Confronted with dramatic social changes, people in many countries are faced with the challenge to integrate multiple social identities into their self-concept. Three studies aimed at investigating this integration process. We expected that identity integration would follow a subtractive pattern (i.e., restrictive/subtractive integration; Amiot, de la Sablonnière, Terry, & Smith, 2007), which is hypothesized to occur when group members integrate a new cultural identity that has a higher perceived relative status than their original identity. This leads to a decrease in importance of the original identity. The first study compared two samples of Kyrgyz students (Ns=109 and 195) who differed in their levels of contact with the American culture. The second study (N=94) employed a longitudinal method in order to capture the intraindividual changes in identity integration over time in a Kyrgyz sample who had direct contacts with the American culture. The third study (N=401) examined the direct effect of status and its perceived legitimacy on the identity integration of Kyrgyz. Results from these studies supported the hypothesis that identity integration follows a subtractive pattern when the new identity has a higher status than the original one.

Keywords: Cultural identity, social change, identity integration, social status
Identity Integration Challenges in Kyrgyzstan: A Subtractive Process

Our world is defined by dramatic and profound social changes. The millions of people immigrating each year to a new country or the newly-formed, independent countries that emerged from the collapse of the Soviet Union are prime examples. Such dramatic social changes have the potential to trigger deep intraindividual changes in cultural identities over time and to force individuals to integrate new cultural identities into their self-concept. In such changing circumstances, individuals are faced with the challenge of reorganizing their self-concept in order to integrate the new identities present in their new environment (Amiot, de la Sablonnière, Terry, & Smith, 2007; Breakwell, 1986; Deaux, 1991; Phinney, 1993).

The general goal of this article is to understand the process by which multiple (i.e., new and original) cultural identities are integrated into the self-concept in the context of rapid social change. In this paper, we argue that under specific situations, identification with one’s original cultural group diminishes following the integration of a new cultural identity (i.e., restrictive/subtractive integration; Amiot et al., 2007; Clément, Noels & Denault, 2001; van Knippenberg, van Knippenberg, Morden, & de Lima, 2002; van Leeuwen, van Knippenberg, & Ellemers, 2003). Specifically, we hypothesize that when members of a cultural group integrate a new cultural identity that enjoys a higher relative status and reputation than their original cultural identity, this should lead to a decrease in the importance of their original identity.

Identity Integration in Social and Cultural Psychology

Cultural identity is defined as a person’s psychological membership to a distinct culture or cultural group (Matsumoto, 2009). The concept of cultural identity is particularly important because it provides individuals with an overarching blueprint that covers every aspect of life, making it critical to a person’s sense of self (Taylor, 1997, 2002). The processes through which a new cultural identity becomes integrated into the self are generating increasing amounts of attention among social and cultural psychologists given that such processes allow researchers to directly assess how people’s self-concept is reorganized and restructured during social change. In line with the work on identity development (Bennett & Sani, 2004; Harter, 1999, 2003; Mascaro & Fischer, 1998; Mascolo, Fisher, & Neimeyer, 1999), and with recent advances in the field of social and cultural psychology (Benet-Martinez, Leu, Lee, & Morris, 2002; Condor, 1996; Hornsey & Hogg, 2000; Lafontaine, Coleman, & Gerton, 1993; Mummeendey & Wenzel, 1999; Roccas & Brewer, 2002), we proposed a cognitive-developmental model to explain how cultural and social identities change and become integrated in the self (Amiot et al., 2007). According to this model, identity integration occurs when cognitive connections and links are established between different identities so that the self feels coherent rather than fragmented and conflicted. When integrated, the different identities each contribute to one’s overall sense of self.

Specifically, identity integration can be conceptualized as the process whereby new identities gain importance and become simultaneously important aspects of the person’s overall self, along with the person’s original identities. Our view of identity integration is in line with the work of cultural psychologists (see Boski, 2008 for a review). First, our conceptualisation of identity integration bears resemblance to the concept of psychological similarity (sameness) or fusion (Boski, 2008), in that identity integration represents an overlap between two cultures. Second, our conceptualisation parallels, and was inspired by, Berry’s (2006) “integration” acculturation strategy. According to Berry, “integration” implies that an individual highly identifies with both his/her original cultural group and his/her new cultural group.
Identity integration, contrary to Berry’s conceptualization, which aims to place people into categories depending on their level of integration, the current article examines how the actual process of identity integration takes place, both intraindividually (i.e., within each individual) and interindividually (i.e., across individuals). Doing so is important to capture how each individual subjectively represents and organizes his/her multiple cultural identities, as well as how individuals’ identities are affected by their social context.

**Identity Integration as a Subtractive Process**

Considering that we define identity integration as the process by which new identities become part of the overall self-structure, which allows one’s diverse identities (both original and new identities) to be simultaneously important (Amiot, et al., 2007), identity integration may then imply that the new cultural identity gains importance but without impeding on one’s original identities (additive identity integration; Amiot et al., 2007; Brewer & Pierce, 2005; Roccas & Brewer, 2002), as most theories suggest (e.g. Berry, 2006). In this case, the person is capable of integrating a new cultural identity without necessarily feeling that he or she is less identified with his or her original cultural group. This process of “adding” new cultural identities to the already existing self-concept without altering one’s original cultural identities is similar to what researchers on bilingualism have labeled “additive bilingualism”, which occurs when learning a second language does not disrupt proficiency in the original language (Lambert, 1975, 1977; Lambert & Taylor, 1983; Louis & Taylor, 2001; Taylor, Meynard, & Rheault, 1977; Wright, Taylor, & Macarthur, 2000). Since language is a pivotal part of a cultural identity (Taylor, 1997, 2002), we argue that this additive process can also be relevant to the process of cultural identity integration. To provide an example of a person experiencing an additive process of identity integration, we present the case of an immigrant living in the United States whose original identity (i.e., Kyrgyz) will not decrease over time as the new cultural identity (i.e., American) increases in importance, and for whom all of her/his identities (i.e., original and new) will come to represent important components of her/his self-concept.

However, this additive form of identity integration may not always take place. It is possible that identity integration, instead of allowing each identity (the original and the new identity) to play an important role within the self, it could actually lead to a diminution in the importance of one’s original identity as identification with the new cultural group increases. The literature on bilingualism has identified a similar process in terms of language acquisition which has been labeled “subtractive bilingualism” (Lambert, 1977; Lambert & Taylor, 1983; Louis & Taylor, 2001; Taylor, et al., 1977; Wright et al., 2000; see also Hakuta, 1987; McLaughlin, 1985; Wong Fillmore, 1991). Subtractive bilingualism occurs when acquiring a new language results in slowing or reversal development of the original language. When applied to the realm of cultural identities, the subtractive process would mean that as the immigrant’s new American identity increases, his/her original Kyrgyz identity decreases.

While identity integration has always been viewed as the ideal solution for people who are actively engaged in intercultural contact (Berry, 2003; Berry & Sam, 1997; Boski, 2008), the actual processes taking place as individuals acquire a new cultural identity in their self-concept have received very little empirical attention. Therefore, in this article we aim to investigate one of the most understudied processes, the subtractive process of identity integration, in order to understand the circumstances under which this process occurs. One of the possible causes of subtractive identity integration refers to relative status differentials.

**The Role of Status in the Identity Integration Process**
Identity integration

Status can be defined as the relative position of groups on dimensions valued by society, (Sachdev & Bourhis, 1987) such as social standing, income, valued skills, and health. The effect of the relative status on one’s identity has already been established, as previous research has shown that members of a group perceived as having a low relative status evaluate their group less positively and identify less strongly with their group than members of the high-status group (Ellemers, Wilke, & Knippenberg, 1993). If someone belongs to two cultural groups, and these groups happen to differ widely in terms of their relative status, this could lead to consequences in terms of how the new identity will be integrated within the self. We propose that whether integration takes an additive vs. subtractive form will depend on the relative status of the identity to be integrated. Specifically, based on the bilingualism literature mentioned earlier and on research conducted in organizational mergers (Terry, 2003; Ullrich, Wieseke, & van Dick, 2005; Seo and Hill, 2006), we argue that one of the factors that should impede an additive type of integration and promote a subtractive form refers to intergroup relative status asymmetries (Amiot et al., 2007; Amiot, Terry, & Callan, 2007; Berry, 1997; Phinney, 1993, 2003). These studies suggest that when one’s cultural identities are recognized and valued differently in society, this could lead to a subtractive process of identity integration. In such a situation, one specific identity (i.e., the one associated with the higher relative status) is more likely to predominate the overall self to the expense of the individual’s other, lower relative status identities (Phinney, 1993, 2003; van Knippenberg et al., 2002). If a person is in the process of integrating a new cultural identity which has a higher relative status compared to the relative status of his or her original identity, the incorporation of this new identity could alter the structure of the self such that the importance of the original identity will decrease as the importance of the new identity increases. In such a situation, a negative association would be observed between the identities (see also van Knippenberg et al., 2002).

We hence propose that when an individual’s original cultural identity is dominant or of high relative status, the acquisition of another identity poses a low threat to his/her original identity and should therefore have little (if any) negative consequences on the original identity of that individual, leading to additive identity integration. In contrast, subtractive identity integration should occur when one’s original cultural identity is less socially valued than the new identity that is to be integrated. In this case, the acquisition of a new cultural identity may lead to a lower level of identification with one’s original identity. The present studies will examine the effect of the relative status of the new identity on the subtractive process of identity integration. We expect to observe a subtractive process when the new identity is perceived to have a high relative status. The studies will also investigate how relative status affects the original cultural identity, and test if high relative status differentials will negatively affect identification with one’s original culture. Finally, the research aims to investigate the role of subtractive identity integration on collective esteem of the original identity, which refers to the evaluative component of one’s cultural identity (Taylor, 1997, 2002). According to Taylor (1997, 2002), both the cognitive and the evaluative components of one’s cultural identity are important parts of the self-concept. However, research has shown that collective esteem is particularly susceptible to differences in group relative status (Ellemers, Kortekaas, & Ouwerkerk, 1999). Therefore, this study will investigate the effect of integrating an identity with higher relative status on one’s original collective esteem.

Overview of Studies

The goal of the present research is to investigate the specific process of subtractive identity integration. To achieve this goal, three empirical studies have been conducted in a
country – Kyrgyzstan – where many individuals face the challenge of integrating a new cultural identity (i.e., the American identity) that has a higher relative status in comparison to their original cultural identity (i.e., the Kyrgyz identity). Indeed, since the breakdown of the Soviet Union, Kyrgyzstan, a small Central Asian country, has been extensively exposed to the western world, especially to the American culture. The United States of America is not only perceived as a more prestigious and opportunistic country than Kyrgyzstan, it also has concrete resources that confirm its higher relative status. For example, the United States enjoys a higher average income: $44,070 vs. $1,790 in Kyrgyzstan; and higher life expectancy: 77.5 years old for Americans vs. 66.5 years old for Kyrgyz (World Health Statistics, 2008). Based on the Human Development Index (HDI), which is a comparative measure of life expectancy, literacy, education and standards of living for countries worldwide, the updated December 2008 report shows that the United States of America was ranked 15th best country in the world (out of 180 countries) while Kyrgyzstan was ranked 122nd (Human Development Report, 2008).

Moreover, in the last two decades, various American and international institutions as well as Non-Governmental Organisations (NGOs) such as United Nations Children’s Fund (UNICEF), United Nations Development Programme (UNDP), United States Agency for International Development (USAID), Academy of Education Development (AED), and the Asian Development Bank, have dominated both the socio-political and the educational development of Kyrgyzstan (Silova & Steiner-Khamsi, 2008). In fact, since Kyrgyzstan is one of the countries in Central Asia with the most NGOs, this recent openness to Western values (and increased contact with the American culture and identity) has greatly influenced the adoption of a more Americanized perspective, a perspective associated with a higher socio-political, educational and economical status (Human Development Report 2007/2008; World Health Statistics, 2008). There is also an increased desire to learn English because knowledge of this language is a tool to find prestigious and well-paid jobs in a country with a high rate of unemployment. In sum, since the American identity enjoys a particularly higher international status compared to the Kyrgyz identity (Plasser, 2000; Reeves, 2005), and given that people in Kyrgyzstan have increased contact with the American culture (presenting opportunities to confirm its higher relative status and opening the door to the integration of the American identity), Kyrgyzstan represents an ideal social context to conduct research on subtractive identity integration.

Three studies conducted in Kyrgyzstan were designed to study the subtractive process of identity integration. The goal of Study 1 was to examine whether contact with a culture of higher relative status will predict the extent to which different cultural identities will be integrated. This first study used samples of Kyrgyz students from two different universities. The two universities, although equally prestigious, differ in terms of exposure to the new “American identity”. The first sample is from the American University of Central Asia and the second sample from the Kyrgyz National University. The American University of Central Asia is a new university in Kyrgyzstan that promotes the American style of liberal arts education. Most of the classes are taught in English, contact with Americans and foreigners are frequent, and the President of the University was American at the time of the study. The students in this university not only have increased contact with the English language, but they also learn to address their professors in an American style, to participate in activities that are popular in America (such as debating), and to think in a more liberal, meritocratic, and capitalistic way. In contrast, the Kyrgyz National University is the oldest university in the country. The emphasis is placed on traditional post-soviet style of education and all classes are taught in Kyrgyz or Russian. For simplicity, we will
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use the label “westernized university” to refer to the American University of Central Asia and the label “traditional university” when referring to the Kyrgyz National University. Study 1 compares students from these two different universities, expecting that those students who have greater contact with the high-status American culture in the westernized university would have more opportunities to integrate this identity and thus would present higher levels of (subtractive) identity integration than the students from the traditional university.

The goal of Study 2 was to better understand the process of identity integration by examining the patterns of intraindividual change over time among students from the westernized university. To assess these intraindividual changes, a longitudinal design is employed. While only a handful of studies conducted in the realm of acculturation and cultural psychology to date have employed longitudinal designs (e.g., Markovizky & Samid, 2008; Miller et al., 2009; Tartakovsky, 2009), such designs allow to directly capture the processes of cultural identity integration and change that are so relevant to the acculturation and cultural psychology literatures. Study 2 followed Kyrgyz students who had just entered the American University of Central Asia. They were first tested in the beginning of the year, and they were tested the second time at the end of the academic year, as it was believed to be enough time to capture the processes of identity change. This study hence provided the opportunity to investigate the effect of being in direct contact with a higher-status culture on the subtractive process of identity integration over time.

The third study aimed to extend the findings from the two previous studies by directly studying the role played by relative status in the identity integration process. To this aim, Study 3 directly measures participants’ perceptions of the relative status of Kyrgyz in comparison to Americans. Furthermore, this study considers the role played by the perceived legitimacy of differences in relative status as a predictor of identity integration. Legitimacy is defined as the belief that the relative status of certain groups is legitimate or appropriate (Bettencourt, Dorr, Charlton & Hume, 2001). Such perceptions are important because, as Tajfel (1982) acknowledged, the perception of legitimacy of intergroup relative status can lead to a variety of intergroup attitudes. Research has confirmed that social groups whose superior relative status is perceived as legitimate attract more resources and promote feelings of identification and favoritism (Caddick, 1982; Bettencourt et al, 2001). Since the effect of relative status on identity also depends on its perceived legitimacy, this variable could play a role in the subtractive pattern of identity integration. More specifically, it is possible that integrating a new identity with higher relative status will lead to subtractive identity integration only when the relative status of this new identity is perceived to be legitimate. Therefore, Study 3 examines the moderating role of relative status and legitimacy in the identity integration process and, more specifically, in the relationship between the new cultural identity and the original identity.

Study 1

The main goal of Study 1 is to investigate whether there is a higher level of identity integration occurring in the westernized university than in the traditional university, and if acquiring a new identity that has a high relative status leads to subtractive identity integration. The process by which identity integration is negotiated was tested based on a series of hypotheses. First, given that students attending the westernized university have increased opportunities for integrating the new high-status American identity into their self-concept, we hypothesized that these students will display higher levels of identity integration than the students in the traditional university (hypothesis 1). Second, since higher identity integration means that the two identities (i.e., Kyrgyz and American) become equally important to the self
and that cognitive connections are created between these identities, we expect people in the westernized university to have more equal levels of Kyrgyz and American identity than people in the traditional university (hypothesis 2). Thirdly, we hypothesize that those in the westernized university will identify more as Americans (higher American identity) as a result of the identity integration process (hypothesis 3). Fourthly, those in the westernized university will demonstrate lower levels of Kyrgyz identification and Kyrgyz collective esteem compared to those in the traditional university, thus showing that as identification with the new high-status cultural group increases, identification with the original culture decreases (i.e., a subtractive pattern of identity integration).

Method

Participants
A total of 330 university students of Kyrgyz nationality and ethnic background took part in the study. In the sample, most of participants’ mothers were of Kyrgyz nationality (89.1%) as were their fathers (97.7%) All participants were in the first to fourth year of their undergraduate studies. The age of participants ranged from 16 to 25 years (M = 18.69, SD = 1.39). In total, 34% of the respondents were men and 65% were women (3 participants did not specify their gender). Most of the participants reported Kyrgyz as being their mother tongue (90.1%) and 51.6% reported Russian as the language they knew best.

Procedure
Participants from each university were recruited during the winter semester and the questionnaire was completed during class time. Participants were informed that the questionnaire was anonymous and that researchers conducting the study were interested in understanding how people relate to their own and other cultural groups. They were also informed that they could terminate their participation at any time and that their answers would serve for research purposes only. Using a back-translation procedure (Brislin, 1970; Vallerand, 1989), the questionnaire was translated from English into Russian, which is one of the official languages in Kyrgyzstan. Russian language is the most functional language in Bishkek, where the study was conducted. This is why we chose to conduct this research in Russian for all participants. Moreover, our participants knew the Russian language better (M = 4.75, SD = .41) than the Kyrgyz language (M = 4.50, SD = .75; t (296) = 4.93, p < .001). The final version of the questionnaire was verified by two bilingual researchers from Kyrgyzstan and Canada, and by 15 Kyrgyz students and professors. Based on their comments, changes were then made so that the meaning of each item was as close as possible in the two languages.

Measures
General Kyrgyz and American identification. A shortened version of the Situated Identity Scale (Clément & Noels, 1992) was adapted for the context of Kyrgyzstan to assess identification with both cultures. This scale is particularly relevant in the present context because it was designed to measure important contextual variations in identification that are expected to take place when people dwell in multicultural situations (Clément, et al, 2001). In addition, this scale is suited to measure both the positive (additive integration) and the negative (subtractive integration) associations that exist between different identities (Clément et al., 2001). On a bidimensional measure of cultural identity, respondents indicated their level of identification with both social groups in 14 everyday scenarios (e.g., when I am at my university; when I think about politics). After each scenario, participants indicated the extent to which they felt Kyrgyz and American, on two consecutive 5-point scales (1 = do not agree at all; 5 = completely agree). Total scores were computed separately for the Kyrgyz and American identities, such that higher
Identity integration

Mean scores reflected higher identification with the corresponding cultural group. Reliabilities for the Kyrgyz and American identities were adequate (alphas = .94 and .92, respectively).

It should be noted that the instrument was tested beforehand in a special workshop conducted with 15 students and professors, where the relevance of each item of the original scale in the Kyrgyz context was discussed. Some items of the original scale were not appropriate to our context and were thus excluded (e.g., When I read the newspaper, I feel Kyrgyz) and others were created to fit the Kyrgyz context (e.g., When I participate in celebrations of the New Year, I feel Kyrgyz).

Identity integration. To assess identity integration, we computed the difference between the two identification scores and used the absolute values of these differences, which yielded a measure of the total divergence (or disintegration) between the two scores (e.g., Sheldon & Niemiec, 2006). Similar statistical methodologies (e.g., focusing on the standard deviation across the scores) correlated highly with the absolute difference measure (i.e., \( r > .90 \)), and yielded highly similar results. To facilitate interpretation of the results, this identity disintegration score was transformed by subtracting each participant’s score from the highest possible score of 4; this created a variable where higher scores represent greater identity integration (see Sheldon & Niemiec, 2006).

Cognitive identification as Kyrgyz. Cognitive identification refers to the cognitive awareness that one is a member of a social group. Five items were used to assess participants’ cognitive identification with their original group, the Kyrgyz (Ellemers, Kortekaas, & Ouwerkerk, 1999; Jackson, 2002). This 5-point scale ranged from 1 = do not agree at all to 5 = completely agree (alpha = .76).

Collective esteem as Kyrgyz. Five items were used to assess participants’ feeling of collective esteem, another component of identity. Based on Ellemers et al. (1999) and Jackson (2002), participants evaluated how positive they felt as a member of their original group using a 1 (do not agree at all) to 5 (completely agree) scale (alpha = .72).

Results and Discussion

Preliminary Analyses

Data cleaning. The main variables used in the analyses were examined for accuracy of data entry, missing values, and fit between their distributions and the assumptions of multivariate analysis (Tabachnick & Fidell, 2001). Missing data (representing less than 5% of the data file) were replaced using the trend imputation procedure (Tabachnick & Fidell, 2001). In total, 26 cases were removed from further analyses based on the high number of missing values. Overall, 304 of our initial sample of 330 participants were retained for further analyses (westernized university: \( N=109 \), and traditional university: \( N=195 \)). Normality indices showed appropriate levels of skewness and kurtosis for all computed variables. Only five outliers that deviated by more than 3 standard deviations from the variable mean, and displayed a Mahalanobis distance greater than the exclusion criterion set at \( p < .001 \) were present in our sample. Since the results were similar with or without excluding these cases, we kept these participants in the sample.

T-tests and chi-square analyses. A series of t-tests and chi-square analyses were conducted to compare participants from the two universities on the demographic variables. These two groups were found to be similar in terms of their place and country of birth, the representation of women and men in each university, and their mothers’ and fathers’ nationality (\( \chi^2 < 6.53; ps > .15 \)). However, and as expected, important differences were found between the samples in terms of how exposed they were to the American culture. First, the amount of contact
with English speaking teachers and students differed: Students from the westernized university were more likely to have contacts with English-speaking teachers (96.2%) than students from the traditional university (66.5%; \( \chi^2(1) = 32.77, p < .001 \)). Westernized university students were also more likely to have contacts with English-speaking students (73.3%) than students from the traditional university (43.6%; \( \chi^2(1) = 23.61, p < .001 \)). Second, students from the westernized university were more likely to have travelled abroad (60.6%) than students from the traditional university (24.4%; \( \chi^2(1) = 37.54, p < .001 \)). For those who did travel abroad, students did not differ in terms of the length of time spent abroad (\( M_{\text{westernized}} = 10.97 \) and \( M_{\text{traditional}} = 13.65 \) months, respectively; \( t(1,92) = -0.46, p = .574 \)). However, the countries visited by these two groups differed (\( \chi^2(1) = 20.29, p < .001 \)). Specifically, students attending the westernized university were more likely to have visited westernized countries such as the USA and Germany in comparison to students from the traditional university (62.9% vs. 37.1%, respectively), while students from the traditional university were more likely to have visited ex-USSR countries such as Russia and Tajikistan (82.3%) in comparison to students from the westernized university (17.7%). Students also differed in terms of language proficiency. Those in the westernized university were significantly more skilful in the Russian language (\( M_{\text{Russain}} = 4.83, SD = 0.34 \)) than in the Kyrgyz language (\( M_{\text{Kyrgyz}} = 4.30, SD = 0.81, t(85) = 5.99, p < .001 \)), while those in the traditional university did not differ in terms of their language proficiency (\( M_{\text{Russain}} = 4.70, SD = 0.44; M_{\text{Kyrgyz}} = 4.61, SD = 0.68 \)).

Correlations. Table 1 presents the correlations among all variables for the westernized university and the traditional university. Of particular interest are the correlations observed between identity integration and both identities as well as collective esteem. Specifically, identity integration was positively associated with the American identification but was negatively associated with general Kyrgyz identification and cognitive identification as Kyrgyz. These patterns of associations provide support for identity integration being a subtractive process (as the importance in a new identity increases, the importance of the original identity decreases).

Hypothesis Testing

Differences between universities. In order to test our hypotheses, t-tests and analyses of variance were conducted to further examine the differences observed between students from the two universities on the main variables. First, a t-test was used to analyze the difference in levels of identity integration between the two universities. As expected, our results show that identity integration is significantly higher among westernized university students (\( M_{\text{westernized}} = 2.79, SD = 1.07 \)), than among students from the traditional university (\( M_{\text{traditional}} = 1.79, SD=1.14, t(302) = 7.51, p < .001 \)), confirming hypothesis 1. To test whether the differences between the Kyrgyz and American identification were less pronounced in the westernized university than in the traditional university (hypothesis 2), a mixed-model ANOVA was performed (where universities was the between-participants factor, and type of identification – Kyrgyz and American – was the within-participants factor). Our results reveal a significant interaction effect between type of identification (i.e., Kyrgyz and American) and university (western and traditional; \( F(1,302)=37.25, p < .001 \)). Figure 1 illustrates this interaction, and it confirms that in the westernised university (i.e., the university with the highest degree of identity integration), there is a smaller difference between the two identification scores compared to the traditional university. Since the interaction was significant, a t-test was performed (as recommended by Stevens, 2002) to further test whether the two universities differed in how discrepant these identities were to each other. Therefore, difference scores were created by subtracting the American identification score from the Kyrgyz identification score in both universities. The difference scores represent the amount...
of discrepancy between the two identities for each individual. An independent sample t-test shows that the two universities differed significantly in their degree of discrepancy, \( t(302) = -6.10, p < .001 \), indicating that those in the westernized university had a smaller discrepancy between identities (\( M_{\text{westernized}} = 1.09, SD = 1.19 \)) than those in the traditional university (\( M_{\text{traditional}} = 2.06, SD = 1.40 \)), which shows greater cognitive connections between identities.

A MANOVA was next used to test whether participants in the two universities differed in their levels of American identification (hypothesis 3), as well as in their Kyrgyz identification (general and cognitive) and collective esteem (hypothesis 4). The MANOVA revealed a significant difference between universities on the combined dependent variables, \( F(4, 299) = 10.88, p < .001 \), Wilks’ Lambda=.87. Observation of each dependent variable, it was found that those in the westernized university had a significantly higher American identification (\( M = 2.66, SD = 1.14 \)) than those in the traditional university (\( M = 2.23, SD = 1.04 \); \( F(1, 302) = 11.45, p < .001 \), confirming hypothesis 3. However, students in the westernized university had lower general Kyrgyz identification (\( M = 3.76, SD = 1.06 \)) and cognitive Kyrgyz identification (\( M = 3.95, SD = 0.80 \)) than those in the traditional university (\( M_{\text{general}} = 4.28, SD = .71; F(1, 302) = 26.91, p < .001 \), and \( M_{\text{cognitive}} = 4.31, SD = .74; F(1, 302) = 15.86, p < .001 \)). Students in the westernized university also reported lower collective esteem (\( M = 4.02, SD = 0.81 \)) than students in the traditional university (\( M_{\text{traditional}} = 4.27, SD = 0.77; F(1, 302) = 7.21, p = .008 \)). The fact that participants from the westernized university showed lower Kyrgyz identification and collective esteem provide support for hypothesis 4 and confirm the existence of a subtractive form of identity integration (where a person’s original identity decreases as the new identity increases) when the new identity integrated has a high relative status.

Summary. An important contribution of this study is that it allowed us to directly compare the identity integration of two samples of students who differed in terms of their contact with the high-status American culture and values. In fact, participants from the two universities were equivalent on a number of important sociodemographic variables (e.g., gender, place of birth, nationality of parents). Furthermore, all of our participants lived in Bishkek, the capital of Kyrgyzstan at the time of the study, and thus they were all exposed to the same social changes that have recently modified the course of history of the Kyrgyz people. However, and possibly due to the fact that they were attending different universities, these two samples differed significantly and systematically in their amount of contacts with the American culture and values. Globally, the results confirm that identity integration is occurring at a higher rate in the westernized university than in the traditional university, and that students from the westernized university also show patterns of subtractive identity integration, showing lower levels of Kyrgyz identity.

Although comparing these two groups represents the first step towards achieving a better understanding of a subtractive identity integration process, only inter-individual differences were assessed in Study 1. Thus, Study 1 represents a snapshot of what takes place over time with regards to the process of identity integration. Another shortcoming of the first study is that the differences observed between the two universities may be caused by a self-selection bias, where participants with certain characteristics not controlled for in the study prefer the westernized university rather than the traditional university, causing the changes in identity integration.

Therefore Study 2 will control for these shortcomings by using a longitudinal design that will allow us to evaluate the intraindividual changes taking place in identity integration over the course of an entire academic year. By using such a design, Study 2 represents one of the very few longitudinal studies up to now conducted in cultural psychology and it allows us to directly...
capture the actual integration processes taking place over time. For the second study, a new cohort of *westernized university* students was followed over the course of their first year at this university.

**Study 2**

In order to further deepen our understanding of the process of identity integration, Study 2 aimed at examining *intraindividual* changes from Time 1 to Time 2 and examine how each participant changed over the academic school year. Specifically, we predict that an important proportion of participants will change significantly from Time 1 to Time 2. Evaluating such changes over time allows us to tap into the changes occurring within each individual’s self and to better understand the pattern of change displayed by each individual (i.e., whether they increased, decreased or remained the same over time). In addition, this study will examine the process of identity integration itself more closely as it occurs inside the individuals, by investigating how integrating a new identity associated with a higher relative status relates to both the original identity and the new identity.

Since Study 1 concluded that the participants in the *western university* had higher levels of identity integration, in this longitudinal study we specifically examine the subtractive pattern of this process. More specifically, we expect that the more individuals become integrated from Time 1 to Time 2, the more their new high-status American identity will increase as will their American collective esteem (hypothesis 1). Furthermore, we predict that as the old low-status and the new high-status identities become more integrated in Time 2, the old Kyrgyz identity (general and cognitive identification) will decrease with its respective collective esteem (hypothesis 2) thus showing a subtractive pattern.

**Method**

**Participants**

Ninety-four first-year university students of Kyrgyz nationality and ethnic background attending American University of Central Asia took part in both phases of the study. Most of participants’ mothers (86%) and fathers (95.3%) were Kyrgyz. The mean age was 17 years, and women comprised 66% of the sample.

**Procedure**

Participants were informed that this study would involve completing two questionnaires. The first questionnaire was completed at the beginning of the students’ first academic year (Time 1, September), and the second questionnaire was completed toward the end of the school year (Time 2, June). Both questionnaires were completed during class time. Participants were informed that the questionnaires were anonymous and that researchers conducting the study were interested in understanding how people relate to their own and other social groups. They were also informed that their participation was voluntary and that their answers would serve for research purposes only. The questionnaire was distributed in Russian, as participants in the sample were significantly more competent in the Russian language ($M = 4.82, SD = .31$) than in the Kyrgyz language ($M = 4.26, SD = .73$), $t(85) = 5.99, p < .001$.

**Measures**

Time 1 and Time 2 questionnaires were comprised of the same measures, all of which were originally used in Study 1. In addition, Study 2 included another cultural identity measure in order to diversify our measure of identification: The Inclusion of the Other in the Self Scale (Aron, Aron, & Smollan, 1992). This scale was added because it is a clear identity measure.
which conceptually represents the overlap between two cultures by showing the common area or overlap of the two cultural identities (Boski, 2008). Also, we assessed participants’ cognitive identification with both cultural identities (i.e., Kyrgyz and American). Collective esteem was also evaluated for both of these cultural groups. We used the same back-translation procedure as in Study 1 to translate the new scales added in Study 2.

**General Kyrgyz and American identities.** The same scale adapted from Clément and Noels (1992) used in Study 1 was employed. Reliabilities for the Kyrgyz and American identities were adequate at Time 1 (alphas = .94 and .90, respectively) and Time 2 (alphas = .96 and .94, respectively).

**Identity integration.** The same procedure as in Study 1 was employed to construct our identity integration score, where higher scores represent higher levels of identity integration.

**Pictorial social identification.** An adapted version of the “Inclusion of the Other in the Self” Scale (Aron, et al., 1992; Aron, Aron, Tudor, & Noels, 1991) was used to assess participants’ identification with the cultural groups (i.e., Kyrgyz, Americans). This pictorial scale was originally designed to assess the degree of closeness experienced with significant others. This measure is also useful when measuring one’s degree of identification with cultural groups (e.g., Aron & McLaughlin-Volpe, 2001). The measure consisted of seven pictures representing circles overlapping to differing degrees, and participants selected the one that best illustrates the relationship between themselves and each of the two cultural groups.

**Cognitive identification.** The same 5-item cognitive identification scale as in Study 1 was used in this study (Jackson, 2002). These items were adapted here to assess participants’ cognitive identification to the two cultural groups (i.e., Kyrgyz and American). Alphas for this scale were adequate at Time 1 (alphas = .78 and .75, respectively) and Time 2 (alphas = .83 and .78, respectively).

**Collective esteem.** Four items were used (Jackson, 2002) to assess participants’ evaluation of the cultural groups (Kyrgyz and American). Alphas for this scale were adequate at Time 1 (alphas = .72 and .80, respectively) and Time 2 (alphas = .79 and .57, respectively).

### Results and Discussion

**Preliminary Analyses**

The main variables were examined for accuracy of data entry, missing values, and fit between their distributions and the assumptions of multivariate analysis (Tabachnick & Fidell, 2001). When the majority of the items of a scale had been completed by a participant, missing item scores were replaced by that participant’s own mean on the variable. Participants who presented more than 25% of their data missing (n=8) were removed from the analyses. Remaining missing data (representing less than 5% of the data file) were replaced using the trend imputation procedure (Tabachnick & Fidell, 2001). Normality indices showed appropriate levels of skewness and kurtosis for all computed variables. Eighty-six participants were thus retained for the main analyses.

Thirty-five percent drop-out was observed across the two phases of the study. Comparisons were made between participants who had completed the questionnaire only once at Time 1 (n=51) with those who had completed both questionnaires (n=94) using a Bonferroni correction to adjust for multiple comparisons. The results revealed no significant differences between these two groups of participants.

**Correlations.** Table 2 presents the correlations among all main variables, at Time 1 and Time 2. All of the correlations involving the identity integration variable are in the expected direction, as Kyrgyz identification is negatively correlated to identity integration, while
American identification has a positive relation to it. Overall, and as in Study 1, these correlations suggest that identity integration is a subtractive process.

**Hypothesis Testing.** To test whether increased levels of identity integration are accompanied by parallel changes in participants’ identities and collective esteem, we first needed to determine whether significant intraindividual changes had taken place over time. Patterns of intraindividual changes were inspected according to a well-established procedure used to investigate intraindividual changes. We calculated a Reliable Change Index for each participant for all variables (RCI; Christensen & Mendoza, 1986; Maassen, 2004; see also Amiot, Blanchard, & Gaudreau, 2008 and Amiot, Terry, Wirawan, & Grice, 2010, for applications to identity change). If the RCI is ≥ ± 1.96, experts suggest that “true” intraindividual change is occurring. The RCI allows us to identify the proportions of participants from our sample who significantly increased, significantly decreased, or showed no appreciable change.

In Table 3, intraindividual changes are reported. In addition, chi-square analyses indicate that the average intraindividual changes in all variables were greater than those expected by chance. For example, our results reveal the presence of intraindividual variation on the variable of identity integration in that 27.9% of participants reported a decrease in identity integration from Time 1 to Time 2, 18.6% showed an increase, whereas 53.5% showed no appreciable change over time ($\chi^2 (2) = 379.88, p < .001$).

Given the evidence for intraindividual changes in our sample, we created a change or difference score for all our variables (i.e., Time 2 – Time 1). A positive change score indicates that the variable increases in time, while a negative score indicates a decrease. We then correlated the identity integration change score with the change scores of the other variables in our study in order to see whether changes in identity integration were associated with changes in participants’ identities and collective esteem. As expected and confirming hypothesis 1, the more participants’ identities became integrated from Time 1 to Time 2, the more their American identification increased, as assessed by our three measures of American identification (general identification, $r = .63, p < .001$; cognitive identification, $r = .33, p < .01$; pictorial social identification, $r = .19, p = .07$). Changes in identity integration were also positively correlated with changes in collective esteem as American ($r = .27, p < .05$), further supporting hypothesis 1. In terms of the Kyrgyz identification, as participants identities became more integrated, their Kyrgyz identification decreased (general identification, $r = -.50, p < .001$; cognitive identification, $r = -.31, p < .01$; pictorial social identification, $r = -.23, p < .05$), providing support for hypothesis 2. Similarly, the more identities became integrated over time, the more participants’ collective esteem as Kyrgyz decreased ($r = -.29, p < .01$). This pattern of correlations – where identity integration is associated positively with the new identity but negatively associated with the original identity – suggests that in the current context (i.e., when the new identity enjoys a higher relative status than the older identity), identity integration is a subtractive process.

**Summary.** The fact that Study 2 employed a different methodologically design from Study 2 provides strength to our conclusions, both in terms of the stability and convergence of our results. Also, the employment of different methods (i.e. the different statistical analyses) in the two previous studies allows us to establish the convergent validity of our findings, further confirming our conclusions that integrating an identity with higher relative status leads to subtractive identity integration. However, at no point during the previous studies were participants asked about their own perception of the relative status of the identities. They were never directly asked about the relative status of Kyrgyz in comparison to Americans’ relative status. It was only assumed that participants perceived the American identity as possessing a
higher relative status than the Kyrgyz identity because of the advantages it enjoys (e.g., higher income). Study 3 seeks to replicate the results found so far by directly measuring participants’ perception of the relative status of one cultural identity compared to the other. More specifically, this third study will investigate the role played by the perceived relative status of the cultural identities in predicting identity integration, identification with the original cultural identity, and collective esteem.

In addition to measuring relative status, Study 3 will go further by investigating one of the sociostructural variables known to affect the relationship between relative status and identity, namely, the legitimacy or fairness of the differences in the status of the cultural groups. For example, studies have found that if the relative status of groups are perceived as illegitimate by the group who has a lower relative status, this can trigger protective tendencies and lead to increased favoritism towards one’s own group (Caddick, 1982; Bettencourt et al., 2001). A meta-analysis found that, on average, groups with lower relative status showed more favoritism towards the higher-status group when the relative status was perceived as legitimate (Bettencourt et al., 2001). In terms of identity, the meta-analysis found that high-status group members identified more with their group than members of the low-status group when the relative status was perceived as legitimate, confirming the influence of both relative status and legitimacy on identity processes. Concerning identity integration more specifically, because acceptance of a situation generally facilitates the endorsement of the changes that it brings (Gagné, Koestner, & Zuckerman, 2000), we anticipate that developing contacts with a high-status cultural group that is also perceived to deserve its more prestigious position will facilitate the endorsement and the integration of this new cultural identity. In summary, previous research confirm that legitimacy plays an important role as a moderator between relative status and identity integration, which is the reason why relative status, legitimacy, and identity will be investigated together. Study 3

Since the effect of relative status on group identity changes as a function of their perception of the legitimacy of the relative status (Bettencourt et al., 2001), we expect a three-way interaction between American identity, relative status and legitimacy when predicting identity integration.

Firstly, and in line with previous research, we expect that relative status should promote a subtractive form of identity integration (Amiot et al., 2007; Amiot, Terry, & Callan, 2007; Berry, 1997; Phinney, 1993, 2003). Concretely, in the current study, subtractive identity integration will take place when negative associations are observed between the original and new cultural identities (van Knippenberg et al., 2002). It is hypothesized that those who identify highly with Americans, who perceive them as having a high relative status, and who perceive that this relative status is legitimate, will have the highest levels of identity integration (hypothesis 1). Secondly, it is expected that those who identify highly with Americans, who believe that Americans enjoy a high relative status, and who perceive that this relative status is legitimate, will have lower Kyrgyz identification (revealing a subtractive pattern of identity integration; hypothesis 2). Finally, it is expected that those who have high American collective esteem, who perceive Americans as having a high relative status, and who perceive that this relative status is legitimate, will have lower Kyrgyz collective esteem (hypothesis 3), again revealing a subtractive identity integration process.

Method

Participants

A total of 401 Kyrgyz university students completed our questionnaire. Most of the students were of Kyrgyz nationality (98.8%), and had parents of Kyrgyz nationality (mothers:
In total, 70.3% of respondents were women and 29.7% were men. In terms of languages, 97.7% of the sample indicated that their first language is Kyrgyz, and 49.7% indicated that this was the language they were most proficient in. The other half of the sample indicated that Russian was their most proficient language (49%).

Procedure

Participants were recruited by a researcher in Kyrgyzstan and research assistants who were trained to distribute questionnaires and to answer participants’ questions. The questionnaire was translated using a back-translation method (Brislin, 1970). Items were originally translated into Russian, and they were then translated back into English by professional translators. Any inconsistency between the two versions was resolved by two of the authors who are fluent in both Russian and English. The participants completed this questionnaire in Russian, which is a language most participants feel comfortable using (93% of participants answered that they can read Russian well or perfectly).

Measures

Several of the scales employed in this study had been used in the previous two studies. However, items that measure relative status and legitimacy were added.

General Kyrgyz and American identities. The same adapted scale used in the previous studies was employed to measure Kyrgyz and American identities (Clément & Noels, 1992). The reliability for each scale was adequate (for Kyrgyz alphas = .91 and for American = .88).

Collective esteem as Kyrgyz and American. The same five items as in Study 2 were used to assess participants’ feeling of collective esteem as members of the two cultural groups (Jackson, 2002; alphas = .63 and .81, for collective esteem as Kyrgyz and as American respectively).

Relative status. In order to measure the relative status of the cultural groups, an item used by Terry and O’Brien (2001) was used. Participants were asked: “What is the social status of Kyrgyz people compared to Americans?”. They completed this item using a 5-point scale (1 = much lower to 5 = much higher). The scores on this item were then reversed, so that a higher score meant that Americans’ relative status was higher than Kyrgyz’.

Legitimacy. Immediately after completing the relative status item, participants were asked whether they thought that this situation was legitimate (Terry & O’Brien, 2001). The 5-point scale ranged from 1 = totally legitimate to 5 = totally illegitimate. Again, this item was reversed so that a higher score meant more legitimacy of the relative status differentials.

Identity integration. To assess identity integration, the same method as in the previous studies was used. We measured American and Kyrgyz identification using the Pictorial Social Identification measure introduced in Study 2 (Aron, et al., 1991; Aron, et al., 1992) as it measures the overlap of two cultural identities (Boskim 2008) in a clear and explicit way that is conceptually easy to understand. Then, we calculated the absolute difference score by subtracting the two identification scores, and then reversed them, with higher scores representing higher levels of identity integration.

Preliminary Analyses

Data cleaning. The main variables were examined for missing values, normality, and outliers (Tabachnick & Fidell, 2001). There were no missing values on any of these variables and normality indices indicated appropriate levels of skewness and kurtosis for all variables. Three outliers that deviated by more than 3 standard deviations from their mean and that showed
a Mahalanobis distance greater than the exclusion criterion of \( p < .001 \) were found. Since results with and without outliers did not differ, we decided to keep them in the main analyses.

**Means and Correlations.** Table 4 presents the means observed for the main variables. It is important to note that the mean for the relative status variable was very high (\( M = 4.55, SD = 0.81 \)) considering that the scores for this variable ranged from 1 to 5, showing that, in general, participants considered that Americans’ relative status is higher than Kyrgyz’s status. The mean of legitimacy, on the other hand, was close to the middle point of the scale (\( M = 3.59, SD = 1.20 \)), showing that on average most people consider that the relative status is moderately legitimate.

In terms of the correlations, Table 5 presents the results of the correlations. Identity integration was positively associated with American identification and with American collective esteem.

**Moderated multiple regressions.**

We hypothesized that relative status and the perceived legitimacy of this relative status would moderate the relationship between American identification and identity integration, such that participants who perceive higher relative status for the American culture in comparison to the Kyrgyz culture, who consider this relative status to be legitimate, and who identify strongly as American will report *higher* identity integration. Hence, we expected a three-way interaction between levels of American identification, relative status, and legitimacy when predicting identity integration (hypothesis 1). We also hypothesized that, under these conditions (of high American relative status and high legitimacy), participants will report *lower* levels of Kyrgyz identification (hypothesis 2), and *lower* collective esteem as Kyrgyz (hypothesis 3). Together, these effects would attest to a subtractive pattern of identity integration.

To test these expected three-way interactions, hierarchical moderated multiple regressions were conducted (Aiken & West, 1991). This statistical method was used because it allows to test for the main and interactive effects of continuous variables (Cohen et al., 2003). A moderation relationship is created by multiplying the variables in the relationship. Then, these multiplicative or interaction terms are introduced in later steps of the hierarchical multiple regression. Since in this study we have three independent variables, four interactions terms were created: three two-way interactions between each of the independent variables (i.e. American Identification X Relative Status, American Identification X Legitimacy, and Relative Status X Legitimacy) and one three-way interaction (i.e. American Identification X Relative Status X Legitimacy). Thus, in our hierarchical multiple regressions, the single independent variables are entered in the first step, the two-way interactions in the second step, and the three-way interaction in the third step. Also, all independent variables were centered to avoid multicollinearity between the predictors; in this way the interaction terms did not distort the results (Cohen, et al., 2003).

**Regression predicting identity integration.** Table 6 shows the results of the hierarchical multiple regression where American identification, relative status, legitimacy and their respective interactions predicted identity integration. As can be seen in Table 6, the three-way interaction between American identification, relative status, and legitimacy significantly predicted identity integration (\( R^2 = .08; F(1, 393) = 18.80, p<.001 \)). Follow-up tests conducted to interpret this interaction indicate that participants reporting high levels of American identification and who perceived that Americans’ high relative status is legitimate displayed higher identity integration when they perceived that Americans have a high relative status, confirming hypothesis 1 (see Figure 2).
Regression predicting Kyrgyz identity. As can be seen from Table 7, the three-way interaction between American identification, relative status, and legitimacy significantly predicted Kyrgyz identification ($R^2 = .23; F(1, 393) = 5.36, p < .05$). Figure 3 reveals that participants who identified highly with Americans and who perceived that the American relative status is legitimate, had lower Kyrgyz identification when they perceived that Americans have a higher relative status. Therefore, these results demonstrate that integrating a new identification associated with high relative status leads to a subtractive pattern of identity integration, confirming hypothesis 2 (see Figure 3).

Regression predicting Kyrgyz collective esteem. For the last regression, the same steps as in the previous regressions were used, except that instead of using American identification as an independent variable, we used American collective esteem. As can be seen in Table 8, the three-way interaction between American collective esteem, relative status, and legitimacy significantly predicted Kyrgyz collective esteem ($R^2 = .06; F(1, 393) = 7.55, p < .01$). Figure 4 represents the interpretation of this interaction and it demonstrates that participants whose American collective esteem is high and who think that American relative status is legitimate report lower Kyrgyz collective esteem when they perceive that Americans have a high relative status, confirming hypothesis 3.

Summary. This study allowed us to further explore the role of relative status on identity integration by directly measuring its impact on the subtractive process of identity integration. In addition, the variable of legitimacy shows that it is not enough to perceive an unfavorable relative status, but that the status must be seen as fair. All our hypothesis were confirmed, as those who identified more with Americans and saw them as having a high and legitimate relative status had higher levels of identity integration, lower levels of Kyrgyz identity and Kyrgyz collective esteem.

General Discussion

Millions of individuals in our world today, whether they are immigrants or members of a newly created nation, are faced with the challenge of integrating multiple cultural identities within their sense of self. Previous research has concluded that indeed, it is possible to identify with more than one cultural identity (e.g., Benet-Martinez, Leu, Lee, & Morris, 2002; Berry, 2003 & 2006). However, previous studies usually assume that a person’s sense of self is extendable, without considering what happens to a person’s original identity once a new one is integrated and incorporated in the self-concept. The main objective of this paper was to explore the process through which multiple cultural identities become integrated into the self. Our results suggest that when the new identity enjoys of a higher relative status than the original identity, the process of identity integration is subtractive and one’s original cultural identity suffers a decrease as the new one increases (e.g., Amiot et al., 2007; Lambert & Taylor, 1983; Louis & Taylor, 2001).

Study 1 allowed us to compare two groups of students attending universities that differed in the amount of contact they had with high-status American culture and values. When comparing these two groups of students, participants from the traditional university identified more strongly as Kyrgyz compared with participants from the westernized university, suggesting that contact with a new cultural group of high relative status is associated with greater identity integration and that identity integration is a subtractive process when the new identity integrated (i.e., American identity) has a higher relative status. In line with Study 1, results from Study 2 also provide support for identity integration being a subtractive process. This longitudinal study
confirmed that the more identities become integrated over time, the more the original Kyrgyz identity decreased. Finally, Study 3 specifically looked at the relationship between American and Kyrgyz identities and investigated the moderating role of relative status and legitimacy in this association. Results revealed that the negative (subtractive) association between the Kyrgyz and the American identities was stronger among participants who perceived that the relative status of Americans is high compared to Kyrgyz and legitimate.

The present research informs us on the processes of the reorganization and reconfiguration of the self-concept. It also shows what occurs when a new high-status cultural identity is being integrated. Given the support that we obtained for the subtractive process taking place as a new and higher-status identity becomes integrated, this research provides some insights on the malleability of the self-concept. Indeed, our results tap into a fundamental yet unanswered question concerning the malleability of the self-concept (Baumeister, 1986, 1998; Showers & Zeigler-Hill, 2003). Specifically, to what extent can the self-concept be extended? A large body of research supports the contention that the self is malleable (Baumeister, 1986, 1998; Kernis & Goldman, 2002; Mischel & Morf, 2003; Showers & Zeigler-Hill, 2003). This view presupposes that identity integration is an additive process and that new social and cultural identities can be integrated into the self-concept without making major changes to the identities that already exist in the self. What our results clearly show is that the self-concept is malleable and that new social identities can be integrated into the self over time. However, the self-concept does not seem to be indefinitely extendable. Thus far, the results from the present research point to the possibility that, under certain circumstances, a new identity can be added to the self-concept but that this new addition impedes on one’s original identities, which were already composing the self-concept. It seems that, despite the fact that the self-concept will reorganize when being in contact with other social groups and cultural identities, there seems to be a limit to the extensibility of the self-concept, such that when one identity with high relative status is added, others will diminish in importance over time.

These results clearly concur with the notion of subtractive bilingualism (Lambert, 1977; Lambert & Taylor, 1983; Louis & Taylor, 2001; Taylor, et al., 1977; Wright et al., 2000; see also Hakuta, 1987; McLaughlin, 1985; Wong Fillmore, 1991). This is because, for the Kyrgyz people, the American identity is conceptualized as being of higher relative status than the Kyrgyz identity (Plasser, 2000; Reeves, 2005). The present studies also concurs with Amiot et al.’s (2007) model of identity integration which proposes that relative status differences between social groups play an important role in inhibiting the identity integration process (see also Bourhis, Moise, Perreault, & Sénécal, 1997; Phinney, 1993, 2003; Taylor, 1997, 2002). The current findings extend this knowledge by showing that differences in the relative status of identities does not necessarily impede identity integration, but that instead it promotes a subtractive process of identity integration.

Despite the empirical evidence provided by the three studies we presented, further research needs to be conducted to test in a more direct way the moderating role of relative status and legitimacy in the identity integration process. It would be interesting, for instance, to manipulate and prime relative status experimentally and evaluate both the short term and long term changes in identity integration. We could then see if these changes also follow a subtractive pattern of identity integration and if possessing an original cultural identity that enjoys a higher relative status leads to an additive pattern of identity integration over time. It would also be relevant to study the consequences of subtractive identity integration on intergroup attitudes and
behaviors (e.g. in-group bias and discrimination) in order to test if integrating a new identity changes the way members of a cultural group relate to members of another group.

Given that a large number of the countries that are undergoing dramatic social and cultural changes (e.g. Russia, the Third World) are increasingly exposed to the Western world and its values, it is important to understand the consequences of such an exposure. With globalisation and the Internet, the American culture and values are increasingly accessible, along with the recognition that the relative status of the different cultural groups may differ. Our results show that emerging countries that have contacts with westernised countries (such as the USA) can feel the repercussion of this contacts, and that the consequences can profoundly impact the members of these countries. Since the emerging countries are the ones who are more often integrating new identities and reacting to imposed changes, and that these new identities are often associated with a higher relative status, our research leaves us with a lingering question about the appropriateness of identity integration in this specific context. Theories on multiculturalism usually agree that identity integration is the best possible outcome in order to facilitate adaptation. However, is it really adaptive for the people who have to continue in close contact with their original values, norms and identities to integrate a new identity that decreases the importance of their original culture? Further research on these individuals’ personal and collective well-being will need to be conducted to provide answers to this question.
References


This conceptualization of identity integration bears resemblance to the conceptualization proposed by Benet-Martinez and her colleagues (2005; Benet-Martinez & Haritatos, 2002) of high bicultural identity integration (BII), especially the “distance” component, where the two identities feel complementary rather than oppositional. It is important to note that the identity integration score that we have developed for the present studies was found to be correlated to the distance component in 3 other studies we conducted (correlation scores ranging from .43 to .75, $M = .61, p < .01$). Results are available upon request to the first author. We argue that our methodology is complementary to Benet-Martinez’s measure. Specifically, although Benet-Martinez’s measure focuses on two identities, with our measure it becomes possible to create a score composed of more than two identities. Because more and more people are facing the challenge to integrate multiple social identities into their self-concept in our societies, a measure of that kind becomes particularly useful. As for the “conflict” component of identity integration in Benet-Martinez’s work, no consistent pattern of significant correlation were found in our studies with our measure of identity integration. We hypothesized that those results are observed because an identity conflict needs to be resolved in order for the new identity to be fully integrated. This is in line with the 4-stage model of identity integration that we proposed in which conflicts occur and are solved in the $4^{th}$ stage, i.e. identity integration stage (Amiot et al., 2007). Results from a study we conducted are in line with this (de la Sablonnière, Debrosse, & Benoit, in press). In that study, we consistently found that our score of identity integration predicted both personal and collective well-being, that the distance component of identity integration was only related to collective well-being, and that the conflict component was never related to neither personal nor collective esteem. Because the question of the role of identity conflict is not at the heart of the present paper, we will not address it further. Rather, we encourage future studies to develop research in that direction.
Table 1
Study 1: Correlations Between Independent and Dependent Variables in Westernized University (Above the Diagonal) and Traditional University (Below the Diagonal)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Kyrgyz identification</td>
<td>-</td>
<td>.42***</td>
<td>.50***</td>
<td>.35***</td>
<td>-.46***</td>
</tr>
<tr>
<td>2. American identification</td>
<td>-.23**</td>
<td>-</td>
<td>.18</td>
<td>.04</td>
<td>.56***</td>
</tr>
<tr>
<td>3. Cognitive identification as Kyrgyz</td>
<td>.35***</td>
<td>-.22***</td>
<td>-</td>
<td>.52***</td>
<td>-.25**</td>
</tr>
<tr>
<td>4. Kyrgyz collective esteem</td>
<td>.31***</td>
<td>-.11</td>
<td>.47***</td>
<td>-</td>
<td>-.30***</td>
</tr>
<tr>
<td>5. Identity Integration</td>
<td>-.60***</td>
<td>.84***</td>
<td>-.31***</td>
<td>-.21**</td>
<td>-</td>
</tr>
</tbody>
</table>

*p = .05; ** p = .01; *** p < .001

Table 2
Study 2: Correlations Among the Main Variables at Time 1 and Time 2 (Time 1 Above the Diagonal; Time 2 Below the Diagonal)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<th>9</th>
</tr>
</thead>
<tbody>
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<td>1. Kyrgyz identification</td>
<td>-</td>
<td>-.06</td>
<td>.56***</td>
<td>-.09</td>
<td>.51***</td>
<td>.09</td>
<td>.51***</td>
<td>-.17</td>
<td>-.47***</td>
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<td>2. American identification</td>
<td>.08</td>
<td>-</td>
<td>-.06</td>
<td>.41**</td>
<td>-.09</td>
<td>.45***</td>
<td>-.08</td>
<td>.42***</td>
<td>.65***</td>
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<tr>
<td>3. Cognitive identification as Kyrgyz</td>
<td>.62***</td>
<td>.13</td>
<td>-</td>
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<td>.42***</td>
<td>.11</td>
<td>.70***</td>
<td>-.06</td>
<td>-.22*</td>
</tr>
<tr>
<td>4. Cognitive identification as American</td>
<td>-.03</td>
<td>.48***</td>
<td>.22*</td>
<td>-</td>
<td>-.06</td>
<td>.39***</td>
<td>.00</td>
<td>.67***</td>
<td>.40**</td>
</tr>
<tr>
<td>5. Pictorial cultural identification as Kyrgyz</td>
<td>.54***</td>
<td>.01</td>
<td>.62***</td>
<td>.03</td>
<td>-</td>
<td>.21</td>
<td>.37***</td>
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<td>-.01</td>
<td>.36**</td>
<td>.19</td>
<td>.53***</td>
<td>.27*</td>
<td>-</td>
<td>.01</td>
<td>.33**</td>
<td>.26*</td>
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<td>.76***</td>
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<td>.61***</td>
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<td>-.10</td>
<td>.41***</td>
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<td>.29**</td>
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Note. * p < .05, ** p < .01, *** p < .001

Table 3
Study 2: Intraindividual Changes from Time 1 to Time 2

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<th>Variables</th>
<th>Decreased (%)</th>
<th>Stayed the same (%)</th>
<th>Increased (%)</th>
<th>χ² (2, N = 86)</th>
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<td>62.8</td>
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Table 4
Study 3 Means and Standard Deviations of the Main Variables

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Table 5
Study 3: Correlations Between Kyrgyz and American Identification, American Status, and Legitimacy of the Status

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* p<.05; ** p<.01; *** p<.001.

Table 6
Study 3. Hierarchical Multiple Regression Predicting Identity Integration

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### Table 7

*Study 3: Hierarchical Multiple Regression Predicting Kyrgyz Identification*

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*p = .05; **p = .01; ***p < .001*
### Table 8

**Study 3. Hierarchical Multiple Regression Predicting Kyrgyz Collective Esteem**

<table>
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* p = .05; ** p = .01; *** p < .001
Figure 1: Study 1. Differences in Identification to Kyrgyz and American Identities Across Universities

* $p = .05$; ** $p = .01$; *** $p < .001$
Figure 2: Study 2. Interaction Between American Status, Legitimacy, and American Identity Prediction Identity Integration

(1) High Legitimacy, High American Identity
(2) High Legitimacy, Low American Identity
(3) Low Legitimacy, High American Identity
(4) Low Legitimacy, Low American Identity
Figure 3: Interaction Between American Status, Legitimacy, and American Identity Prediction

Kyrgyz Identification

- (1) High Legitimacy, High American Identity
- (2) High Legitimacy, Low American Identity
- (3) Low Legitimacy, High American Identity
- (4) Low Legitimacy, Low American Identity
Figure 4: Study 3. Interaction between American Status, Legitimacy, and American Identity Prediction Kyrgyz Collective Esteem