinsic motivation for the Asian group. Their interpretation focused on the latter findings, which they portrayed as challenging the notion that autonomy is important across cultures. Oishi (2000) measured

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autonomy by assessing people's individualistic values, apparently assuming them to represent autonomy as defined within SDT. On the basis of this measure, Oishi reported that, outside of a very few highly individualistic Western nations, "autonomous individuals were no more satisfied with their lives than were those who were less autonomous" (p. 102). Finally, Miller (1997) cited SDT as exemplifying a Western view of internalization in which one gains autonomy "from social expectations" (p. 184). She suggested that, in some cultures, adherence to controlling pressures yields more satisfaction than does autonomy, the later defined as an absence of all exogenous influences. Her characterizations of autonomy, like those of Oishi (2000) and Iyengar and Lepper (1999), are ones that do not concur with SDT's definition.

Differentiating Autonomy and Individualism

Given our SDT-based framework, we see several problems with these criticisms and formulations. The major issue is the failure within some of these perspectives to differentiate the construct of autonomy from those of individualism, independence, or separateness (Ryan, 1993).

Although some dictionary definitions of autonomy and independence overlap, these terms can be used in a more differentiated way, and SDT has explicitly applied this more differentiated approach in both theory construction and empirical studies (e.g., Koestner & Losier, 1996; Ryan, 1993; Ryan & Lynch, 1989). The basis of SDT's distinction is further supported by its convergence with analytical and phenomenological philosophical analyses of these concepts (e.g., Dworkin, 1988; Memmi, 1984; Pfander, 1911; Ricoeur, 1966); by modern attributional theory, which provides a distinctive conceptualization of autonomy (e.g., deCharms, 1968; Deci & Ryan, 1985); and by specific culturally (e.g., Kagitcibasi, 1996) and clinically focused (e.g., Lerner, 1988) analyses.

According to the SDT formulation, a person is autonomous when his or her behavior is experienced as willingly enacted and when he or she fully endorses the actions in which he or she is engaged and/or the values expressed by them. People are therefore most autonomous when they act in accord with their authentic interests or integrated values and desires (Deci & Ryan, 1985, 2000; Ryan, 1995). deCharms (1968) described a person who acts autonomously as an origin of behavior, because, when autonomous, a person feels initiative and stands behind what he or she does. According to SDT, the opposite of autonomy is not dependence but rather *heteronomy*, in which one's actions are experienced as controlled by forces that are phenomenally alien to the self or that compel one to behave in specific ways regardless of one's values or interests.

Along with other theoretical perspectives (e.g., Bowlby, 1969), SDT defines *dependence* as reliance on others for guidance, support, or needed supplies (Ryan & Lynch, 1989). Within SDT, the opposite of dependence is not autonomy but rather *independence*, the circumstance of not relying on others for support, help, or supplies. It follows from this SDT framework that autonomy is seen as largely orthogonal to both independence and individualism (Ryan, 1993). One can be autonomously dependent on an other, willingly relying on his or her care, particularly if the other is perceived as supportive and responsive (La Guardia, Ryan, Couchman, & Deci, 2000; Ryan & Solky, 1996). Yet one could also be forced or compelled into a position of dependence, with a variety

of negative implications. For example, one can autonomously accept guidance from a parent or, alternatively, feel forced to submit to that guidance, an issue not considered by Iyengar and Lepper (1999). Similarly, people often autonomously support dependents (e.g., friends in need, children) and, in other circumstances, feel forced to care for another individual. In fact, research suggests that autonomous or volitional caregiving differs both in its effectiveness and in its impact on the caregiver when compared with less autonomous caregiving (Pierce, Lydon, & Yang, 2001). These considerations suggest the importance of differentiating the fact of dependence or interdependence from the experience of autonomy versus heteronomy attending it.

Similarly, the issue of conformity concerns that of following an external influence. But according to SDT and modern philosophical analyses of autonomy (see Dworkin, 1988), the surface behavior of conforming can be associated with an experience of either autonomy or heteronomy. People often experience a lack of autonomy when pressured to do something they do not believe in or to follow social norms with which they do not identify. However, one can willingly follow an external influence or even an order provided one fully consents to, concurs with, or identifies with that influence. Thus, if one believes in the value of traffic laws, one can experience following the command of a traffic cop as highly autonomous. Similarly, if one fully concurs with and endorses group norms, one can experience conforming to them as volitional and autonomous (Ryan, 1993). However, one can also experience adhering to tradition or norms as heteronomous, as when one obeys a group or leader out of fear of punishment or merely to obtain externally controlled inducements (Kim, Deci, & Zuckerman, 2002).

Prior research has supported the value of this distinction between autonomy and independence. For example, Ryan and Lynch (1989) showed that U.S. teens who more willingly depend on their parents for guidance or help evidence greater well-being, are less susceptible to peer pressure, and are less prone to risk behaviors than are teens who are more detached and independent from their parents. It is interesting that parents who support autonomy have teens who rely on them more and who are more likely to internalize parental norms (Grolnick, Deci, & Ryan, 1997; Kandel & Lesser, 1969; Ryan & Lynch, 1989). Similarly, Koestner and colleagues (Hodgins, Koestner, & Duncan, 1996; Koestner et al., 1999; Koestner & Losier, 1996), on the basis of SDT, have distinguished between *reactive autonomy*, a propensity to be resistant to external influences, and the *reflective autonomy* defined within SDT. Koestner et al. (1999) found that persons high in reflective autonomy were willing to follow expert advice, whereas those high in reactive autonomy moved away from others' influences, even to their detriment. In other studies, Hodgins et al. (1996) and Koestner and Losier (1996) showed that those high in reflective autonomy had more intimate and self-disclosing interactions with peers than did those high in reactive autonomy.

In this study, our intent is to show how the concept of autonomy can be differentiated from the concepts of individualism and collectivism. Specifically, we assess people's experience of autonomy with respect to varied cultural practices within varied cultures. Included in our focus are people's relative autonomy regarding practices typical of collectivist, individualist, vertical, and horizontal social orientations and the relations of that relative autonomy to well-being. In contradistinction to those who equate

independence and autonomy, viewing both as aspects of individualism, we suggest that autonomy is a significant issue for well-being and motivation with respect to both individualistic and collectivistic practices as well as vertical and horizontal orientations rather than being an exclusive attribute of individualistic contexts.

Assessing Autonomy: SDT's Internalization Continuum

According to SDT, the issue of autonomy concerns the extent to which one fully accepts, endorses, or stands behind one's actions (Deci & Ryan, 1985, 2000). However, the issue of acceptance or endorsement is not an absolute one: Instead, SDT specifies various motives to act, each of which can be understood as lying along a continuum of relative autonomy or of lesser to greater internalization (Deci & Ryan, 1985; Ryan & Connell, 1989; Vallerand, 1997). At the low end of this continuum is *external regulation*, in which a person acts only to obtain external rewards or to escape punishment or reward loss. Here, one's behavior is perceived as being directly regulated by external controls with which one might not concur. A somewhat more internalized form of regulation is *introjected regulation*, in which one acts to experience self- or other approval or to avoid feelings of guilt or self-disparagement. Still more autonomous are *identified regulations*, in which a person consciously endorses a given behavior or value as having personal significance and importance. The most autonomous form of extrinsic motivation is labeled *integrated regulation*, which pertains to behaviors and values with which one has identified that are also well synthesized into everyday life and well coordinated with one's other identifications. Behavior can also be *intrinsically motivated*, another highly autonomous form of regulation in which one engages in an activity out of interest or enjoyment. However, because intrinsic motivation, being a spontaneous and natural form of regulation, does not require internalization and also does not apply to instrumental behaviors, it is not as pertinent to the study of the relative internalization of the cultural practices we examine in this project. These styles of regulation have been modeled in numerous studies and shown fall along a continuum from less to more autonomy (Ryan & Connell, 1989). Further, numerous studies have shown that the more internalized the regulation for an activity is, the greater people's persistence, performance, and quality of experience are. Studies in North America and Western Europe have extensively tested this model in many domains, including education, religion, sport, health care, and work, among others (Deci & Ryan, 2000; Ryan & Deci, 2000; Vallerand, 1997).

Only recently have researchers begun to examine the importance of internalization and autonomy as conceptualized within SDT in more collectivistic contexts. For example, Hayamizu (1997) surveyed Japanese high school students and found that more autonomous motivation, as assessed using an SDT-based model of internalization, was related to more positive and adaptive coping. Yamauchi and Tanaka (1998) provided similar results in another sample of Japanese students. Asakawa and Csikszentmihalyi (2000) compared Asian American and Caucasian American students and found greater relative autonomy for academic motivation among the Asians. They attributed this to the more connected or relatedness-supportive family styles of the Asian participants, which facilitated the internalization of academic values. Tanaka and Yamauchi (2000) reported more positive learning

styles and experience in Japanese college students whose motivation was more autonomous. Finally, Sheldon et al. (2001) found that autonomy was one of the most important components of satisfying events and that event-related autonomy uniquely predicted well-being within both Korean and U.S. samples.

Similarly, SDT-based measures of autonomy support have predicted adjustment and mental health in cultures that have been characterized as either authoritarian or vertically collectivistic. Specifically, Deci et al. (2001) found in a sample of Bulgarian adults that autonomy support on the job significantly predicted greater need satisfaction, facilitating both work engagement and well-being, as it did in a U.S. comparison sample. Chirkov and Ryan (2001) found that, although Russian parents were perceived as less autonomy supportive than their U.S. counterparts, autonomy support predicted more positive mental health in high school students from both the U.S. and Russia. Thus, where appropriate measures have been used, the positive outcomes associated with autonomy appear to generalize beyond individualistic nations.

This claim is of tremendous theoretical and practical significance. Theoretically, these findings challenge the undifferentiated view of autonomy and independence. As Kagitcibasi (1996) stated, "even though autonomy does not necessarily mean distancing oneself from others, such a meaning is commonly attributed to it" (p. 180). She argued that autonomy and relatedness can be synthesized and that a more differentiated view could serve as a corrective to cultural psychologies that pit autonomy against relatedness. Thus, distinguishing autonomy from the concept of individualism in cultural analyses appears to be an important step both in a more detailed and differentiated understanding of cultural differences and for creating policies toward enhancing mental health worldwide. However, should the claim of no functional value for autonomy in collectivistic or vertical cultures (e.g. Miller, 1997; Oishi, 2000) prove correct, the policy implications would also be manifold (Sen, 1999).

Autonomy of Diverse Cultural Forms

In this study, we assess the relative autonomy of behaviors that were selected to represent a wide array of cultural forms, as outlined within dimensional theories of cultural differences. Specifically, we argue that our internalization view of autonomy can be similarly understood in diverse cultural settings and that any type of cultural practice can be described as more or less autonomously enacted. Further, we test SDT's assumption that when people experience more autonomy with respect to their behavior, whatever it might entail, they also exhibit greater well-being. Accordingly, we test the idea that cultural practices, including those characterized as collectivistic and vertical in nature, can be more or less internalized by cultural members and that the less internalized (i.e., the less autonomous) they are, the more negative the well-being outcomes are.

In identifying cultural practices, we draw on work by Triandis (1997) and Triandis and Gelfand (1998), who conceptualized four different types of cultural behaviors and norms, built around two dimensions. Their horizontal/vertical dimension refers to practices and norms supporting equality or interchangeability among people versus hierarchical or subordinate social relations. The dimension of individualism/collectivism refers to the relative priority given to the individual's goals and

preferences versus the priority placed on the needs, norms, and goals of one's group or collective. Crossing these two dimensions yields four cultural orientations. *Horizontal collectivism* is depicted as the tendency to see oneself as similar to others and to emphasize common goals, interdependence, and sociability. *Horizontal individualism* is the tendency to want to be unique and distinct from groups and to see individuals as having equality in worth, dignity, and rights. *Vertical collectivism* involves an emphasis on the loyalty to one's in-group and adherence to hierarchical relations within one's group. *Vertical individualism* involves wanting to become distinguished and acquire status, especially through direct competition with others, and it embraces self-assertion to achieve one's personal aims.

In the current research we examine samples from four diverse cultures, selected for the fact that they vary from each other in their relative emphasis on vertical versus horizontal and individualistic versus collectivistic practices. First, we examine perceptions of the *practices of others* by asking participants to report on the frequency and importance to people of their own culture of specific behaviors and attitudes that appear in measures of cultural orientations based on work by Triandis and colleagues (Singelis, Triandis, Bhawuk, & Gelfand, 1995; Triandis, 1995; Triandis & Gelfand, 1998). We did this for two reasons. First, remarkably few cross-cultural studies have actually assessed how their participants perceive their ambient cultural contexts. Instead, researchers often simply assume differing cultural orientations on the basis of a priori categorizations or rely on means derived from the self-reports of the participants' own orientations. Thus, we expect that our method will validate, in a unique and important way, the types of cultural variations hypothesized by Triandis (1997), Hofstede (1991), and others. Second, because we are examining the degree to which our participants have internalized specific cultural practices, providing this description of cultural backdrops will help verify the appropriateness of our measures. Although our interests are mainly descriptive, on the basis of the existing literatures we expect to find that (a) U.S. students will see other Americans as relatively high in individualism and low in vertical collectivism, (b) Koreans will perceive other Koreans as relatively high in both horizontal and vertical collectivism, and (c) both Russia and Turkey will emerge as somewhat mixed model cultures relative to Korea and the United States.

Moving to our primary focus, we assess individuals' relative internalization of practices associated with each of these orientations by asking participants to rate reasons for why they would engage any of the specified practices. These reasons were based on the SDT model of internalization (Ryan & Connell, 1989). It was our contention that, despite the fact that persons in each culture would engage in different practices and describe ambient cultural norms differently, for both genders in all four samples and for all practices, greater internalization and the relative autonomy associated with it conduce toward well-being. We also test the hypothesis that, regardless of cultural differences in specific normative practices, cultural membership per se does not moderate the influence of relative autonomy on well-being. This is a critical claim, as it suggests that the influence of autonomy on well-being is not restricted to the individualistic nations, as some have argued.

Vertical Cultural Practices: Are All Cultural Forms Equally Assimilable?

Internalization concerns people's assimilation of cultural practices, and SDT holds that the more one can assimilate and integrate ambient cultural practices, the greater one's well-being is. However, a further question arises; namely, are some cultural practices or orientations more easily internalized and integrated than others? On the basis of SDT, we speculate that there are differences in the extent to which people readily assimilate different cultural forms, as a function of how those specific cultural orientations and practices meet or do not meet basic psychological needs. Specifically, we believe that both collectivism and individualism have components and aspects that allow people to meaningfully accept, endorse, and value them in integrated ways. Thus, we do not see one as more readily fitting with human nature. The only exception is that some researchers have speculated that during the era of evolutionary adaptation, when the species's basic psychological attributes were established, the dominant social form was collectivistic, and the basic tendency toward relatedness, empathy, and care from and for others might potentiate some ease of internalizing and assimilating collectivistic beliefs (Martin, 1999). However, the agentic nature of individualism also has some evolutionary grounding (Slavin & Kreigman, 1992), which leads us to be uncertain as to whether these practices might differ in relative autonomy, all things considered.

However, when considering horizontal versus vertical dimensions, we see more reason to hypothesize differences in the degree to which each can, on average, be more fully internalized. Specifically, we see the very nature of vertical social arrangements as more inherently conflictual vis-à-vis SDT's postulated basic needs for autonomy and relatedness. Vertical societies frequently require individuals to forgo autonomy and to subordinate themselves to heteronomous influences. In addition, vertical societies place boundaries around those with whom intimacy and connectedness can be established. As no study to date has examined differences in the relative internalization of different cultural orientations, this is an initial test of this hypothesis. However, this hypothesis is consistent with results obtained in a recent study (Sheldon, Ryan, Chirkov, Kim, & Elliot, 2002) of Korean, Russian, and U.S. students. In that study, it was found that, to the degree that people espoused more vertical versus horizontal values, their well-being was poorer. Thus, we predict that vertical practices will, on average, be more poorly internalized or assimilated than will cultural practices characterized as horizontal. We test this provocative hypothesis by examining whether internalization is lower for vertical than for horizontal practices across all samples.

Method

Participants

Participants were 559 students drawn from four nations: 195 from a northeastern U.S. university, 159 from two universities in north central Russia, 94 from a university in southwest Turkey, and 111 from a South Korean university. All universities were located in urban areas and enrolled economically diverse students. Eligible participants were born in and native speakers of the country being studied. Participants volunteered for the study, receiving course credit or a small monetary compensation.

Demographic Variables

Self-reported age, marital status, family income (adjusted to national levels of wealth), parents' education, and place of birth appear in Table 1. Of note are the relatively lower socioeconomic status indicators (father's education, family income) in the Turkish sample.

Procedure

Surveys were administered in small groups in a standardized format. The study was explained as a survey of everyday behaviors, values, and life attitudes. After completing the survey, participants were fully debriefed as to purpose of the study.

Measure Translations

In every case, translations of instruments that appeared originally in English were accomplished by persons highly fluent in both English and the language in question. Russian surveys were translated from English to Russian by a Russian psychologist who is fluent in English, and back translations were done by an American psychologist fluent in Russian. Korean surveys were translated from English to Korean by a translator

fluent in Korean and English and back translated by a psychologist with English and Korean expertise. Finally, the Turkish survey was translated by a native Turkish scholar fluent in both languages and back translated by a scholar trained in both languages.

Cultural Orientations and Behavior Measures

The survey focused on four sets of cultural practices, beliefs, or feelings representing horizontal collectivism, horizontal individualism, vertical collectivism, and vertical individualism. We created the descriptions of these practices by modifying six items for each of the four constructs, largely drawn from existing and widely used scales (Singelis et al., 1995; Triandis, 1995; Triandis & Gelfand, 1998). We modified the original items and added other items to reformulate them in terms of actions, behaviors, or practices that people could rate for personal motivation and for the frequency and importance of their enactment within the participants' culture (items appear in the Appendix). The four sets of six practices were presented to participants twice. In the first presentation, participants were asked to rate the motivation they would have for engaging in the target practice, and their likelihood of performing it, using the internalization measure described below. At the second presentation, items were rated for

Table 1
Demographic Characteristics of Four Samples

Demographic	United States		Russia		Korea		Turkey	
Age								
<i>M</i>	19.6		20.7		21.7		20.2	
Range	18–44		18–25		18–27		18–37	
	United States		Russia		Korea		Turkey	
Demographic	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Gender								
Women	143	72.8	117	73.6	30	27.0	40	42.6
Men	52	26.7	42	26.4	79	71.2	54	57.4
Marital status								
Single	193	99.0	137	86.2	105	94.6	88	93.5
Married	2	1.0	20	12.6	6	5.4	2	2.2
Divorced	0	0.0	2	1.3	0	0.0	2	2.0
Family income								
Low–low	19	9.7	9	5.7	4	3.6	44	48.4
Low	59	30.3	36	22.6	25	22.5	32	35.2
Middle	55	28.2	63	39.6	31	27.9	12	13.2
High	52	26.7	28	17.6	31	27.9	1	1.1
High–high	10	5.1	23	14.5	20	18.0	2	2.2
Father's education								
Some high school	2	1.0	8	5.0	11	9.9	61	68.5
High school	29	14.9	17	10.7	29	26.1	11	12.4
Some college	23	11.8	65	40.9	3	2.7	4	4.5
College graduate	47	24.1	67	42.1	51	45.9	9	10.1
Beyond college	96	48.2	1	0.6	17	15.3	4	4.5
Mother's education								
Some high school	6	3.1	3	1.9	16	14.4	72	80.9
High school	31	15.9	14	8.8	49	44.1	12	13.5
Some college	35	17.9	68	42.8	4	3.6	0	0.0
College graduate	62	31.8	72	45.8	39	35.1	4	4.5
Beyond college	61	31.8	0	0.0	3	2.7	1	1.1
Place of birth								
Urban	69	35.4	59	37.1	84	75.7	39	43.3
Suburban	119	61.0	89	56.0	20	18.0	20	22.2
Rural	7	3.6	11	6.9	7	6.3	31	34.4

Note. $n = 159$ for Russia, 111 for South Korea, 94 for Turkey, and 195 for the United States. n values may differ slightly on specific variables because of missing or nonapplicable data. Freq. = frequency.

the extent to which others in the participants' culture engage in each practice, as described below.

Internalization (or *relative autonomy*) was assessed with the Self-Regulatory Questionnaire of Cultural Practices, which was based on earlier work by Ryan and Connell (1989), Vallerand (1997), Sheldon and Houser-Marko (2001), and others. For each practice, belief, or feeling, the question "Why do you or would you do [feel, believe] this?" was asked. Four possible reasons reflecting the different types of internalization proposed by SDT were provided, and participants rated each reason in terms of the degree to which it applied for them, using a 5-point scale from *not at all because of this reason* (1) to *completely because of this reason* (5). Specifically, each practice was rated with the following definitions in mind:

External Regulation: Because of external pressures (to get rewards or avoid punishments). I would engage in this behavior because someone insists on my doing this, or I expect to get some kind of reward, or avoid some punishment for behaving this way. *Introjected Regulation*: To get approval or avoid guilt. I would engage in this behavior because people around me would approve of me for doing so, or because I think I should do it. If I didn't do this I might feel guilty, ashamed, or anxious. *Identified Regulation*: Because it is important. I would engage in this behavior because I personally believe that it is important and worthwhile to behave this way. *Integrated Regulation*: Because I have thoughtfully considered and fully chosen this. I have thought about this behavior and fully considered alternatives. It makes good sense to me to act this way. I feel free in choosing and doing it, and feel responsible for the outcomes.

Alpha coefficients for these subscales are presented in Table 2.

We assessed *perceived cultural practices* by asking participants two questions concerning each target behavior, belief, or feeling: "What do most Americans [Koreans, Russians, Turks] think about this behavior?" rated on a 5-point scale from *not at all important* (1) to *very important* (5), and "How frequently, in your opinion, do most Americans [Koreans, Russians, Turks] do this?" rated on a 5-point scale from *very rarely* (1) to *very frequently* (5). Alpha coefficients are presented in Table 2. Only 1 of

Table 2
Internal Reliability Coefficients (Alphas) of the Internalization and Perceived Cultural Practice Ratings for Four Cultural Orientations

	Korea		Russia		Turkey		United States	
	H	V	H	V	H	V	H	V
External regulation								
I	.77	.85	.77	.77	.85	.86	.82	.85
C	.84	.86	.76	.82	.81	.85	.78	.86
Introjected regulation								
I	.74	.85	.81	.78	.79	.84	.83	.84
C	.78	.85	.75	.81	.81	.81	.76	.86
Identified regulation								
I	.67	.75	.72	.76	.78	.76	.69	.74
C	.74	.62	.61	.70	.80	.67	.70	.70
Integrated regulation								
I	.70	.74	.80	.79	.81	.80	.86	.83
C	.67	.73	.82	.82	.82	.78	.78	.82
Perceived cultural practices								
I	.50	.74	.76	.74	.74	.77	.77	.81
C	.74	.80	.75	.74	.88	.84	.75	.77

Note. H = horizontal; V = vertical; I = individualistic; C = collectivistic.

these 16 coefficients, namely Koreans' ratings of others' horizontal individualism, showed weak reliability, suggesting the general coherence of these items in accord with the Triandis-based dimensional approach.

Psychological well-being was assessed using indicators that (a) reflect both hedonic (happiness) and eudaimonic (self-fulfillment) aspects of well-being (Ryan & Deci, 2001), (b) have been used in previous cross-cultural research, and (c) have shown cross-cultural comparability in U.S.–Russian and U.S.–Korean comparisons (e.g., Ryan et al., 1999; Kim et al., 2002). Included were (a) the Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), a 5-item indicator of subjective well-being; (b) the Short Index of Self-Actualization (Jones & Crandal, 1986), a 15-item measure of growth and self-realization; (c) the 10-item Self-Esteem Scale (Rosenberg, 1965), which assesses global self-worth; and (d) 6 items from the Center for Epidemiological Studies–Depression Inventory (Radloff, 1977), which assesses depressive symptoms. These indices are statistically evaluated for their cross-cultural comparability below.

General Analytic Procedures

Establishing the comparability of constructs when examining between-groups differences is a critical problem in cross-cultural research (Cheung & Rensvold, 2000; Little, Lindenberger, & Nesselrode, 1999). To ensure that the constructs we examine are comparable across samples, we used means and covariance structure (MACS) analyses (Little, 1997, 2000). MACS analyses are an extension of conventional structural equation modeling techniques. This method addresses the issue of measurement equivalence and construct comparability by testing the strong factorial invariance of measurement models across samples by placing equality constraints on both intercepts and factor loadings (but not on the unique parameters and correlations between constructs). In practical terms, this analysis was executed by a set of three nested models with different equality constraints. The goodness-of-fit index (GFI), the root-mean-square error of approximation (RMSEA), the incremental fit index (IFI), and the comparative fit index (CFI) were used to assess the model fit. For the GFI, IFI, and CFI, values of about .90 or higher are generally considered acceptable, and for the invariance test, we used a difference-in-fit criterion of less than .05 (Little, 1997). For RMSEA, we used the conventional decision rule: RMSEA < .05 represents a small error of approximation and a very good fit of the model, .10 > RMSEA > .05 suggests a reasonable error of approximation, and RMSEA > .10 indicates poor fit. Because of its high sensitivity to trivial discrepancies between covariance matrices, we did not use the likelihood ratio chi-square statistic in decision making about model acceptability.

Results

In this section, we first present the results of construct comparability testing. Because of the relatively small sample sizes within each country, we assess the construct comparability for predictor and criterion variables separately. Where appropriate on the basis of these analyses, we compare construct means to address hypotheses concerning patterns of perceived cultural practices and differential internalization of these cultural dimensions. Then, using multiple regression, we test the relations between well-being and internalization as well the effects of country, gender, and their interactions.

Construct Comparison of Internalization and Perceived Cultural Practice Variables

The perceived cultural practices variable consisted of four latent constructs concerning the perceived normativeness of horizontal

collectivism, horizontal individualism, vertical collectivism, and vertical individualism in each country. Each construct was represented by three observed indicators, and each indicator was made up of two items each tapping both frequency and importance aspects of perceived cultural practices. In initial runs of MACS analyses, Turkish data on the perceived cultural practice variables appeared to be noncomparable with the remaining three samples. Accordingly, we do not perform latent construct or simple mean comparisons on this variable for the Turkish sample, although we report raw means for descriptive purposes. However, we directly examined the construct comparability of perceived cultural practices across the other three samples. Factorial invariance of the measurement model (with the factor loadings set to be equal across samples and with the covariances between latent constructs and observed indicators' error variances freed across samples) for these three samples had an acceptable fit (RMSEA = .06, CFI = .93, IFI = .93). When intercepts for observed variables were set equal across samples to establish strong factorial invariance, the fit of the model became marginal (RMSEA = .07, 90% confidence interval [CI] = .06–.09; CFI = .89, IFI = .89). We decided to accept this strong factorial invariance of the perceived cultural practices measures in Korea, Russia, and the United States because the RMSEA of the model for these samples was acceptable, CFI and IFI were very close to the required .90, and the difference-in-fit criteria between factorial and strong factorial invariance models for these two indices were smaller than .05 (Little, 1997). The comparability of these measures allowed us to compare latent construct means (Jöreskog & Sörbom, 1993; Little, 1997) and test hypotheses about differences in perceived cultural contexts.

When the four latent constructs means for the U.S. sample were assigned to zero, the means for Russians and Koreans could be described as follows (see Table 3): Russian participants saw other Russians as higher on vertical collectivism and lower on vertical individualism than U.S. students saw other Americans. Korean students saw other Koreans as more horizontally and vertically collectivistic and as less horizontally and vertically individualistic than U.S. students saw their fellow Americans.

Latent means comparisons within MACS analyses necessitate that one country be assigned as a reference group, which in this case was the United States. To provide a more descriptive comparison of perceived cultural practices in the three comparable countries, we also examined differences in raw scores by combin-

ing the three samples and conducting one-way analyses of variance (ANOVAs). These analyses (see Table 3) revealed that Koreans saw their culture as more horizontally and vertically collectivistic than either U.S. or Russian students saw their own culture. In contrast, U.S. participants saw their culture as characterized by greater horizontal and vertical individualism than Koreans saw their own culture and as involving greater vertical individualism than their Russian counterparts experienced. Russian students perceived the lowest levels of vertical individualism among their populace, and they fell between the United States and Korea in ratings of vertical collectivism. Korean ratings were lower on horizontal individualism in comparison with both Americans and Russians. Put differently, Koreans perceived their own culture as relatively collectivistic, Americans viewed theirs as relatively individualistic, and Russians emerged as somewhat of a mixed model.

Only a few gender differences in perceived cultural practices were found. Specifically, U.S. women reported more horizontal, $t(193) = 2.57, p < .01$, and vertical, $t(193) = 2.17, p < .05$, individualism among Americans than did their male counterparts. Russian women perceived more vertical collectivism in their country than did Russian men, $t(157) = 2.47, p < .05$. Finally, Korean women saw more horizontal collectivism in Korea than did Korean men, $t(107) = 3.05, p < .01$. Family income and parental education were generally unrelated to perceived cultural practice variables. However, one correlation did emerge, indicating that U.S. students whose mothers were more educated perceived their fellow Americans as less horizontally collectivistic ($r = -.15, p < .05$).

Relative Autonomy of Cultural Practices

We calculated an index of the internalization, or relative autonomy, of cultural practices for each item using the following formula based on Ryan and Connell's (1989) formulations: $(-2) \times \text{external regulation} + (-1) \times \text{introjection} + (1) \times \text{identification} + (2) \times \text{integration}$. The larger the index is, the greater is the relative autonomy of the corresponding practice. We created three observed indicators for each set of cultural orientations by summing these indices for every two items. It is notable that the relative autonomy index showed strong factorial invariance and was comparable across the four samples (RMSEA = .09, 90% CI =

Table 3
Latent and Raw Means for the Perceived Cultural Practices in Korea, Russia, Turkey, and the United States

Country	Horizontal collectivism		Horizontal individualism		Vertical collectivism		Vertical individualism	
	Latent	Raw	Latent	Raw	Latent	Raw	Latent	Raw
Korea	0.42**	3.67 _a	-0.71**	3.08 _b	0.75**	3.76 _a	-0.22**	3.47 _b
Russia	0.13	3.52 _b	0.02	3.57 _a	0.32**	3.43 _b	-0.59**	3.26 _c
Turkey		3.70		3.53		3.60		3.41
United States	0.00	3.57 _b	0.00	3.57 _a	0.00	3.11 _c	0.00	3.64 _a

Note. Latent means are relative to the United States, which is set at zero. The Turkish sample is not comparable. Different subscripts denote significant differences ($p < .05$) on raw means. The Turkish sample is not compared. Significance values indicate difference from the United States.

** $p < .01$.

.08–.10; CFI = .90, IFI = .90), allowing us to compare latent means.

As hypothesized, horizontal practices were internalized to a greater degree than were vertical practices across all groups. The overall mean across the four samples for horizontal practices (both collectivistic and individualistic) was 4.68, compared with 1.60 for vertical practices, $t(557) = 27.20, p < .0001$, suggesting a robust difference. Although not hypothesized, results also suggest that individualistic practices were internalized more than were collectivistic ones within both horizontal and vertical dimensions: horizontal individualism, $M = 5.08$; horizontal collectivism, $M = 4.45, t(557) = 6.94, p < .0001$; vertical individualism, $M = 2.01$; vertical collectivism, $M = 1.19, t(557) = 5.88, p < .001$.

Table 4 presents both the latent and the raw means for each sample's internalization of each cultural dimension. Because latent means involve relative comparisons, we used U.S. data as the zero point. Table 4 also presents the raw means, with subscripts indicating country by country differences obtained using one-way ANOVA with the Tukey test of significance (.05). It is surprising that the U.S. students generally showed low levels of internalization for most of these cultural practices, which suggests that they would experience less autonomy when engaged in the target practices. Internalization for vertical practices was highest in Turkey and Russia, followed by Korea, and was lowest in the United States. Internalization of horizontal collectivism was highest for the Turkish sample, next highest in Korea, and lowest in Russia and the United States. Between-samples differences were small for horizontal individualism, although Koreans differed from U.S. and Russian participants.

There were no gender differences in the internalization of horizontal practices, but several emerged for the internalization of vertical practices. U.S. women internalized both vertical collectivism, $t(193) = -3.31, p < .001$, and vertical individualism, $t(193) = -2.65, p < .01$, less than U.S. men did. The same pattern appeared for Russian women with regard to vertical individualism, $t(157) = -2.50, p < .05$, and was marginal for Turkish women with regard to vertical collectivism, $t(92) = -1.84, p < .07$. That is, in three of four samples, results revealed a greater tendency among men to internalize vertical structures.

Significant correlations emerged between mothers' education and internalization of vertical collectivism in the United States ($r = -.15, p < .05$); between fathers' education and internaliza-

tion of horizontal individualism ($r = .19, p < .05$), horizontal collectivism ($r = .15, p < .05$), and vertical individualism ($r = .16, p < .05$) in the Russian sample; and between family income and internalization of vertical individualism ($r = .23, p < .05$) among Koreans.

Construct Comparison of the Psychological Well-Being Indicators

To examine the cross-cultural comparability of well-being variables, we drew three observed indicators each from the depression and self-actualization variables and two indicators each from the self-esteem and life satisfaction variables. The factorial invariance fit for these measurement models across the four countries was acceptable (RMSEA = .06, CFI = .96, IFI = .96). However, the model based on the strong factorial invariance fell just below the optimal levels (RMSEA = .11, 90% CI = .10–.01; CFI = .89, IFI = .89). We decided to treat these constructs as comparable for the following reasons: (a) This measurement model yielded relatively high factorial invariance (Ghospade, Hattrup, & Lockritz, 1999), and (b) prior research using MACS in which these scales were used revealed stable comparability across three of these four cultures (e.g., Chirkov & Ryan, 2001; Kim et al., 2002; Ryan et al., 1999). Table 5 presents latent and raw means for the well-being composite and between-countries comparisons.

Analysis Relating Relative Autonomy of Cultural Practices to Well-Being

We performed multiple regressions using a composite well-being index (the sum of the standardized scores of the well-being scales, with depression reversed) as the dependent variable and the four internalization variables (centered), country codes, and interactions as independent variables. The purpose of the codes was to capture variance due to country membership, both as a main effect and to examine for Country \times Relative Autonomy interactions. Contrast 1 compared U.S. with Russian, Korean, and Turkish participants taken together; Contrast 2 compared Russians with Koreans and Turks; and Contrast 3 evaluated Koreans in relation to Turks. Table 6 displays these regressions, and Table 7 presents the 16 betas and their significance levels, representing the within-

Table 4
Latent and Raw Means for the Internalization of Four Cultural Practices in Korea, Russia, Turkey, and the United States

Country	Horizontal collectivism		Horizontal individualism		Vertical collectivism		Vertical individualism	
	Latent	Raw	Latent	Raw	Latent	Raw	Latent	Raw
Korea	0.84**	4.47 _b	0.82**	5.48 _a	1.52**	1.17 _b	1.07**	1.78 _c
Russia	0.50	4.13 _b	0.54	5.18 _a	2.93**	2.87 _a	2.24**	2.80 _b
Turkey	1.95**	5.44 _a	0.53	5.14 _a	2.84**	2.30 _a	3.32**	3.81 _a
United States	0.00	3.65 _b	0.00	4.62 _a	0.00	-0.71 _c	0.00	0.69 _d

Note. Latent means are relative to the United States, which is set at zero. Different subscripts denote significant differences ($p < .05$) on raw means. Significance values indicate difference from the United States. ** $p < .01$.

Table 5
Latent and Raw Construct Means for the Psychological Well-Being Indicators in Korea, Russia, Turkey, and the United States

Country	Self-actualization		Self-esteem		Life satisfaction		Depression	
	Latent	Raw	Latent	Raw	Latent	Raw	Latent	Raw
Korea	-0.46**	3.05 _d	-0.46**	3.50 _c	-0.26**	2.90 _c	0.84**	2.56 _b
Russia	-0.18**	3.41 _b	0.11	4.10 _a	-0.20*	2.97 _b	0.68**	2.50 _c
Turkey	-0.26**	3.27 _c	-0.35**	3.68 _b	-0.57**	2.53 _d	1.15**	2.94 _a
United States	0.00	3.53 _a	0.00	3.96 _a	0.00	3.60 _a	0.00	2.29 _c

Note. Latent means are relative to the United States, which is set at zero. Different subscripts denote significant differences ($p < .05$) on raw means. Significance values indicate difference from the United States.

* $p < .05$. ** $p < .01$.

country relations between the well-being composite and relative autonomy for each type of cultural practice.

Internalization of horizontal individualism together with country explained 20.2% of well-being variance. R for the regression was significantly different from zero, $F(7, 547) = 19.84, p < .001$. The standardized beta coefficient for internalization of horizontal individualism was .24, $F = 27.20, p < .01$; for Contrast 1, it was .37, $F = 67.59, p < .01$; for Contrast 2, it was .26, $F = 28.66, p < .01$; and for Contrast 3, it was not significant. As predicted, no Country \times Internalization interactions reached significance.

Internalization of horizontal collectivism together with country variables explained 19.0% of well-being variance. R for the regression was significantly different from zero, $F(7, 547) = 18.55, p < .001$. The standardized beta coefficient for internalization of horizontal collectivism was .24, $F = 22.58, p < .01$; for Contrast 1, it was .40, $F = 71.90, p < .01$; for Contrast 2, it was .30, $F = 34.36, p < .01$; and for Contrast 3, it was not significant. Again, none of the Contrast \times Horizontal Collectivism Internalization interactions were significant.

Internalization of vertical individualism together with country variables explained 20.3% of well-being variance. R for the regression was significantly different from zero, $F(7, 547) = 19.84, p < .001$. The standardized beta coefficient for internalization of vertical individualism was .27, $F = 28.55, p < .01$; for Contrast 1, it was .44, $F = 82.50, p < .01$; for Contrast 2, it was .30, $F = 33.10, p < .01$; and for Contrast 3, it was not significant. None of the Contrast \times Vertical Individualism Internalization interactions were significant, again suggesting no moderation of the autonomy-well-being relations by country.

Internalization of vertical collectivism together with country variables explained 20.2% of well-being variance. R for the regression was significantly different from zero, $F(7, 547) = 19.82, p < .001$. The standardized beta coefficient for internalization of vertical collectivism was .27, $F = 28.60, p < .001$; for Contrast 1, it was .44, $F = 82.50, p < .001$; for Contrast 2, it was .30, $F = 33.10, p < .001$; and for Contrast 3, it was not significant. None of the Contrast \times Vertical Collectivism Internalization interactions reached significance.

To ensure that participants' own orientations toward individualism or collectivism did not moderate the relationship between autonomy and well-being, we accomplished a further regression analysis. In the first step, we entered the individual's overall level of internalization, his or her likelihood of performing individual-

istic practices, and his or her likelihood of engaging in collectivistic practices. In the second step we examined all two-way interactions, and in the third step we examined the potential three-way interaction. In this model, only the main effects of internalization ($\beta = .17, p < .01$) and of the likelihood of performing collectivistic behaviors ($\beta = .09, p < .05$) were associated with well-being, and no interactions were significant. The absence of these potential interactions thus strengthens our argument concerning the import of relative autonomy for well-being across cultural dimensions.

Finally, to examine the relations between relative autonomy, gender, and their interactions, we performed four additional multiple regressions. As in previous analyses, main effects for the internalization of all four cultural practices were significant. Main effects for gender also emerged, revealing higher well-being for women ($p < .05$). However, no interactions between gender and internalization for any of the cultural practice variables were significant.

Discussion

The thrust of this study was to examine the functional significance of internalization or relative autonomy for well-being across diverse cultures. We have argued that the concept of autonomy has too often been theoretically confounded with those of individualism and independence, whereas, on the basis of distinctions made within SDT (Deci & Ryan, 1985; Ryan & Deci, 2000), we suggest that any type of cultural practice can be engaged in more or less autonomously, whether it be collectivistic, individualistic, vertical, or horizontal in nature, with implications for well-being.

To demonstrate the importance of this differentiated view, we have assessed the relative autonomy of various practices representing different patterns of cultural behavior and the association of that relative autonomy to well-being. Our main hypotheses were the following: First, we expected participants to rate their ambient cultures differently, in ways that fit with Triandis's (1995) and others' models of cultural variations along collectivistic, individualistic, horizontal, and vertical dimensions. Second, we expected that the experience of autonomy, as operationalized using SDT's continuum of internalization, would be positively related to well-being and that the relation would not be moderated by cultural membership. Third, we expected that horizontal practices would be internalized to a higher degree than vertical ones across samples. In general, we found support for all these hypotheses.

Table 6
Regression Analysis of Well-Being Composite Onto Internalization of Four Cultural Practices Orientations, Contrast Codes for Country, and Their Interactions

Variable	Horizontal individualism			Horizontal collectivism			Vertical individualism			Vertical collectivism		
	B	SE	β	Variable	B	SE	β	Variable	B	SE	β	
IHI	0.25	0.05	.24**	IHC	0.24	0.05	.24**	IVI	0.24	0.05	.27**	
Contrast 1	1.78	0.22	.37**	Contrast 1	1.92	0.23	.40**	Contrast 1	2.14	0.24	.44**	
Contrast 2	1.31	0.24	.26**	Contrast 2	1.50	0.26	.30**	Contrast 2	1.51	0.26	.30**	
Contrast 3	0.09	0.40	.01	Contrast 3	0.43	0.41	.06	Contrast 3	0.69	0.42	.09	
IHI × Contrast 1	-0.03	0.07	-.02	IHC × Contrast 1	-0.04	0.07	-.03	IVI × Contrast 1	-0.03	0.07	-.02	
IHI × Contrast 2	-0.12	0.07	-.07	IHC × Contrast 2	-0.10	0.08	-.06	IVI × Contrast 2	-0.10	0.07	-.06	
IHI × Contrast 3	0.01	0.14	.00	IHC × Contrast 3	-0.08	0.13	-.03	IVI × Contrast 3	-0.06	0.11	-.03	

Note. $R^2 = .20, .19, .20, .20$, respectively ($N = 547, p < .01$). IHI = internalization of horizontal individualism; IHC = internalization of horizontal collectivism; IVI = internalization of vertical individualism; IVC = internalization of vertical collectivism.

** $p < .01$.

Table 7
Within-Sample Regression Analysis of Well-Being Onto Internalization of Cultural Practices

Variable	B	SE	β
Korea			
IHI	0.37	0.12	.28**
IHC	0.26	0.10	.23**
IVI	0.28	0.09	.28**
IVC	0.24	0.09	.25**
Russia			
IHI	0.16	0.07	.17**
IHC	0.17	0.07	.18**
IVI	0.17	0.07	.18**
IVC	0.20	0.06	.24**
Turkey			
IHI	0.32	0.09	.37**
IHC	0.30	0.09	.34**
IVI	0.30	0.09	.38**
IVC	0.33	0.07	.42**
United States			
IHI	0.24	0.08	.22**
IHC	0.22	0.08	.19**
IVI	0.23	0.08	.21**
IVC	0.15	0.07	.15*

Note. IHI = internalization of horizontal individualism; IHC = internalization of horizontal collectivism; IVI = internalization of vertical individualism; IVC = internalization of vertical collectivism.

* $p < .05$. ** $p < .01$.

A unique feature of this study was that rather than relying on a priori cultural classifications, we measured cultural contexts through the perceptions of our participants. Using this method, we found support for the cultural distinctions forwarded by Triandis (1995), Hofstede (1991), and others. However, having assessed the ambient cultural orientations, we also saw that participants varied considerably, both between- and within-country, in the degree to which they had internalized these ambient orientations. This suggests that one cannot presume that a person truly endorses cultural practices or values just because he or she is surrounded by them or because he or she resides in a given country. Indeed, persons in all cultures may at times enact some normative practices, not because they value or authentically endorse them but because of external regulations or introjected pressures (Inghilleri, 1999).

Moreover, we found that whatever cultural practices one is considering, there appears to be a positive relation between more internalized or autonomous regulation of those practices and well-being, as measured through both hedonic (happiness) and eudaimonic (self-fulfillment) indicators (Ryan & Deci, 2001). Specifically, we found that whether one's behavior and attitudes are individualistic, collectivistic, horizontal, or vertical in nature, more autonomous enactment is associated with greater well-being. These findings support SDT's position regarding basic psychological needs and, more specifically, the controversial idea that autonomy is a basic human concern. Although some have argued that

autonomy is functionally significant only within a few Western nations (e.g., Oishi, 2000), results from this study suggest otherwise. They also support the viability of our distinction between autonomy and individualism.

One way to reconcile these findings with the observations of cultural relativists is to first recognize the specific definition of autonomy within SDT as volition, or the inner endorsement of one's actions and lifestyle. A person who has fully assimilated or integrated ambient cultural values is, therefore, highly autonomous from this perspective. However, when autonomy is defined as independence or separateness, it is probably not a universal need—in fact, within SDT, independence is not conceptualized as a need at all. On the contrary, the theory suggests that independence is not a very common, nor typically a particularly healthy, human state (Ryan & Lynch, 1989). Instead, according to SDT, humans have a basic need to be connected with others, and they thrive best in contexts of relatedness and mutuality (Deci & Ryan, 2000).

There are other ways to consider why autonomous functioning is not incompatible with collectivism or other cultural forms that emphasize interdependence and relatedness. Because autonomy concerns volition, persons who are strongly connected with others often function with those others' interests in mind. Put differently, if others are integrated within oneself (e.g., Aron & Aron, 1997), doing for or conforming with those others could be fully volitional. Parents who love their children often and quite autonomously put their offspring's interests ahead of their own (Ryan, 1993). Similarly, those who identify with a group or collective may adopt values or behaviors that lend priority to that group, and, in doing so, they can be acting autonomously. Yet individuals in both Eastern and Western nations also at times experience coercion and alienation, which underscores the basic utility of the human capacity to distinguish autonomous from heteronomous functioning. In short, postulating autonomy as a basic need and sentiment evident in all humans (and in some other species as well; see Deci & Ryan, 1985, 2000) in no way contradicts findings that distinguish cultures along individualistic versus collectivistic lines. It does suggest, however, that such distinctions may require more specific and exacting characterizations of groups and cultures (see also Kagitcibasi, 1996; Kegan, 1994). Further, our results attest to considerable variance in individuals' internalization of culturally predominant practices, underscoring that differences in the relative autonomy of cultural practices exist not only between cultures but also within them.

We also hypothesized and found support for the proposition that vertical orientations and practices may be more difficult to internalize than horizontal ones, a result that was particularly pronounced for women. We made this prediction on the basis of the idea that vertical regulations within cultures can often be a barrier to the fulfillment of basic needs for autonomy and relatedness. This finding may strike some as reflecting cultural biases, as it suggests we have some preferences regarding cultural forms. However, we think it is important to study aspects of culture that are more or less conducive to well-being. We suggest that cultural forms, like any other attribute of human organizations, can supply more or less nutriment to people's growth, integration, and well-being and that the relative yield of such forms is, indeed, an empirical question. In our pursuit of that question, the hypothesis of basic psychological needs provides a starting point for forming

critical hypotheses. However, we also caution that there are many specific types of vertical practice that were not represented in our items, some of which might be readily internalized and autonomously adopted, qualifying this "on average" claim.

As with the cross-cultural literature, SDT maintains that the issue of autonomy is as functionally important for women as it is for men. Results of this study support that view, as gender did not moderate the impact of autonomy on well-being within any of these samples. However, we reiterate that our definition of autonomy concerns the experience of volition and the self-endorsement of one's actions. Thus, our findings neither confirm nor conflict with some of the other characterizations of gender differences often found in the literature, especially those concerning agency or communality orientations (e.g., Bakan, 1966; Saragovi, Koestner, DiDio & Aube, 1997), which for us are distinguishable from autonomy and relatedness, exactly considered. Further, our findings do not contradict the idea that relatedness may be more salient for women than for men or that women and men may differ in their regard for independence (Jordan, 1997). Rather, it is our interpretation of these findings that, as defined within SDT, autonomy is a meaningful and important need for women and men alike.

One methodological advantage of this study is the explicit testing of measurement invariance and latent construct comparability using MACS analyses. The issue of whether researchers' questions are similarly understood by participants from different cultures is an important one. Using stringent criteria, we found, notably, that our measure of internalization or relative autonomy demonstrated comparability. We also found, however, some degree of variation in the psychometric properties of other constructs. We think the implementation of comparability analyses in cross-cultural work is critical, as it provides appropriate caution signs when researchers are generating conclusions that apply across groups.

The study also has some notable limitations. First and foremost, we drew our samples from university students in all four countries. It is clear, therefore, that these samples are not representative of these countries as a whole, and they may, in particular, have more access to what some might refer to as the global culture. On the positive side, the use of similar populations in each country helps control for some potentially confounding variables in cross-cultural comparisons, and such samples have been commonly used in the literatures we cited. Another limitation is the cross-sectional design of this investigation. We did not assess causal sequences but rather patterns of association between variables predicted by our theoretical framework. For example, we assumed that autonomous functioning enhances well-being, but it is also conceivable that high well-being leads people to view their behaviors as more autonomous. Future cross-cultural studies of the relations between psychological needs and well-being could be advanced by longitudinal designs, such as diary studies, in which both sequential effects and between- and within-subject effects over time can be examined. At this point in time, such studies of basic needs have only been accomplished within the United States (e.g., Reis, Sheldon, Gable, Roscoe & Ryan, 2000; Sheldon, Ryan, & Reis, 1996). Finally, we tested a hypothesis concerning a universal need, but we only tested it in samples from four cultures. Despite the diversity of these four cultures, they do not begin to capture all cultural forms. In particular, countries from South America, Africa, and

other parts of the world should be studied for their similarities and differences concerning the role of relative autonomy and internalization within culture. LeVine (1990), for example, has argued that, however nonsalient the concept of self is within the more collectivistic subsistence cultures of Africa, each member is in many ways more self-regulating, differentiated, and autonomous than the average North American. Such observations suggest that empirical studies of more cultures, particularly those along the North–South as well as East–West dimensions, are needed for an understanding of the meaning, expression, and functional value of autonomous versus heteronomous regulation across the globe.

In sum, this study shows that, across diverse cultures, the issue of autonomy can be similarly understood and that, across diverse practices, autonomy is associated with well-being. We suggest that it is precisely because humans in different cultures must learn and adopt different practices and values that the issue of autonomy, or the degree of internalization, has import. Although some theorists have cast autonomy as an attribute of individualistic behaviors or an issue relevant to wellness only within Western societies, we believe that autonomy versus heteronomy in the regulation of behavior is a basic concern for all humanity. The study of internalization and relative autonomy within varied cultures may tell us much about what types of practices are most assimilable and conducive to well-being and what forms of socialization foster most integration for human beings, wherever they might reside.

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(Appendix follows)

Appendix

Modified Items Representing Four Cultural Orientations

Horizontal Individualism

1. To do "one's own thing."
2. To rely on oneself most of the time and rarely rely on others.
3. To behave in a direct and forthright manner when having discussions with people.
4. To depend on oneself rather than on others.
5. To believe that what happens to people is their own doing.
6. To cultivate a personal identity, independent of others.

Horizontal Collectivism

1. To help a relative (within your means), if the relative has financial problems.
2. To maintain harmony within any group that one belongs to.
3. To do something to maintain coworkers'/classmates' well-being (such as caring for them or emotionally supporting them).
4. To consult close friends and get their ideas before making a decision.
5. To share little things (tools, kitchen stuff, books, etc.) with one's neighbors.
6. To cooperate with and spend time with others.

Vertical Individualism

1. To strive to do one's job better than others.
2. To be annoyed when other people perform better than you.
3. To strive to work in situations involving competition with others.
4. To express the idea that competition is the law of nature.

5. To get tense and aroused, when another person does better than you do.
6. To express the idea that without competition, it is impossible to have a good society.

Vertical Collectivism

1. To do what would please one's family, even if one detests the activity.
2. To teach children to place duty before pleasure.
3. To sacrifice an activity that one enjoys very much (e.g., fishing, collecting, or other hobbies) if one's family did not approve of it.
4. To respect decisions made by one's group/collective.
5. To sacrifice self-interest for the benefit of group/collective.
6. To take care of one's family, even when one has to sacrifice what he/she wants.

Note. Items are from "Converging Measurement of Horizontal and Vertical Individualism and Collectivism," by H. C. Triandis and M. J. Gelfand, 1998, *Journal of Personality and Social Psychology*, 74, pp. 118–128. Copyright 1998 by the American Psychological Association. Items are also from "The Psychological Measurement of Cultural Syndromes," by H. C. Triandis, 1996, *American Psychologist*, 51, pp. 407–415. Copyright 1996 by the American Psychological Association.

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