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Abstract

The present study focused on the function of autonomy for individuals from a collectivistic culture, thereby differentiating between two prevailing conceptualizations of autonomy—namely, autonomy as independence and autonomy as self-endorsed functioning. Participants were 573 Chinese adolescents from both urban and rural regions. Autonomy as independence (versus dependence) was operationalized as the degree of independent decision making within the family, whereas autonomy as self-endorsed (versus controlled) functioning was operationalized in terms of the degree of self-endorsement reflected in motives underlying both independent and dependent decision making. Basic psychological need satisfaction was examined as an explanatory mechanism (i.e., mediator) of the association between autonomy and well-being. Results showed that relatively more self-endorsed motives for both independent and dependent decision making yielded a unique positive relation with psychological well-being, with psychological need satisfaction playing an intervening role in these associations. In contrast, the degree of independent decision making as such did not yield any significant relations with well-being or need satisfaction. Moreover, individual differences in collectivistic cultural orientation did not moderate any of the above associations. Discussion focuses on the distinction between the two viewpoints of autonomy and their meaning for Chinese adolescents.

Keywords

autonomy, independence, decision-making, internalization, self-endorsement, cultural orientation, basic psychological need satisfaction, self-determination theory

The conceptualization and functional role of autonomy remains a heavily debated topic in various disciplines of psychology, including motivation (e.g., Ryan & Deci, 2006), developmental (e.g., Beyers, Goossens, Vansant, & Moors, 2003), and cross-cultural psychology (e.g., Markus & Kitayama, 2003). From the perspective of self-determination theory (SDT; Deci & Ryan,

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2002; Ryan & Deci, 2000), a motivation theory on personality development in social context, autonomy represents a universal and necessary condition for people's well-being. In contrast, from the perspective of social constructivism (e.g., Iyengar & DeVoe, 2003; Miller, 1997; Oishi, Diener, Lucas, & Suh, 1999), autonomy is often portrayed as being only beneficial for individuals living in Western society. This is because autonomy is represented as a culture-bounded value that is typically emphasized in relatively individualistic cultures. Because the pursuit of autonomy is contradictory to the values of interdependence and relatedness that are more salient in more collectivistic societies, the experience of autonomy would not have an adaptive function for individuals in these societies.

Unfortunately, part of this debate is rooted in conceptual confusion. The concept of autonomy is often equated with individualism, which involves making individual choices or acting independently of any external influence (Bandura, 1989; Markus & Kitayama, 1991; Rothbaum & Trommsdorff, 2007; Schwartz, 2000, 2006). This viewpoint is largely similar to the way autonomy has been treated within separation-individuation theory (Blos, 1979; Steinberg, 2002), an influential theory in developmental psychology. Yet this conceptualization of autonomy may be of limited value in collectivistic cultures, as qualitative studies show, for instance, that Asian American adolescents typically do not conceive of autonomy as acting independently from parents (Russell, Chu, Crockett, & Lee, 2010). Instead, Chinese youth would experience and benefit from "relating or inclusive autonomy," meaning that they would feel autonomous even when acting dependently (Rudy, Sheldon, Awong, & Tan, 2007; Yeh & Yang, 2006). Different from the conceptualization of autonomy as independence, in SDT autonomy is defined as self-endorsed functioning and is contrasted with pressured or controlled functioning (Ryan & Deci, 2000).

The present study aims to clarify this conceptual fuzziness by empirically separating both viewpoints on autonomy. By doing so, we hope to gain a deeper insight into the question of whether autonomy is beneficial for individuals in collectivistic societies. Specifically, we tapped into Chinese adolescents' independent versus dependent decision making in the family context to index behavioral independence. In line with SDT, we used the motives underlying independent and dependent decision making to index self-endorsement (see Van Petegem, Beyers, Vansteenkiste, & Soenens, 2012). We examined the associations between both operationalizations of autonomy and Chinese adolescents' well-being and investigated whether basic psychological need satisfaction would play an intervening role in these associations.

Autonomy as Independence

Individualism versus collectivism is an important dimension to describe cultural differences. This dimension refers to differences in the extent to which independent or rather interdependent self-construals are more salient (Markus & Kitayama, 1991; Triandis, 1990). When adopting an independent self-construal, people value the importance of choosing actions independently and of making decisions without relying on others. In the present investigation, we will focus on one specific manifestation of independence in adolescence—that is, independent decision making (Goossens, 2006)—which refers to adolescents making choices by themselves—that is, without the parents' involvement.

Adolescents living in an individualistic society would typically learn through socialization to view personal decisions as a unique expression of themselves, thereby preferring to proactively make independent decisions to assert their autonomy (Iyengar & Lepper, 1999; Markus & Kitayama, 2003). By contrast, the development of autonomy in collectivistic cultures is supposed to be constrained by the primary task of interdependence. Due to the cultural priority to establish satisfying relationships and to maintain harmony, youngsters would primarily learn to take into account the perspective and preferences of in-group members when making decisions. In a family context, for instance, adolescents may more frequently consult parents before making a

decision or they may comply with parents' preferences and advice, thereby allowing parents to decide for them. Consistent with this viewpoint, a number of studies have shown mean-level differences in independent functioning between individuals from Asian and Western societies (Oyserman, Coon, & Kemmelmeier, 2002). Similarly, Chao and Tseng (2002) cited more than 20 studies that found greater exercise of parental authority and less promotion of independence in Asians (i.e., Chinese, Indians, Filipinos, Japanese, and Vietnamese) than Caucasians. These findings confirm that dependence on the parents is more prevalent in collectivistic cultures.

Apart from these observed mean-level differences, some cross-cultural psychologists claim that autonomy as independence is unlikely to yield a beneficial effect for people raised within a collectivistic culture (Iyengar & DeVoe, 2003; Markus & Kitayama, 2003). One reason for this is that the pursuit of independence may conflict with the cultural focus on relatedness and conformity, which would create inner tension, thereby undermining well-being (Sagiv & Schwartz, 2000). There exists some evidence for this hypothesized moderating role of ethnic context. For instance, among European American adolescents, dependent decision making was associated with less psychosocial well-being, whereas among African American adolescents the same style of decision making related to better adjustment (Lamborn, Dornbusch, & Steinberg, 1996). Along similar lines, Iyengar and Lepper (1999) found that independent decision making was most motivating for Anglo-American children, whereas the dependent decision making by important others (mother or classmates) was more motivating for Asian American, compared to Anglo-American, children. The authors interpreted this result as evidence that Asian American children are less motivated in situations that highlight autonomy, as manifested by independent decision making.

Autonomy as Self-Endorsement

Within the framework of SDT, autonomy is not defined as independence but as self-endorsement. Self-endorsement implies that one fully concurs with the reasons or motives underlying one's actions, such that one's actions are grounded in authentic values and interests (Deci & Ryan, 2000). In other words, it refers to a full willingness to engage in one's behavior and to personally endorse one's choices, expressed in experiences such as "I want to do this." The opposite of self-endorsement is controlled functioning, where one feels pressured or forced into a certain action, either by environmentally prescribed or self-forced demands, expressed in experiences such as "I feel coerced to do this."

To index the relative degree of self-endorsement, SDT specifies different types of motives behind one's actions. These different motives are distinguished on the basis of the extent to which one's reasons for acting have been "taken in" or internalized (Deci & Ryan, 1985; Ryan & Connell, 1989). The more the behavioral regulation has been internalized, the more it is experienced as autonomous or self-endorsed. The least internalized type is an *external* motive, in which case the behavior is motivated by external pressures, such as meeting demanding expectations, avoiding punishments, or obtaining rewards. An *introjected* motive reflects partial internalization. In this case, the behavior is motivated by internal pressures, such as the desire to boost one's ego or the avoidance of feelings of shame, guilt, and anxiety (Assor, Vansteenkiste, & Kaplan, 2009). Although an introjected motive stems from an internal impetus, it still has the phenomenological experience of pressure and obligation, as the person is dictated by the feeling that one "should" engage in the behavior (Ryan & Deci, 2011). Thus, an introjected motive also represents a controlled type of functioning. A fuller degree of internalization occurs in the case of an *identified* motive, where actions are accepted as personally meaningful and valuable. In other words, the behavior is in line with one's personal values and convictions, and therefore reflects self-endorsed functioning. An *integrated* motive represents the highest type of internalization as individuals fully assimilate the regulation such that it becomes congruent with other values and

preferences. Because integration requires a high level of self-reflection and introspection and the midadolescents that participated in the present study may not have sufficiently developed these capacities yet (Harter, 2003; Ryan & Deci, 2012), we did not assess integrated regulation in the current study.

Consistent with the idea that these motives fall along a continuum of increasing internalization, Ryan and Connell (1989) found that motives next to each other on the continuum (e.g., external and introjected) correlated more strongly than motives situated further apart (e.g., external and identified). Furthermore, also the pattern of correlates with external outcomes was reflective of a simplex pattern, with correlates with well-being and proactive coping becoming gradually more positive when moving along the continuum. Based on this ordered pattern of associations, different weights can be assigned to each motive depending on their location on the continuum as to derive a composite score. This score has been labeled the Relative Autonomy Index (RAI; e.g., Ryan & Connell, 1989) in case all motives were assessed and the Relative Internalization Index (RII; Neyrinck, Vansteenkiste, Lens, Duriez, & Hutsebaut, 2006) in case the assessment was limited to the extrinsic motives, varying in their level of internalization.

Since the specification and operationalization of these motives, dozens of studies have examined their correlates across various (mainly Western) age groups and across a variety of life domains, including education, identity development, physical activity, and health care (see Vansteenkiste, Niemiec, & Soenens, 2010, for an overview). In these studies, higher degrees of self-endorsed, as opposed to controlled, functioning were consistently found to be linked with better psychosocial functioning. Furthermore, several studies have confirmed that a higher degree of self-endorsement is also functionally important in Eastern Asian countries. For instance, Tanaka and Yamauchi (2000) found in a sample of Japanese undergraduate students that identified motives are positively associated with mastery orientation, deep-level processing, and academic achievement, whereas introjected and external motives were related to a higher dropout rate and ill-being. Subsequent studies among Taiwanese and South Korean (Sheldon et al., 2004), Russian and Turkish (Chirkov, Ryan, Kim, & Kaplan, 2003), Brazilian (Chirkov, Ryan, & Willness, 2005) and Chinese participants living in cities (e.g., Vansteenkiste, Zhou, Lens, & Soenens, 2005) and rural areas (e.g., Zhou, Ma, & Deci, 2009) extended these initial findings, showing that higher self-endorsement relates to better psychological functioning and task performance across nations.

According to SDT, the reason why self-endorsement and psychological well-being are deeply connected is because self-endorsement facilitates the satisfaction of the basic psychological needs for autonomy, relatedness, and competence (Ryan & Deci, 2011). These needs are considered innate “psychological nutriment” that all humans across cultures require for thriving (Ryan, 1995; Sheldon, Elliot, Kim, & Kasser, 2001). In brief, autonomy refers to the experience of a sense of volition and psychological freedom, relatedness involves the feeling of connectedness with the persons about whom one cares, and competence entails the feeling of effectiveness to overcome challenges and to achieve desired outcomes.

When acting upon one’s personal convictions and values, as in the case of identified regulation, people’s behavior will be accompanied with a sense of volition and psychological freedom (Ryan & Deci, 2000). Interestingly, self-endorsed functioning and the support of it also contributes to relatedness satisfaction—for instance, as expressed in high-quality romantic relationships (LaGuardia, Ryan, Couchman, & Deci, 2000; Patrick, Knee, Canevello, & Lonsbary, 2007), parent-child relationships (Assor, Roth, & Deci, 2004), and friendships (Deci, LaGuardia, Moller, Scheiner, & Ryan, 2006; Soenens & Vansteenkiste, 2005). Furthermore, self-endorsement facilitates competence satisfaction, as people execute activities more effectively when they completely stand behind their activities (Ryan & Deci, 2011).

Notably, need satisfaction may not only follow from but also facilitate more self-endorsed functioning, as need satisfaction is said to energize and be conducive to the processes of

internalization and intrinsic motivation. There has been support in the literature for both directions of effects. For instance, longitudinal research (e.g., Sheldon & Elliot, 1999; Smith, Ntoumanis, Duda, & Vansteenkiste, 2011) has shown that self-endorsed goal pursuit related to greater well-being through better goal attainment and enhanced psychological need satisfaction. Conversely, in other studies, psychological need satisfaction has been modeled as an antecedent of self-endorsed functioning (e.g., Vallerand, Fortier, & Guay, 1997). In this study, we decided to first model need satisfaction as a consequence and mediator of self-endorsed functioning because this is the direction of effects examined and supported most consistently in SDT. Yet we were open to the opposite direction of effects and also tested an alternative model (i.e., with self-endorsed motives as a mediator of the associations between need satisfaction and well-being).

Combining Both Conceptualizations

These two viewpoints on autonomy can be meaningfully linked. Independence versus dependence rather concerns the locus of the decision-making process—that is, it pertains to the question of *who* is making the decision. The locus is internal in case one decides by oneself and the locus is external when one leaves the decision to others. The locus of the decision-making process may be a function of one's cultural background, with individualistic cultures promoting a more internal and collectivistic cultures promoting a more external locus of decision making. Yet SDT additionally stresses the motives of *why* one is acting in a certain way. Therefore, it is maintained that both an internal and an external locus of decision making can be undergirded (i.e., motivated) by more or less self-endorsed reasons (deCharms, 1968; Ryan & Deci, 2000). This implies that different combinations arise when both viewpoints on autonomy are crossed. Specifically, a youngster may decide on her holiday plans independently because she personally values the importance of doing so (identified motive), to obtain a positive self-image by proving that she is capable of doing so without her parents (introjected motive), or because she feels obliged to figure things out by herself due to the lack of available support (external motive). Similarly, a youngster could leave this decision to his parents because he fully endorses their opinion and therefore voluntarily gives away the decision (identified motive). He may also conform to the parents' opinion to avoid feelings of guilt or out of pressured loyalty (introjected motive) or because he has the feeling that his parents will appreciate him less if he does not conform to their decision (external motive).

In line with these conceptual distinctions, Beyers et al. (2003) performed a factor analysis on a large set of autonomy measures and found two slightly correlated factors, labeled separation and agency, which resemble independence and self-endorsement. Furthermore, in a study on the living situation of emerging adults, Kins, Beyers, Soenens, and Vansteenkiste (2009) found that self-endorsed motives behind the choice to live independently related more strongly to well-being than the event of home leaving as such. Finally, a recent study examined various measurements regarding different operationalisations of the concept of autonomy and found they are empirically represented by two dimensions, one reflected the self-endorsement versus pressured functioning and another reflected interpersonal distance (Van Petegem, Vansteenkiste, & Beyers, in press).

In other words, the difference between the two viewpoints on autonomy and their differential relations with outcome variables is increasingly distinguished. Yet today, the relevance of the distinction between both autonomy measures has not been directly examined in a non-Western sample. Indirect evidence has, however, been reported in the cross-cultural literature. For instance, Kagitçibasi (2005) makes an analogous distinction by differentiating the dimension of interpersonal distance (independence-interdependence) from the dimension of agency (autonomy-heteronomy). Furthermore, Yeh and colleagues (Yeh, Bedford, & Yang, 2009; Yeh, Liu, Huang, & Yang, 2007; Yeh & Yang, 2006) coined the terms *individuating* and

relational autonomy to refer to the fact that Chinese adolescents develop both an independent identity, in which case they express individualistic attributes, and an interdependent identity, in which case they take their parents' wishes and expectations into account. Thus, both SDT and Yeh's dual autonomy model (Yeh et al., 2007, 2009; Yeh & Yang, 2006) share the assumption that autonomy can manifest with respect to independence-related and interdependence-related issues. Specifically, given that relating autonomy is measured with items such as "It is meaningful for me to fulfill my duty as a son or daughter," this form of dependence seems to reflect self-endorsed dependence in SDT. Yet two differences are worth being mentioned. First, Yeh et al. primarily define autonomy as a capacity to achieve a particular identity, which emphasize the feeling of competence, as reflected in the phrases of the items such as "I always feel confident..." and "I always feel able to...". In contrast, in SDT definition of autonomy, feelings of self-endorsement and volition (i.e., the experience that one wants to do something and feels free to do it) are relatively more central. Second, SDT takes a somewhat more encompassing view as it stipulates that both more adaptive (i.e., self-endorsed) and more maladaptive (i.e., controlled) motives can underlie people's independent and dependent functioning (Rudy et al., 2007). For instance, Chirkov et al. (2003) measured the self-endorsed and controlled motives behind a variety of both collectivistic and more individualistic cultural practices.

Present Study

To shed further light on the distinction between independence and self-endorsement, we examined the relevance of these two constructs in a relatively collectivistic culture—that is, China. In Chinese society, interdependence is maximized in parent-child relationships by frequent guidance, consultation, and even intrusion into children's private life (Triandis, Bontempo, & Villareal, 1988). So we believe the family environment is an important context to understand the meaning and functional role of autonomy for individuals from a relatively collectivistic society. Specifically, following a procedure developed by Van Petegem et al. (2012), adolescents first indicated whether they decided for themselves on a diversity of daily issues or whether parents took decisions for them. In addition, they separately rated their motives for taking independent decisions and for being dependent on their parents. Using this methodology, we examined the following five research questions.

First, can autonomy as decisional independence and autonomy as self-endorsement be empirically differentiated? Based on theoretical grounds and previous work (Van Petegem et al., 2012; Vansteenkiste et al., in press), we expected that both sets of concepts could be distinguished using factor analysis and would be relatively orthogonal, as expressed in low correlations between the constructs.

Second, how do independence and self-endorsement contribute to psychological well-being? Based on Markus and Kitayama (2003), we reasoned that the level of independent versus dependent decision making would not be beneficial for Chinese youngsters, because independent functioning conflicts with the collectivistic emphasis on conformity and family harmony in China. Based on SDT, we hypothesized that self-endorsed dependence but also self-endorsed independence, as operationalized through the RII, would yield a unique positive relation to well-being, above and beyond the level of independent functioning per se.

Third, to what extent can the association between self-endorsement and well-being be accounted for by basic psychological need satisfaction? We hypothesized that both self-endorsed independent and self-endorsed dependent functioning would allow for greater psychological need satisfaction (e.g., Sheldon & Elliot, 1999), which in turn would relate to well-being. In addition, we examined an alternative model with need satisfaction as an antecedent of self-endorsed functioning rather than an intervening variable.

Fourth, we examined whether the proposed model would hold up for individuals differing in their collectivistic orientation. We divided the sample into two groups with lower and higher levels of collectivistic values to examine whether the obtained associations would be similar for these two groups. This was deemed important because culture is a complex and dynamic construct in which the same cultural orientation could be more or less endorsed by different individuals (e.g., Kagitçibasi, 1997; Oyserman et al., 2002). Despite the different emphasis placed on independence by individuals with a different cultural orientation, we hypothesized that the associations between self-endorsed functioning, need satisfaction, and well-being would *not* be moderated by a collectivistic orientation. Said differently, the self-endorsement of independent decisions would also contribute to the well-being of Chinese youngsters adopting a collectivistic orientation.

Finally, to further understand how the specific motives that together constitute the relative internalisation index relate to well-being, we broke the Relative Internalisation Index down into its separate components (i.e., the three motives) and examined whether they contributed uniquely to the outcomes. We hypothesized that identified motives would relate positively, whereas introjected and external motives would relate negatively to psychological need satisfaction and well-being.

Method

Participants

The sample comprised 591 Chinese high school students in the 10th grade. To maximize the heterogeneity of the sample, we included (a) 292 participants from two high schools in, respectively, the Eastern and Western part of an urban area of China, Shanghai (52.4% girls) and (b) 299 participants from one local high school in a rural area of China, Shanggao (49.1% girls). The participants ranged in age from 14 to 18 years, with a mean of 16.08 years ($SD = 0.49$). Of the participants, 88.2% came from intact families, 5.3% came from divorced families, and 4.1% came from a single-parent family.

Of all the participants, eight showed missing data on more than 20% of the variables and were therefore not retained in the analyses. Little's (1988) Missing Completely at Random (MCAR) test produced a normed χ^2 (χ^2/df) of 1.24 for the remaining adolescents. According to Bollen (1989), this indicates that the data were likely missing at random, and as a consequence, cases with missing values could be retained in the analyses. To do so, we used the Full Information Maximum Likelihood (FIML) procedure available in Mplus 6.1 (Muthén & Muthén, 2007).

Procedure

Data were collected at school during regular school time. Before data collection, the teachers in charge of each class were gathered to have a 15-minute training with the research staff about the instruction for the measurement. Then, each teacher administered the questionnaire in one class. The research staff stayed in each classroom for 5 minutes to answer students' questions and to address difficulties to understand or misinterpretations. The questionnaire took about 35 minutes to complete, and anonymity was guaranteed.

Measures

Originally English instruments were translated into Chinese by a Chinese researcher fluent in English. The back translations were done by an English-Chinese language teacher with expertise in both languages. A third person (i.e., a psychologist) fluent in English compared the original

and back-translated version of the items to inspect their equivalence. Nonequivalent translations were discussed by the two translators and the psychologist to arrive at consensual agreement on the final wording.

Autonomy as independence. To measure independent versus dependent decision making, we administered a variation of the Family Decision Making Scale (FDMS, Dornbusch et al., 1985), which consisted of 24 issues from six social domains¹ the personal domain (e.g., how to spend pocket money), the friendship domain (e.g., how much time to spend with friends), the prudential domain (e.g., whether you drink alcohol or not), the conventional domain (e.g., how you talk to your parents), the moral domain (e.g., whether you keep your words to others), and the academic domain (e.g., whether to attend after-school courses). The first five domains are based on Smetana's Social Domain Theory (Smetana, Campione-Barr, & Daddis, 2004; Smetana & Daddis, 2002). The academic domain was added to this study because it is an important issue in daily life for Chinese adolescents and their parents (Liu et al., 2000). Participants answered the question, "Who decides on each of the following issues in your family?" on a 5-point scale: (1) *My parents alone*, (2) *My parents, after talking to me*, (3) *My parents and I together*, (4) *I decide, after talking to my parents*, and (5) *I alone*. Higher scores indicate more independent decision making. Cronbach's alpha was .84.

Autonomy as self-endorsement. Using an approach validated by Van Petegem et al. (2012), we then measured the motivation behind (in)dependent decision making to index participants' degree of self-endorsed functioning. Participants were first instructed to select the three items with the highest scores on the FDMS and to write these down. Doing so, we aimed to prime their independent functioning, as these are issues about which the participant decides relatively independently. Then, we asked *why* they decide rather alone about these issues. Through this procedure, we aimed to access their underlying motives for independent decision making using 18 items adapted from the Self-Regulation Questionnaire (SRQ; Ryan & Connell, 1989) and used by Van Petegem et al. (2012). Three different types of regulation were assessed—that is, identified motives (e.g., "because it is personally important to me"; 6 items), introjected motives (e.g., "because I would feel bad about myself I didn't"; 6 items), and external motives (e.g., "because others pressure me to do so"; 6 items). Respondents answered on a 5-point Likert-type scale, ranging from 1 (*completely untrue*) to 5 (*completely true*). Then, a similar procedure was used to assess the motives for dependent decision making. The participants first selected the three items with the lowest scores on the FDMS to prime their dependent functioning. Then, they filled out a similar version of the SRQ to measure their motives for dependent decision making. Information regarding the internal validity of this instrument is presented as part of Research Question 1 in the Results.

Basic need satisfaction. To assess basic psychological need satisfaction, we used the nine-item Basic Psychological Needs Scale (Sheldon et al., 2001), which taps into the satisfaction of autonomy (e.g., "I can do what I am really interested in"), relatedness (e.g., "I feel close and connected with other people who are important to me"), and competence (e.g., "I feel I can successfully complete difficult tasks"). Items were rated on a 5-point Likert-type scale, ranging from 1 (*completely disagree*) to 5 (*completely agree*). This scale has been validated in various studies (e.g., Sheldon et al., 2001; Sheldon, Cheng, & Hilpert, 2011) and yielded an acceptable reliability in current study ($\alpha = .72$).

Psychological well-being. Psychological well-being was measured using three indicators: self-esteem, depression, and vitality. Self-esteem was assessed with Rosenberg's 10-item scale (Rosenberg, 1965), which has been widely examined across nations (Schmitt & Allik, 2005).

Items were rated on a 5-point Likert-type scale ranging from 1 (*completely disagree*) to 5 (*completely agree*). Cronbach's alpha was .86. Depression was assessed with a shortened version of the Centre for Epidemiological Studies–Depression scale (CES-D; Radloff, 1977), which taps into how often participants experienced specific depressive symptoms during the last week. Items were rated on a scale ranging from 1 (*rarely or none of the time*) to 4 (*most or all of the time*). This shortened 12-item version has been validated extensively across cultures (e.g., MacKinnon, McCallum, Andrews, & Anderson, 1998; Roberts, Lewinsohn, & Seeley, 1991) and had a good reliability in the current study ($\alpha = .79$). Vitality was assessed with the seven-item Subjective Vitality Scale (Ryan & Frederick, 1997). Items tapped into feelings of energy, vigor, and aliveness over the past few months and were rated on a 5-point Likert-type scale ranging from 1 (*completely disagree*) to 5 (*completely agree*). The scale has been successfully used in a Chinese sample before (Vansteenkiste, Lens, Soenens, & Luyckx, 2006), and the Cronbach's alpha in the present investigation was .87.

Collectivism. To assess a collectivistic orientation, we used the Perceived Cultural Context questionnaire (PCC; Chirkov et al., 2003), which comprises subscales for horizontal and vertical collectivism (six items for each construct). In this study, we followed the procedure of previous researchers (Jang, Reeve, & Ryan, 2009; Triandis, 1996) and combined the two collectivism scales into a single measure, yielding a Cronbach's alpha of .72.

Plan of Analysis

To examine whether the constructs of self-endorsement and independence can be differentiated (Research Question 1), we used Confirmatory Factor Analysis (CFA), thereby making use of robust maximum likelihood estimation in Mplus 6.1 to correct for the observed nonnormality of some variables. Whereas each of the motives was represented by their respective items, we used the six different domains that were tapped into via the FDMS (i.e., personal, friendship, prudential conventional, moral, and academic) as indicators of independent decision making. We chose to rely on these domain indicators rather than making use of the full range of 24 items as to balance the number of indicators across the motives and the level of independent decision making itself (Marsh, Hau, Balla, & Grayson, 1998). In addition, we inspected their intercorrelations and used within-sample *t* tests to examine the mean-level difference of motives for independent and dependent decision making.

To identify the unique contribution of independent decision making and the relative internalization (i.e., self-endorsement) of both independent and dependent decision making in the prediction of psychological well-being (Research Question 2), a Structural Equation Model (SEM) was estimated. Beforehand, we examined the relations between a number of relevant background variables and well-being through a MANOVA to examine whether we needed to control for any of them in the main analyses. In the structural models, the latent variables were represented as follows: Contrary to the approach used in the CFA (Research Question 1), self-endorsed motives were indicated by three parcels (rather than with the individual items) because we wanted to reduce the number of parameters to be estimated in these more complex structural models (Little, Cunningham, Shahar, & Widaman, 2002). Independent decision making was again represented by the six domains. Well-being was represented by the scales for vitality, depression, and self-esteem. Finally, need satisfaction was indicated by the three subscales for each of the three needs.

To examine whether psychological need satisfaction plays an intervening role in the association between the motives for (in)dependent decision making and psychological well-being (Research Question 3), we tested a number of additional SEM models. In doing so, we followed Holmbeck's (1997) two-step procedure. In a first model, the independent variables (i.e., independent decision making; self-endorsement) were modeled as predictors of the intervening variable

(i.e., need satisfaction), which in turn related to the outcome (i.e., well-being). Then, in a second model, a direct association between the independent and the dependent variable was allowed. According to Holmbeck (1997), evidence for an intervening effect is shown when the addition of a direct path from the independent variable to the dependent variable in the second model does not improve model fit compared to the first model. Notably, a variable can play an intervening role in one of the following two ways (Mathieu & Taylor, 2006). First, an intervening variable can account for an initial direct association between the independent and the dependent variable, in which case the intervening variable is said to *mediate* the direct relation. Second, even in the absence of an initial direct association between an independent and a dependent variable, the independent variable can still be related indirectly to the dependent variable through the intervening variable, in which case an *indirect* effect is established. We performed bootstrapping testing, which is highly recommended to quantify the indirect or mediated effect (Hayes, 2009; Preacher & Hayes, 2004). Bootstrapping testing also has the advantage that it does not require a normal distribution to test the indirect effect because, through a process of resampling, it generates bias-corrected confidence intervals for the indirect effect (MacKinnon, Lockwood, & Williams, 2004; Shrout & Bolger, 2002).

To test for the possible moderating role of collectivism in the associations between the motives, need satisfaction, and well-being (Research Question 4), we divided the sample into two subgroups based on a standardized score of zero on the collectivism dimension. Next, we performed a multigroup CFA to examine the measurement equivalence across the two groups by constraining the factor loadings of each latent construct to be equal, while freeing intercepts and error variances. Next, we examined the structural equivalence by comparing a constrained model in which all structural paths were set equal across two groups with an unconstrained model where all structural paths were set free. We took two indexes of model invariance—that is, the difference in CFI (ΔCFI) and difference in chi-square statistic ($\Delta\chi^2$). $\Delta\chi^2$ is considered an elusive criterion especially when data are nonnormally distributed (Byrne & Stewart, 2006; Cheung & Rensvold, 2002). Following this recommendation, we took a ΔCFI value of less than .01 as evidence for model invariance.

Finally, to gain insight into the specific contribution of the separate motives constituting the RII for (in)dependence (Research Question 5), we tested a SEM model inserting all six motives as separate predictors next to the level of independent decision making.

Results

Research Question 1: Internal Validity, Means, and Correlations

Before examining whether independent, relative to dependent, decision making can be distinguished from the motives underlying both, we used CFA to examine the measures of motives for independent and dependent decision making separately. As for the motives underlying independence, after dropping one item with a low factor loading (i.e., $< .35$, from the introjected motivation subscale, “I can only feel proud of myself if I...”), a CFA with three latent factors yielded the following fit: $\chi^2(113) = 269.09, p < .001$; Standardized Root Mean Square Residual (SRMR) = .06, root mean square error of approximation (RMSEA) = .05, comparative fit index (CFI) = .93. After removing the same introjected motivation item from the motives underlying dependence, the three-factor solution yielded the following fit indices: $\chi^2(113) = 294.01, p < .001$; SRMR = .05, RMSEA = .06, CFI = .93. Standardized factor loadings across the motives underlying independence and dependence ranged between .38 and .79.

More importantly, in a subsequent CFA, we examined whether the level of independent decision making per se can be differentiated from the motives underlying (in)dependent decisions. This model comprised seven latent constructs—that is, independent decision making as such as

Table 1. Correlations Among Latent Variables.

	1	2	3	4	5	6	7	8
1. Independent DM	—							
2. Identified independence	.09	—						
3. Introjected independence	-.08	.37**	—					
4. External independence	-.21**	-.09	.52**	—				
5. Identified dependence	-.21**	.04	.03	.17**	—			
6. Introjected dependence	-.28**	-.09	.41**	.39**	.56**	—		
7. External dependence	-.16**	.06	.27**	.35**	-.28**	.34**	—	
8. Need satisfaction	.00	.40**	.22**	.03	.17**	-.12*	-.29**	—
9. Well-being	-.07	.21**	.08	-.03	.09	-.10	-.26**	.67**

Note. DM = decision making.

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

well as identified, introjected, and external motives for both independent and dependent decision making. This model yielded the following fit: fit, $\chi^2(708) = 1,212.86$, $p < .001$; SRMR = .06, RMSEA = .04, CFI = .91. The latent correlations among these seven constructs are shown in Table 1. As expected, independent decision making had small correlations with the underlying motives, with correlations ranging from .09 to -.28. This pattern of relations provided support for our hypothesis that both operationalizations of autonomy are distinct and even relatively orthogonal. Cronbach's alpha was .80, .76, and .74 for the identified, introjected, and external motives for independent decision-making, respectively, and .79, .72, and .85 for the three motives for dependent decision making, respectively.

Furthermore, as hypothesized, the correlations among the motives underlying both independent and dependent decision making showed a simplex-like pattern, with subscales situated closer to one another on the internalization continuum being positively associated (e.g., identified and introjected motives), and subscales situated further apart being negatively associated (i.e., identified and external motives). These ordered patterns of correlations add to the validity of the measurement and justify the creation of a composite score, representing the relative degree of internalization. In line with past work (e.g., Neyrinck et al., 2006; Soenens, Vansteenkiste, & Niemiec, 2009), an RII was created by weighing the motives in the following way: (Identified Motive $\times 3$) + (Introjected Motive $\times -1$) + (External Motive $\times -2$).

Next, we examined mean-level differences between the motives underlying independence as well as dependence. These means can be found in Table 2. Identified motives for independent decision making were significantly more strongly endorsed than the introjected, $t(552) = 37.20$, $p < .001$, $d = 1.60$, and external, $t(552) = 48.39$, $p < .001$, $d = 2.01$, motives for independent decision making. Similarly, identified motives for dependent decision making were significantly more strongly endorsed than introjected, $t(552) = 21.72$, $p < .001$, $d = 0.85$, and external, $t(551) = 9.19$, $p < .001$, $d = 0.37$, motives for dependent decision making. In addition, external motives for dependent decision making were more strongly endorsed than introjected motives, $t(551) = 5.40$, $p < .001$, $d = 0.22$.

Finally, we examined the association of background variables and collectivism with the autonomy measures. A MANCOVA was performed to examine the effects of age, gender, living area, and family structure on decisional independence and relative internalization of (in)dependence. Results indicated no significant effects. Next, as can be noticed in Table 2, we found collectivism to be positively associated with relative internalization for dependent decision making ($\beta = .17$, $p < .01$), but to be unrelated to the relative internalization for independent decision making and the level of independent decision making itself.

Table 2. Descriptive Statistics and Intercorrelation Matrix for Independent Decision Making², the Underlying Motives, Basic Psychological Needs Satisfaction, and Psychological Well-Being.

	M	SD	2a	2b	2c	2d	3a	3b	3c	3d	4a	4b	4c	5	6
1. Independent DM	4.12	0.53	.13**	.06	-.05	-.14**	-.02	-.17**	-.19**	-.12**	.04	-.07	.02	-.04	-.04
2. Motives for independent DM															
2a. Relative internalization	5.56	2.66	-	.70**	-.34**	-.72**	.14**	-.04	-.30**	-.18**	.13**	.15**	.10*	.11**	.07
2b. Identified independence	4.18	0.66		-	.28**	-.08*	.01	.03	-.09*	.04	.22**	.26**	.23**	.17**	.17**
2c. Introjected independence	2.70	0.88			-	.43**	-.19**	.01	.29**	.24**	.15**	.10*	.13**	.05	.11**
2d. External independence	2.14	0.72				-	-.13**	.11**	.28**	.27**	-.03	.03	.06	-.02	.02
3. Motives for dependent DM															
3a. Relative internalization	1.87	3.41					-	.76**	-.05	-.77**	.17**	.12**	.06	.20**	.17**
3b. Identified dependence	2.95	0.87						-	.43**	-.20**	.11**	.13**	.04	.07*	.19**
3c. Introjected dependence	2.19	0.80							-	.27**	-.07	-.03	-.05	-.07*	.13**
3d. External dependence	2.42	0.97								-	-.12**	-.04	-.04	-.24**	-.10*
4. Need satisfaction															
4a. Autonomy	3.55	0.72									-	.30**	.35**	.42**	.23**
4b. Relatedness	3.95	0.60										-	.29**	.31**	.49**
4c. Competence	3.41	0.75											-	.48**	.21**
5. Psychological well-being	3.54	0.56												-	.29**
6. Collectivism	3.73	0.46													-

Note. DM = decision making.
* $p < .05$. ** $p < .01$.

Research Question 2: Independent Contributions of Both Autonomy Operationalizations in the Prediction of Well-being

Before examining the independent contribution of both autonomy operationalizations in the prediction of well-being, we explored whether we needed to control for any background variables through a MANCOVA, including age, gender, living area, and family structure as independent variables and with the three measures of well-being as dependent variables. We found an overall significant effect of gender, $F(4, 512) = 4.56, p < .001, \eta^2 = .05$, with follow-up univariate analyses indicating that boys scored significantly higher on self-esteem, $F(1, 537) = 10.10, p < .01, \eta^2 = .02$, and vitality, $F(1, 537) = 11.50, p < .01, \eta^2 = .02$, than girls. Hence, we controlled for gender in the subsequent analyses by including it as a predictor of well-being in the structural equation models.

We tested a structural equation model in which independent decision making as such as well as the relative internalization of both independent and dependent decision making were modeled as predictors of psychological well-being. Whereas independent decision making itself was unrelated ($\beta = -0.02, ns$) to psychological well-being, the relative internalization of both dependent decision making ($\beta = .26, p < .01$) and independent decision making ($\beta = .13, p < .05$) yielded a unique positive association with well-being. On top of these psychological predictors, gender was positively associated with well-being, indicating that boys reported higher well-being than girls ($\beta = .17, p < .01$). In total, 12% of the variance of well-being was explained in this model, Satorra-Bentler-Scaled $\chi^2(97) = 209.23, CFI = .96, RMSEA = .05, SRMR = .05$.

Research Question 3: Need Satisfaction as an Intervening Variable

To address Research Question 3, we modeled need satisfaction as an intervening variable to explore whether it could account for the association between relative internalization of dependent and independent decision making and well-being. In the first model, we allowed paths from the relative internalization indices as well as independent decision making as such to need satisfaction, which in turn related to well-being. This model had an acceptable fit, SBS $\chi^2(144) = 291.36, CFI = .96, RMSEA = .04, SRMR = .05$. Relative internalization of independent ($\beta = .17, p < .01$) and dependent ($\beta = .26, p < .01$) decision making were positively associated with need

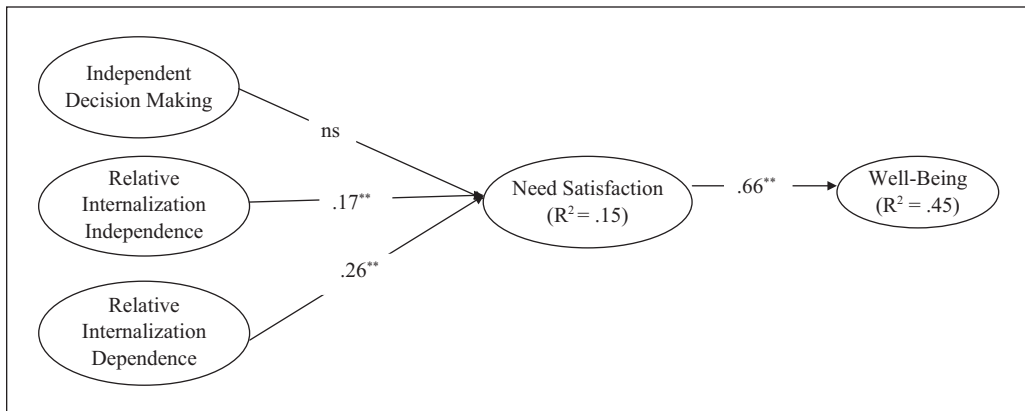


Figure 1. Structural Model of the Relation Between Decisional Independence, Relative Internalization of Independence and Dependence, Need Satisfaction, and Well-Being.

Note: Correlations between endogenous variables are not printed, neither are the associations with control variables. * $p < .055$. * $p < .05$. ** $p < .01$.

satisfaction, while need satisfaction was positively associated with well-being ($\beta = .66, p < .01$). In contrast, independent decision making yielded no significant associations with need satisfaction. In total, 15% of the variance of psychological need satisfaction and 45% of the variance of well-being was explained in this model.

In the second model, we added two direct paths from the relative internalization of independent and dependent decision making to well-being to test whether adding these two direct paths would improve the model fit. The second model did not show any significant difference in model fit compared to the first model, SBS $\chi^2(142) = 286.20$, CFI = .96, RMSEA = .04, SRMR = .05; Δ SBS $\chi^2(2) = 5.16, p > .05$; moreover, none of the direct associations was found to be significant. Because of its parsimony, the first model was preferred above the second model. Finally, results of the bootstrap estimation showed a significant indirect effect of relative internalization of independence (95% CI: 0.04 to 0.19) and relative internalization of dependence (95% CI: .10 to .25) on well-being through need satisfaction.

In short, need satisfaction was found to play an intervening and, more specifically, a mediating role in the association between the relative internalization of dependent and independent decision making and well-being.

Research Question 4: Examining Collectivism as a Moderator

We tested the above model in two groups, one with participants low on collectivism (i.e., scoring below a standardized score of 0) and one with participants high on collectivism (i.e., scoring higher than a standardized score of 0). Before doing so, we first examined whether the measurement model was equivalent across both groups. The constrained measurement model, SBS $\chi^2(262) = 395.02$, CFI = .95, RMSEA = .04, SRMR = .06, did not differ in terms of fit compared to the unconstrained model, $\Delta\chi^2(12) = 12.64, \Delta$ CFI = 0.00, thus testifying to the invariance of the measurement model across the two subsamples.

Next, we tested an unconstrained structural model where the structural paths were allowed to vary across both groups, SBS $\chi^2(305) = 500.06$, CFI = .93, RMSEA = .05, SRMR = .07. This model was compared to a constrained model where all the paths are set equal across both groups, SBS $\chi^2(308) = 501.57$, CFI = .93, RMSEA = .05, SRMR = .07. The difference in model fit was not significant, $\Delta\chi^2(3) = 1.51, \Delta$ CFI = .00, indicating that the model presented in Figure 1 was invariant across the subsamples of participants relatively low and relatively high on collectivism.

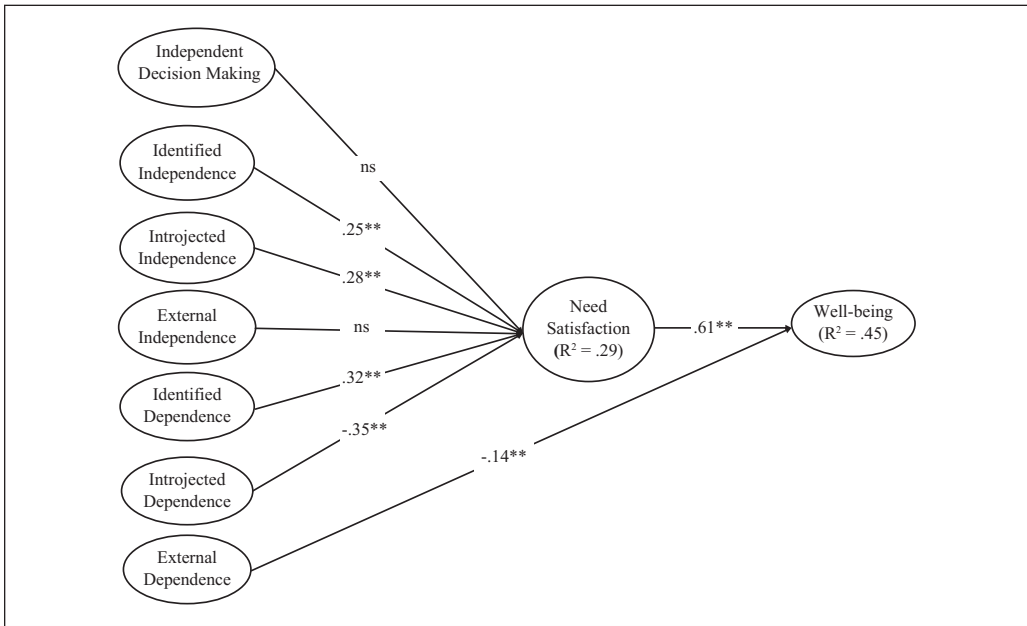


Figure 2. Structural Model of the Relation Between Decisional Independence, the Underlying Motives for Independence and Dependence, Need Satisfaction, and Well-being.

Note: Correlations between endogenous variables are not printed, neither are the effects of the control variables.

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

Research Question 5: Examining Separate Motives Underlying Independence and Dependence

Although more parsimonious, the creation of an RII provides no insight into which specific motives are driving the observed associations. Therefore, we tested our proposed model once more, this time inserting the six specific motives underlying dependent and independent decision making as predictors. In the direct effect model, SBS $\chi^2(325) = 596.48$, CFI = .94, RMSEA = .04, SRMR = .05, identified independent and externally dependent decision making were found to be, respectively, positively ($\beta = .21$, $p < .01$) and negatively ($\beta = -.29$, $p < .01$) associated with well-being. Next, we estimated a model in which psychological need satisfaction was an intervening variable without allowing direct associations between motives and well-being, SBS $\chi^2(403) = 734.01$, CFI = .94, RMSEA = .04, SRMR = .05. A model containing direct paths from the six motives to well-being resulted in an improved model fit, Δ SBS $\chi^2(6) = 16.46$, $p < .01$. As only external dependent decision making yielded a direct negative association with well-being, we left out all nonsignificant paths from the model, which resulted in the model displayed in Figure 2, SBS $\chi^2(402) = 723.09$, CFI = .95, RMSEA = .04, SRMR = .05. In total, 29% of the variance in need satisfaction and 45% of the variance of well-being was explained in this model. As can be noticed, both identified independent and identified dependent decision making related positively to psychological need satisfaction. Interestingly, whereas introjected independence yielded a positive association with need satisfaction, introjected dependence yielded a negative relation. Finally, bootstrapping testing indicated that for each of these four predictors, need satisfaction played an intervening role in the relation between the predictor and well-being: identified independence (95% CI: .02 to .23), identified dependence (95% CI: 0.17 to 0.36), introjected independence (95% CI: .08 to .35), and introjected dependence (95% CI: -0.17 to -.43). Because identified independence yielded an initial significant association with well-being, we can

conclude that need satisfaction plays a mediating role for this predictor. In contrast, the lack of direct association in the case of introjected dependence, introjected independence, and identified independence indicates that need satisfaction plays an indirect role for these three predictors.

Supplementary Analysis

From the SDT perspective, need satisfaction may not only follow from the relative endorsement of (in)dependent decision making but may also play an antecedent role. Therefore, we tested an alternative model in which need satisfaction was said to predict both relative internalization indices and independent decision making as such, which in turn related to well-being. We then compared this model with the previous mediation model by making use of the Akaike information criterion (AIC) and the Bayesian information criterion (BIC), because the two models are not nested (Bozdogan, 2000). Lower AIC and BIC values are indicative of a better fit (Bollen & Long, 1993). Although the alternative model yielded a reasonably good fit, SBS $\chi^2(143) = 305.12$, CFI = .95, RMSEA = .05, SRMR = .06, it had slightly higher AIC and BIC values (i.e., 27,348.82 and 27,623.36, respectively) than the model in which need satisfaction was modeled as an intervening variable (i.e., 27,333.07, BIC = 27,603.32). Moreover, the bootstrap estimation showed that the indirect effect of needs satisfaction on well-being through relative internalization for either independent or dependent decision making was not significant. Hence, we favored the originally proposed model with need satisfaction as an intervening variable.

Because, rather unexpectedly, introjected independence decision making related positively to need satisfaction, we performed a series of post hoc analyses. Specifically, we examined whether this association would be moderated by the identified motives for independence. The interaction between these two motives for independence was significant ($\beta = .10$), $\Delta F(1, 527) = 4.96$, $p < .05$. Specifically, whereas among adolescents scoring high on identified independence introjected independence related positively to need satisfaction ($\beta = .21$, $p < .01$), for those scoring low on identified independence, the relation between introjected independence and well-being was non-significant ($\beta = -.08$, $p > .05$). Thus, introjected independence is only positively associated with need satisfaction when identified independence is also high.

Discussion

The topic of human autonomy remains a controversial issue in cross-cultural psychology. To facilitate the debate around the role of human autonomy, the conceptual ambiguity surrounding the concept needs to be resolved and its exact meaning needs to be articulated. To shed further light on this topic, in the current study, we adopted the distinction between two major conceptualizations of autonomy—that is, autonomy conceived of as independence and autonomy conceived of as self-endorsed functioning.

Defining and Measuring Autonomy in a Cross-Cultural Context

In cross-cultural (Markus & Kitayama, 2003; Rothbaum & Trommsdorff, 2007) and developmental psychology (Blos, 1979; Steinberg, 2002), autonomy has typically been defined as independence—that is, as the tendency to act in a self-reliant way without depending on others. When defined in this way, autonomy is typically portrayed as a Western value. Yet when autonomy is defined as self-endorsed functioning—that is, as a full and willing endorsement of one's actions—autonomy does not represent the exclusive mode of functioning of Western individuals. This is because the degree of self-endorsement of one's behavior is largely orthogonal to whether one's actions entail independence or dependence. Along similar lines, Yeh and colleagues (Yeh et al., 2007, 2009; Yeh & Yang, 2006) distinguished between an individuating and a relating form

of autonomy and suggested that these two forms can coexist. Thus, although youngsters growing up in more collectivistic societies like China might more often take into account societal norms and rely on their parents' advice when taking decisions, they may still function in an autonomous fashion, if at least their dependence is well-internalized. In that case, dependence will be experienced as willingly chosen and self-endorsed (rather than pressured).

In line with recent work (Van Petegem et al., 2012) and consistent with our first research question, we could clearly distinguish between these two viewpoints on autonomy through factor analysis. Specifically, independence, operationalized as adolescents' level of independent decision making regarding a diverse set of issues, yielded small to nonsignificant associations with motives reflecting relative internalization of either independent or dependent decision making. Said differently, the locus of the decision-making process (i.e., *Who* is making the decision?) was found to be distinct from the motives for doing so (i.e., *Why* is the decision made by the youngster or the parents?).

In terms of descriptive results, we found that, on average, when Chinese adolescents follow their parents' decisions, it is most often because they personally value this reliance and input and relatively less often because they feel pressured into compliance. This finding echoes previous work suggesting that Chinese adolescents tend to adopt an orientation of relating autonomy, whereby they willingly take their parents' preference and opinion into consideration (Yeh & Yang, 2006). It is also consistent with a recent qualitative study (Russell et al., 2010) in which Chinese American adolescents were found to make decisions within the boundaries of parents' preference, but still viewed it as their own volitional choice. Specifically, adolescents identified with their parents' advice for various reasons, including the belief that parents have more knowledge and resources to choose what is best for them and the belief that parents' involvement is indicative of their love and care. These reasons represent specific instantiations of the identified motives for dependency in the current study.

Thus, the finding that dependence can be undergirded by self-endorsed motives suggests that reliance on external guidance and compliance with traditions and norms does not necessarily imply a lack of autonomy. Indeed, conformity and autonomy do not fall along a single bipolar dimension, as has been suggested by some cross-cultural psychologists (e.g., Markus & Kitayama, 2003). To the extent that one, after genuine reflection, concurs with the external norms and traditions, one maintains a sense of autonomy and volition (Ryan, 1993). On the other hand, conformity to parental advice may also be driven by external pressures, such as the avoidance of parental criticism, or internal demands, such as pressured loyalty. Such controlled types of dependency may be steeped in an authoritarian parenting climate characterized by restrictive parental control (Chao, 1994; Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Soenens, Vansteenkiste, & Luyten, 2010). In such a family climate, obedience to the elder is seen as related to duty and self-sacrifice (Chao, 2000). However, when adolescents do not or only partially internalize such duty, they may feel pressured to carry it out (Miller, Das, & Chakravarthy, 2011).

Is Autonomy Beneficial for Chinese Adolescents and How?

The distinction between independence and self-endorsement is not just a terminological issue, as both measures were found to relate differentially to Chinese adolescents' psychological well-being. While the level of dependent versus independent decision making as such did not yield any relation to psychological well-being, the relative internalization of both independent and dependent decisions was uniquely associated with psychological need satisfaction and well-being.

What seems to matter to Chinese adolescents' well-being is not so much whether they take decisions themselves or leave the decisions to their parents, but whether they do so willingly. Specifically, to the extent that Chinese adolescents take independent decisions out of personal

conviction rather than external pressure, they experience more psychological need satisfaction, which in turn relates to higher well-being. This finding sheds further light on the “paradox of choice”—that is, the question of whether independence or free choice will engender well-being, especially for relatively collectivistic Asian individuals (Markus & Schwartz, 2010; Schwartz, 2006). It is not simply the case that Chinese adolescents do not benefit from independent choice making because such functioning mismatches with the dominant culture value. The key to the paradox is the consideration of the relative internalization of such behavior. If one authentically endorses the independent decisions one takes, one psychologically benefits from doing so, even if one lives in a relatively more collectivistic society as China. More generally, this finding is consistent with the claim in SDT that self-endorsed functioning is universally important and beneficial (Chirkov, Sheldon, & Ryan, 2011; Ryan & Deci, 2006; Vansteenkiste et al., 2006).

One interesting finding was that individuals with a higher collectivistic orientation reported a higher level of internalization for dependence. This finding is consistent with Russell et al.’s (2010) finding that Asian individuals more easily interpreted dependence toward parents as being compatible with personal autonomy. Indeed, self-endorsed functioning can be expressed through both independent decision making and conformity with parental guidance, depending on prevailing sociocultural values. Although there is variation in the behavioral manifestation of self-endorsement, what ultimately matters is the phenomenological experience accompanying the independent or dependent behavior. A full willingness to act independently or to stay dependent is what contributes to Chinese adolescents’ psychological well-being, no matter how collectivistic their orientation is. This finding is consistent with previous findings showing that not only American but also Chinese adolescents benefit from individuating and relating autonomy (Yeh et al., 2009). According to SDT, the main reason for these findings is that when autonomy is defined as self-endorsed functioning, an authentic intention with full willingness, it is an inherent and universal ingredient for growth and well-being rather than a sociocultural construction, the effects of which depend on a match with one’s environment (Chirkov et al., 2011; Ryan & Deci, 2000).

Notably, the finding that Chinese adolescents’ willing dependence was related positively to their well-being allows us to reinterpret the results from the study of Iyengar and Lepper (1999), who found that Asian American children benefit from following the decisions of parents. The reason for this might be that the Asian children tend to endorse and trust the decisions from parents, and therefore volitionally follow their decisions. In other words, following parents’ decisions might be what they are willing to do at that moment. Thus, they benefit from parental decision making probably not because they are dependent on their parents as such, but essentially because their dependency was a self-endorsed choice.

Findings from our mediation analyses suggest that the reason why both self-endorsed independent and dependent functioning relate to higher well-being is because they are related positively to basic psychological needs satisfaction. When pursued for volitional reasons, both dependent and independent decision making seem to optimize the satisfaction of basic psychological needs, which in turn fosters psychological well-being (Deci & Ryan, 1985, 2000). This sequence of events, where self-endorsement predicts need satisfaction and subsequent adjustment, is consistent with past findings in the literature (e.g., Filak & Sheldon, 2008; Sheldon & Elliot, 1999; Smith et al., 2011; Weinstein & Ryan, 2010). However, it is noteworthy that it has also been proposed that need satisfaction in a particular context energizes the self-endorsement of the activity at hand (e.g., Deci & Ryan, 2000). Hence, rather than representing a mediator, need satisfaction might also be an antecedent, the effects of which on well-being are mediated through self-endorsement. This alternative order of effects did not receive much support in our data, as the fit of this alternative model was somewhat lower and as the indirect effects through self-endorsement were mostly nonsignificant. Still, due to the cross-sectional design of the current study, we cannot draw firm conclusions regarding order of effects and causality. That is,

need satisfaction, as theorized within SDT, might also contribute to and energize internalization, such that both processes affect each other in a mutually reinforcing fashion. This issue needs to be sorted out in future longitudinal and experimental research.

Gaining Precise Insight: Considering the Separate Motives Underlying (In)Dependence

By breaking down the relative internalization indices into their subcomponents, we gained more precise insight into the question of which motives were driving the observed associations. For instance, an introjected form of dependency was indirectly associated with lower well-being through frustration of the basic psychological needs. In case Chinese adolescents comply with parents' decisions out of internal pressure like feelings of guilt and shame, they seem to pay a psychological cost for it. As Perls (1973) described vividly, introjection is a process where some external elements are thrown inside and "swallowed whole" but never "digested" (Ryan, Deci, Grolnick, & LaGuardia, 2006). Adolescents might think they "should" do something out of loyalty or obligation to meet parents' expectations, but actually they don't really "want" to do it. Moreover, the compliance with parents' decisions for externally pressuring reasons yielded a direct negative relation to well-being. These are noteworthy findings because, although the act of depending on one's parents matches the cultural norms (Markus & Kitayama, 1991), such behaviors may fail to bring psychological need satisfaction and well-being. These findings mesh with previous work showing that only when individuals internalized the cultural practice with full volition can they benefit from those culturally matched practices (Chirkov et al., 2003).

More generally, we argue that important values in collectivist cultures such as loyalty and duty (Rothbaum & Tromsdorff, 2007), although being antithetical to autonomy when defined as independence, do not contradict self-endorsed functioning. When the duty toward members of one's ingroup (family and friends) is internalized, individuals experience psychological freedom and need satisfaction in carrying out the duty, despite the mean level difference in internalization of the duty across cultures (Miller et al., 2011). However, when an individual does not fully internalize the duty, the duty or compliance to obey may come to be experienced as a psychological burden, thereby negatively impacting on need satisfaction and well-being.

One interesting finding was that externally driven dependence was related directly to lower well-being, without mediation through diminished psychological need satisfaction. One possible reason is that our assessment was limited to need satisfaction and did not include items tapping into need frustration. Recent studies have suggested that low need satisfaction might not necessarily imply that needs are actively thwarted and need frustration has been found to yield additional predictive value for maladaptive outcomes and psychopathology (e.g., Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; Sheldon et al., 2011). Externally pressured dependence might involve a more active thwarting of the needs because the parents directly impose pressure and threaten adolescents' autonomy by telling them which direction they have to take. Such pressure may give rise to an orientation of oppositional defiance, where adolescents rebel against the parents' advice and do exactly the opposite of what parents expect (Vansteenkiste, Soenens, Van Petegem, Wuyts, & Duriez, 2012). This in turn may increase adolescents' susceptibility to norm-breaking and aggressive behaviors. Thus, in future research, we may include processes of need frustration, defiance, and externalizing problems to better understand the effect of external dependence.

As for the other motives, we found, in accordance with our hypothesis, that identified motives were positively associated with well-being and that this association was fully accounted for by basic psychological need satisfaction. This confirmed previous findings that identified motives for independent home leaving and decision making were related positively to Western

adolescents' adjustment (Kins et al., 2009; Van Petegem et al., 2012). This is also consistent with previous findings showing that Chinese adolescents benefited from both individuating and relating autonomy, concepts similar to identified independence and identified dependence, respectively (Yeh et al., 2007, 2009). It is noteworthy that identified and introjected motives for (in)dependence are moderately positively correlated. For instance, when one feels that it is meaningful to follow parents' request to fulfill one's duty as a son or daughter, it is also possible that meanwhile one feels somewhat internally pressured to comply with the request. Thus, it is important to investigate the unique contribution of identified or introjected (in)dependence when controlling for the other, as done in the present study. Future research might further explore how different motives (such as identification and introjections) co-occur within persons, for instance through the use of person-centered analyses (e.g., cluster analysis).

Finally, interestingly but rather unexpectedly, we found a unique positive association between an introjected motive for independence and basic psychological need satisfaction and well-being. If anything, from a traditional cultural relativistic perspective, one might hypothesize that Chinese adolescents should benefit from introjected dependence rather than introjected independence, because dependence is more normative and approved in that context. Yet the current findings prompt us to further reflect what the introjected motives for independence mean in the current specific cultural and developmental context. Adolescence is a period in which individuals' demands for independence increase with age (Blos, 1967, 1979). In a Chinese cultural context, however, it is less normative for parents and society to promote independence (Dubas & Gerris, 2002). When Chinese adolescents do pursue independence, they might primarily do it out of a genuine desire, as also reflected in the high mean score for identified independence. Adolescents who personally endorse independence might interpret the internal pressures to be independent in a different way with a more internalized flavor. Feelings of guilt might be interpreted as rather informational and indicative to move toward more independent functioning rather than as evaluative and pressuring. The post hoc analyses confirmed this reasoning, as we found that only adolescents high on identified independence benefited from "introjected" independence in terms of need satisfaction. Obviously, the explanation provided here is rather speculative and requires further examination.

Limitations and Future Research Directions

Our findings need to be interpreted against the background of a number of limitations. First, since our main purpose was to differentiate and understand two constructs of autonomy within a specifically collectivistic cultural context (i.e., China), we are unable to generalize the current findings to other cultures. Future research might include other Eastern as well as Western countries to make more formal and encompassing cross-cultural comparisons.

A second limitation is our cross-sectional design. Although the model comparisons suggested that satisfaction of psychological needs could better be modeled as a mediator of self-endorsed motivation rather than as an antecedent, a cross-sectional design does not allow one to draw any conclusion regarding the direction of effects. Future longitudinal research is needed to test the potential bidirectional relation between self-endorsed functioning and need satisfaction.

Besides, we relied on the adolescents as a single source of information about independence, motives, and well-being. This exclusive reliance on self-report may have artificially inflated some of the observed relations. However, it is important to emphasize that because our study focused on adolescents' intrapsychic experiences of autonomy, need satisfaction, and well-being, we believe adolescents' self-report of their independent and self-endorsed functioning are more relevant and valid than parents' reports. Nevertheless, for the well-being outcomes, future studies might use a multi-informant design to measure this in a more valid way.

Furthermore, it would be interesting to include additional well-being indicators in future research, particularly indicators tapping into interpersonal functioning. As reported by Yeh et al. (2007, 2009), individuating and relating autonomy yielded distinct associations with different well-being outcomes, with individuating autonomy being primarily associated with intrapersonal well-being (e.g., depression and self-esteem) and relating autonomy being relatively more strongly related to interpersonal outcomes (e.g., filial piety and conflict frequency within adolescent–parent relationship). Future research could also include indicators of interpersonal well-being in different types of relationships (e.g., child–parent relationship and friendship) to examine whether self-endorsed (in)dependence within parent–child relationships contributes to well-being across different types of relationships (see also Van Petegem et al., 2012).

Another interesting direction for future studies is to investigate the meaning of introjected and external motives of independence in Chinese adolescents using qualitative methodology. How do Chinese adolescents understand the items in a context where independence is expected and promoted less? And how does their understanding bring basic need satisfaction or affect the way how need satisfaction is expressed? We think such a further qualitative exploration is important to understand both etic (universal) and emic (culture-specific) aspects of autonomy (Berry, 1999).

Furthermore, future research could focus explicitly on domain differences in independent functioning, an issue that was beyond the scope of the present research. Instead, we focused on the general degree of independent functioning. Nevertheless, it would be interesting to explore, for instance, the relative internalization of academic, relative to other, issues among Chinese adolescents, considering Chinese parents' intensive involvement in this domain (Cheung & Pomerantz, 2011).

A final interesting future direction is to explore other cultural variables that possibly will moderate one's perception of self-endorsement. In the current study, we found that the functional role of subjectively experienced self-endorsement was not moderated by collectivism. However, we think culture might influence how people perceive or interpret an objective behavior in terms of support for self-endorsement. In other words, culture could moderate the association between an objective situation or event (e.g., a parent giving advice about homework) and the subjective perception of this event in terms of experienced autonomy support or control. Cultural values such as filial piety (Leung, Wong, Wong, & Chang, 2010) and power distance (Begley, Lee, Fang, & Li, 2002) might play a role herein.

Conclusion

The present study empirically differentiated between two prevailing conceptualizations of autonomy—that is, independence and self-endorsed functioning. This differentiation adds to the debate about whether autonomy yields beneficial outcomes for individuals from a collectivistic culture. Whereas autonomy as independence did not show a unique association with psychological well-being, autonomy as self-endorsed (relative to controlled) functioning related to higher (versus lower) levels of subjective well-being. Furthermore, the experience of basic psychological need satisfaction was an important explaining variable in this association. Moreover, these findings were found to be stable across individuals' levels of a collectivistic orientation. We propose that autonomy as self-endorsed functioning could be viewed as an etic part of human optimal functioning that applies to both individualistic and collectivistic cultures. In this sense, humans are not simply puppets that are passively determined by social expectations and sociocultural pressures (Chirkov et al., 2011). Rather, they can initially reflect on these external requirements and decide whether to internalize them or not. Furthermore, the way the self-endorsed functioning is manifested—that is, in terms of independence or dependence—could be viewed as an emic feature of autonomy, which is more locally determined in the specific social context.

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Notes

1. As our measure of decisional independence comprised 24 issues, coming from six social domains, one may wonder why no differentiation was made in independent decision making in these different domains. However, reliability analyses produced low alphas for five of the six domains, and factor analyses could not differentiate between the six domains. Moreover, correlational analyses between independent decision making in these specific domains and the outcome variables yielded a very similar pattern across domains, with almost no associations with three depression, self-esteem, and vitality.
2. The mean scores of independence of decision making vary from 3.89 to 4.48 across six social domains, including personal domain ($M = 4.48$, $SD = .55$), friendship domain ($M = 4.30$, $SD = .59$), prudential domain ($M = 4.21$, $SD = .72$), conventional domain ($M = 3.97$, $SD = .78$), moral domain ($M = 3.94$, $SD = 1.06$), and academic domain ($M = 3.89$, $SD = .72$).

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