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## Participation in a new cultural group and patterns of identification in a globalized world: The moderating role of similarity

Diana Cárdenas<sup>a,b</sup>, Roxane De la Sablonnière<sup>b</sup>, Galina L. Gorborukova<sup>c</sup>,  
Geneviève A. Mageau <sup>b</sup>, Catherine E. Amiot<sup>d</sup> and Nazgul Sadykova<sup>c</sup>

<sup>a</sup>European Research Centre on Migration and Ethnic Relations, Department of Interdisciplinary Social Science, Utrecht University, Utrecht, Netherlands; <sup>b</sup>Department of Psychology, Université de Montréal, Montréal, Canada; <sup>c</sup>Department of Sociology, American University of Central Asia, Bishkek, Kyrgyz Republic; <sup>d</sup>Department of Psychology, Université de Québec à Montréal, Montreal, Canada

### ABSTRACT

Globalization impacts the identities of millions. This research first investigates whether participating in a new cultural group predicts higher identification with it while remaining in one's group of origin. Second, it tests whether the association between identification with the new group (following participation) and with the group of origin depends on the perceived similarity between groups. Studies 1 and 2 (in Kyrgyzstan) showed that participating in the American group predicted greater identification with Americans. This, in turn, positively predicted identification with Kyrgyz in contexts promoting similarities; a negative association between identities emerged when similarities were not promoted (Study 2). Studies 3 (in Kyrgyzstan) and 4 (in Canada) replicated these findings measuring similarity and with a repeated measures methodology (Study 4).



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Participation; identification with culture of origin; identification with new culture; identification patterns; globalization

Globalization, the “increasing interconnectedness of societies, economies, and cultures” (Rosenmann, Reese, & Cameron, 2016, p. 202), has had – and continues to have – an immense impact on people's lives. Cheaper means of transportation have allowed for goods to be available around the globe and for the emergence of tourism as a form of income in many countries. Television, the internet and social media facilitate the flow of ideas from one continent to the next within seconds (Marsella, 2011). Our world has never been more connected. This invariably means that we have never been more in contact with cultural groups different from our own (Arnett, 2002; Marsella, 2011). The high number of international migrants around the globe (Adams, 2015) is one example of globalization; in 2013, 232 million people were living in a country other than their country of birth (Adams). Another example is the increased number of institutions and media found in any one country that actually originate from another country; these institutions and media allow individuals to be in contact with new groups within their own borders. One such institution is the *American University of Central Asia* (or the

**CONTACT** Diana Cárdenas  [d.cardenas@uu.nl](mailto:d.cardenas@uu.nl)  Padualaan 14, Kamer B219, Utrecht University, 3584 CH, Utrecht, Netherlands

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*American University* in this article), in which Kyrgyz students can experience an American-style education and culture while continuing to live in Kyrgyzstan. Clearly, globalization profoundly impacts the lives of individuals.

One way in which globalization affects individuals is by allowing them to engage in behaviors that are typical of (or expected in) new cultural groups (i.e., participate in the new group). In the case of migrants, they are embedded in a new cultural group and thus have daily opportunities to participate in it; in the case of the Kyrgyz students at the *American University*, they are being offered opportunities to engage in typical American behaviors while remaining physically embedded in their culture of origin.

In the current article, we argue that engaging in these typical behaviors has consequences for individual's cultural identities, even if they remain physically embedded in their cultural group of origin. First, in line with previous studies in the context of immigration (e.g., Cárdenas & de la Sablonnière, 2017), we propose that the psychological mechanisms activated by participating in a new group will take place even when individuals continue living in their group of origin. More specifically, we test whether participation in a new group while remaining physically embedded in the cultural group of origin predicts higher identification with the new group. Hence, the current article offers a glimpse into the identities of billions of people around the world who possibly "grow up wanting to be like the latest pop music star, eat Big Macs, vacation at Disney World, and wear blue jeans, baseball caps, and Nikes" (Arnett, 2002, p. 779) and into the identity allegiances they may develop from within their own borders.

A second question that we seek to answer is whether acquiring a new cultural identity by participating in the new group has repercussions for one's cultural identity of origin. Research shows that the relation between new identities and identities of origin is indeed complex. Sometimes, adopting a new social identity can result in a subtractive identification pattern, where increased identification with a new group is accompanied by decreased identification with the group of origin (e.g., de la Sablonnière et al., 2016; Phinney, Berry, Vedder, & Liebkind, 2006). In other cases, increased identification with a new group may result in an additive pattern, where there is no change or even higher identification with the group of origin (e.g., Phinney et al., 2006). Even though both patterns of identification have been reported, there have been few theoretical and empirical attempts to predict their occurrence (e.g., de la Sablonnière et al., 2016), particularly following participation in the new group. In a series of four studies, we test the theoretical proposition that perceiving similarities between a new group and the group of origin – and between their important characteristics – will predict the pattern of identification that occurs. Together, these studies shed light on how individual's self-concept adapts to the ubiquitous phenomenon of globalization.

### **Participation in a new cultural group and identification with the new group**

Research shows that group identification, which is the sense of belonging to and being close to one's group, can be impacted by a set of different factors, including contextual/environmental factors (e.g., discrimination; de Vroome, Verkuyten, & Martinovic, 2014), personal (sharing goals with the new group; Zhang & Chiu, 2012), and cognitive variables (need for cognition; Kashima & Pillai, 2011). However, many of these factors cannot be controlled or are not easily modified by individuals that wish to trigger change in

their group identification. Lately, a new factor, which is under the control of individuals, was proposed by Cárdenas and de la Sablonnière (Cárdenas & de la Sablonnière, 2017, 2018a). They suggested that participating in a new culture, that is, engaging in behaviors or actions that are typically observed in the new group (e.g., adopting the new language, engaging in cultural traditions, social/work/education activities and relationships with members of this new cultural group), will promote identification with the new group (Cárdenas & de la Sablonnière). More specifically, participation is postulated to activate two psychological mechanisms (Cárdenas & de la Sablonnière, 2018a). First, participation should promote the perception that one is close to the prototype of the new group (Hogg, 2005, 2006). For example, an immigrant participating in Canadian culture by watching hockey is adopting characteristics that are contained in the Canadian prototype. As the migrant adopts the characteristics of the Canadian prototype, he/she is getting closer to this group's prototype. The closer one fits a prototype, the more likely one is to self-categorize as a member of that group and identify with it (Hogg, 2005, 2006). The second mechanism activated by participation is the need for consistency between one's actions and attitudes (or in this case, identities; Cialdini, 2009; Fiske & Taylor, 2013; see also Swann, 1983). The need for consistency involves the motivation to perceive oneself as having a consistent self-concept as opposed to one that varies across situations. Returning to our example, the immigrant who participates in the Canadian culture by watching hockey will attempt to make his/her inner attitudes (and identities) more coherent with the action of participating in a new group. One way of doing so is by viewing himself/herself as a member of the Canadian group, thus increasing identification with the new group. Given these two theoretical mechanisms (Cárdenas & de la Sablonnière, 2018a), participating in a new group should promote stronger identification with the new group.

The relation between participation and identification with the new group was initially tested in two empirical studies conducted among Latin American immigrants in Canada (Cárdenas & de la Sablonnière, 2017). In the first study, path analyses showed that a model in which participation predicted identification best fit the data; this compared to models in which participation and identification were simply correlated or in which identification predicted participation. In the second study, qualitative analyses of immigration narratives revealed that only when immigrants participated in the new cultural group did they feel a sense of belonging to this new group. Recent experimental studies offer further support for this relation; immigrants in Quebec who participated in Quebecer culture (by watching hockey) identified more with this group than immigrants who did not participate (watched basketball; Cárdenas & de la Sablonnière, 2018b). These studies support the contention that, for migrants, participation predicts identification.

However, previous studies have exclusively been conducted in the context of migration, a unique and particular context facilitating participation in a new group and its impact on identity. For starters, migrants are physically removed from their cultural group of origin and often experience a full immersion in a new cultural group (but see transnationalism; Waldinger, 2015). Furthermore, immigration often requires migrants to participate in a new cultural group in order to persevere and adapt to the new environment (Chen, Benet-Martinez, Wu, Lam, & Bond, 2013). Thus, migration is a very potent and immersive context in which participation in a new group is close to being a

necessity. This, however, does not mean that participation – and its possible consequences for identity – only occur when individuals migrate.

Indeed, globalization has allowed the media, institutions and social entities of external cultural group to be present in one's country of origin. For some, globalization is a boon, allowing open-access information and cheaper technology to be available within one's borders. Others however, are critical of the media, institutions and social entities of external cultural groups within their borders, fearing that such entities will dramatically change the culture of their group and the cultural identities of group members (Arnett, 2002). Indeed, there is increasing evidence that the presence of these external cultural groups touches the cultural identities of individuals in ways similar to immigration (Arnett, 2002; Chen, Benet-Martinez, & Bond, 2008; Chen et al., 2013; Jensen, Arnett, & McKenzie, 2011), even while remaining physically embedded in one's culture of origin. One reason for this influence on identity may be that globalization offers individuals the opportunities to participate in a new cultural group. Indeed, globalization involves sharing intangible (e.g., ideologies and identities) and tangible resources (e.g., objects and institutions) across borders. These resources allow individuals to acquire knowledge about new cultural groups, and importantly, offer them the opportunity to participate in it.

In the current article, we argue that even if individuals remain physically embedded in their culture of origin and are not required to participate in the new group out of necessity (unlike when they immigrate), engaging in the behaviors of the new group and participating in it can engage the same psychological mechanisms responsible for the increase in immigrants' identification (i.e., prototypicality and need for consistency; Cárdenas & de la Sablonnière, 2018a). Thus, for the Kyrgyz student, participating in the American group from within his or her country of origin has the potential to promote identification with Americans.

Nevertheless, there are important differences between participation in the new group in the context of immigration versus within the borders of one's groups. When individuals participate in a new group while remaining within their group of origin, such participation is not a requirement for surviving in one's immediate environment, as it is predominantly governed by their culture of origin. In addition, in this subtler context of globalization, the influence of the new cultural group is in great competition with that of the group of origin and may even be nullified, such that participation in the new group would not promote identification with it. Furthermore, considering the importance of cultural identities for one's psychological well-being (e.g., Taylor & de la Sabonnière, 2014), adopting a new cultural identity might not be a process that one engages in when unrequired by the immediate context. Thus, it is possible that participation in this subtler context of globalization may not predict identification with new groups.

In the current article, we test whether participation in the new group can successfully predict identification, even when the influence of the new group is weakened by the overwhelming influence of the group of origin. More specifically, we expect that participating in a new cultural group while remaining in one's cultural group of origin will predict higher identification with this new group (H1), as previously observed in the context of immigration. This research hence furthers our understanding of how the

institutions and media of external cultural group impact billions of individuals, possibly creating identity-related allegiances towards these external group.

In addition, previous research has yet to elucidate how participating in a new group while remaining physically embedded in one's culture of origin can impact the relation between identification with this new group and the group of origin. More specifically, an increase in identification with new groups can sometimes be positively and sometimes negatively associated with one's original cultural identity. Hence, it remains unclear how the identification with the new group (that result from participation) will be associated with that of the cultural identity of origin. Although this question is relevant to all contexts of globalization, including the context of immigration, we address it in contexts where people remain physically embedded in their culture of origin.

### **Participating in a new cultural group and the additive/subtractive patterns of identification**

According to the cognitive developmental model of social identity integration, a new identity becomes integrated when it becomes as important in one's self-concept as the social identities that were previously in the self (Amiot, de la Sablonnière, Terry, & Smith, 2007). When two identities are integrated, the self is in balance and both the new identity and the identity of origin are important in defining the individual's self-concept. As such, it is possible for a new identity to gain importance in the self without it impacting the identification levels of the identities previously in the self.

This process of adding new identities without it negatively impacting the identities of origin has been labelled the additive pattern of identification (de la Sablonnière et al., 2016), a label inspired by bilingualism research. Additive bilingualism occurs when learning a second language does not disrupt proficiency in the original language (Lambert, 1977; Lambert & Taylor, 1983; Louis & Taylor, 2001; Wright, Taylor, & Macarthur, 2000). Similarly, the additive pattern of identification occurs when increased identification with the new social identity does not negatively impact the identity of origin; instead, these identities are positively related or even unrelated to each other. For example, a Kyrgyz student who speaks English with professors in an American university – and consequently identifies more with Americans – experiences the additive identification pattern if this identification increase is not accompanied by lower identification with Kyrgyz.

However, a different identification pattern, the subtractive pattern, is also possible. This pattern of identification refers to an increase in the identification with a new group that is accompanied by a decrease in identification with the group of origin, resulting in a negative association between the two identities (de la Sablonnière et al., 2016). The subtractive pattern of identification is inspired from subtractive bilingualism, which arises when acquiring a new language impedes the development of the original language (Lambert, 1977; Lambert & Taylor, 1983; Louis & Taylor, 2001; Wright et al., 2000). For example, the Kyrgyz student participating in the new American culture, who increasingly identifies with Americans and who, as a result, reports a decrease in Kyrgyz identification is experiencing the subtractive identification pattern.

While both additive and subtractive identification patterns had been observed in previous research (e.g., Phinney et al., 2006), few had theorized when and where such patterns would emerge (but see Fleischmann & Phalet, 2018). An initial step was taken

by de la Sablonnière et al. (2016), who proposed that the status and legitimacy of the new group impact the emergence of subtractive identification patterns. This assertion is based on social identity theory, which postulates that individuals are motivated to belong to groups that provide them with a positive social identity and self-value (Tajfel, 1982; Tajfel & Turner, 1979). Because groups that have higher perceived status also have more potential for increased self-esteem, individuals will tend to identify more strongly with such high status groups. In contrast, belonging to low status groups can reflect poorly on individuals' self-concept, which in turn was proposed to trigger a process of disidentification (Tajfel & Turner, 1979). Under this logic, increasingly identifying with a new group that is perceived as having a higher status than the group of origin, while simultaneously lowering their identification with their group of origin, would provide individuals with an opportunity to maximize their own self-value. Decreasing identification with the group of origin would, in turn, result in a negative association between identities. This subtractive pattern would be stronger when the status differences are perceived as legitimate, as this indicates an acceptance of the status differentials (Bettencourt, Dorr, Charlton, & Hume, 2001). These hypotheses received support in three studies (de la Sablonnière et al., 2016), which showed that status differentials between one's original and new cultural groups (Study 1) and the legitimacy of these status differences (Studies 2 and 3) moderated the relation between identification with the new group and identification with the group of origin.

### Perceived similarity and the identification patterns

Although differences in the value attributed to different groups seem to impact the pattern of identification, it is still not clear whether it is specific differences in the value attributed to the groups (implied by status and legitimacy) that influence identification patterns, or if simply perceiving differences between cultural groups – and between their important characteristics – would promote a subtractive identification pattern. In fact, status and legitimacy may represent one of several set of characteristics by which we judge the general similarity or dissimilarity between groups. Given the difficulty involved when attempting to integrate contradictory aspects of the self (e.g., Festinger, 1957), we can indeed expect that perceiving similarities between a new group and one's group of origin (and between their important characteristics) will impact whether an additive or subtractive pattern of identification will emerge (see also Cárdenas & de la Sablonnière, 2018a). Specifically, we propose that, following participation in a new group, perceived similarities between the new cultural group (e.g., Americans) and the group of origin (e.g., Kyrgyz) should result in additive identification pattern (i.e., a non-negative relation between the new identity and the identity of origin), whereas perceived dissimilarities should predict the subtractive identification pattern (i.e., a negative relation between the new identity and identity of origin).

These hypotheses are in line with the cognitive developmental model of social identity integration, which posits that perceiving similarities between a new social group and the group of origin creates cognitive links between possibly competing identities, in turn facilitating the identification with multiple groups (Amiot et al., 2007). Similarly, according to social identity complexity theory (Roccas & Brewer, 2002; see also Miller, Brewer, & Arbuckle, 2009; Verkuyten & Martinovic, 2012; Verkuyten, 2007),



perceiving one's groups as having similar characteristics helps individuals see their multiple groups as a single, generally similar, ingroup (or low identity complexity), thus allowing identification with both groups. Experimental work also shows that bicultural individuals who focused on similarities between banal objects (e.g., keys and socks) reported greater identity integration than those who focused on the differences between the objects (Mok & Morris, 2012, Study 3). Hence, perceiving similarities between groups appears to foster the cognitive links between one's identities. When identities are similar and cognitive links between identities are formed, they become interdependent, where the activation of one identity activates the other. Thus, dual strong identification with the new identity and the identity of origin is more likely when similarities are perceived. This results in a positive relation between these two identities, or an additive pattern. In contrast, if an individual perceives differences between cultural groups, the cognitive links between the identities will be hindered. Thus, when one identity is activated the other one is repressed. This in turn would result in a negative association between the new identity and the identity of origin, or in the subtractive pattern of identification.

The role of perceived similarity in predicting the patterns of identification may be particularly important when individuals are participating in a new group because this behavior likely activates one of the processes proposed by Cárdenas and de la Sablonnière (2018a), the need for consistency (Fiske & Taylor, 2013; Swann, 1983). As previously mentioned, the need for consistency involves the motivation to see coherence between one's behaviors and attitudes. As such when individuals engage in new behaviors, their attitudes will tend to be modified, and some new attitudes may develop, so as to establish coherence with the novel actions they have undertaken (for theoretical explanations for this phenomenon see the theory of cognitive dissonance, Festinger, 1957; and self-perception theory, Bem, 1972). In accordance with the need for consistency, individuals who participate in a new group will be motivated to organize their self-concept so that their behaviors (i.e., their participation in the new group), as well as their personal attitudes (e.g., their identification) towards the new group and their group of origin are consistent and coherent with each other. When individuals participate in a group perceived as similar to their group of origin, the increased identification with the new group promoted by participation should be positively associated with the identity of origin. This additive pattern of identification should be facilitated by perceiving the characteristics of the new identity as coherent and consistent with the identity of origin. Both identities can therefore be simultaneously endorsed (H2a). In contrast, when groups are perceived as dissimilar, then participating in the new group should again foster identification with this new group. However, this participation should result in lower identification with the group of origin because the new identity and the identity of origin are inconsistent with each other. In this case, identification with the new group should be negatively associated with identification with the group of origin (H2b).

### *Hypotheses and overview of studies*

In the present article, we present four studies that investigate how individuals' self-concept adapts to the ubiquitous phenomenon of globalization, and more specifically



when people participate in a new cultural group while remaining physically embedded in their culture of origin. More formally, we hypothesize that participation in a new cultural group positively predicts identification with the new group even when individuals remain in their cultural group of origin (H1; Studies 1 to 4), and that the relation between the increased new identity and the identity of origin will be either positive/neutral (H2a; Studies 1 to 4) or negative (H2b; Studies 2 to 4), depending on whether the context promotes perceived similarities between the new and original cultural groups. Bringing these hypotheses together into a single model (Studies 3 and 4), we postulate a moderated mediation, where identification with the new group will mediate the relation between participation in the new culture and identification with the culture of origin, and that this mediation, and more specifically the link between identification with the new group and the group of origin, will vary as a function of perceived similarity between groups.

Study 1 was conducted at the *American University of Central Asia* in Kyrgyzstan, a university that promotes similarity between cultural groups and nations through its mission. This study tested whether participating in the new cultural group promoted by the institution (the United States of America) positively predicts identification with this new group (H1). Given that the university promotes similarities between the two cultural groups, identification with the new group should, in turn, positively predict identification with the group of origin (H2a). Study 2 compared two universities in Kyrgyzstan, *the American University* that fosters similarities between cultural groups and a second university which does not promote such similarities. Study 2 tests whether the two universities had different patterns of association between participation, identification with the new group, and identification with the group of origin. It was expected that participation in the new group will positively predict identification with the new group. In the university promoting similarities, increased identification with the new group will positively predict identification with the culture of origin; in contrast, a negative association between cultural identities was expected at the university that does not promote similarities between the two groups.

Study 3, also conducted in Kyrgyzstan, explicitly measured perceived similarity between groups and tested whether such similarity moderates the proposed mediation model. Study 4 aimed at replicating the results of Study 3 with two important changes: The study was conducted in a different cultural context (Franco-Ontarians in Canada) and employed a repeated measures methodology. Testing the hypotheses in a different cultural context allowed us to test whether results can be generalized to another population; additionally, using a repeated measures methodology allowed for a more stringent test of our hypothesis, where the relation between group participation and subsequent identification patterns was observed over a five-year interval.

## Study 1

Study 1 aimed at testing whether participation in a new cultural group predicts identification with it even when individuals remain in their country of origin (H1), and whether identification with this new group, in turn, positively predicts identification with the group of origin when similarity between cultural groups is promoted (H2a). These hypotheses were tested at the *American University of Central Asia*. The

*American University* is a university established in 1993 in Kyrgyzstan with the aim of promoting the American style of liberal arts education. The mission of this university is to create a space where students can be educated in the American liberal arts tradition, learning the principles of global citizenship, democratic values, and critical thinking ("Mission, Values, and Goals," n.d.). For example, this university offers a course in global citizenship. The goal of this class is to understand how students' local roots are grounded in a globalized world – including a sense of moral or ethical responsibility towards others because of their common humanity. The emphasis on global citizenship, which is transmitted throughout many university courses and extra curricular activities, can promote the additive identification pattern by helping individuals think about the commonalities between group identities. More specifically, situations and settings that present abstract information (such as democratic values and global citizenship) promote a global thinking style (e.g., Mok & Morris, 2012) in which individuals are more likely to focus on the global commonalities between distinct objects, individuals, and identities, instead of focusing on their specific differences. By encouraging global thinking when reflecting upon the American and Kyrgyz cultural groups, the *American University* represents a context that promotes the perception of similarities between these two cultural groups, and hence should encourage the additive pattern of identification.

In addition, contact with Americans and foreigners at this university is frequent such that students have several occasions to participate in the American cultural group within the walls of the university. This in turn creates a perfect setting for testing our hypotheses among individuals who experience globalization while remaining physically and fully imbedded in their cultural group of origin. One important way in which the university promotes participation in the American cultural group is by offering courses in English and providing students with opportunities to speak in this language.

Language is an observable behavior strongly associated with groups. This often makes it a distinct and salient characteristic of the group itself (Abrams & Hogg, 1987; Bourhis, 2001). For instances, Quebecers in Canada (Bourhis, 2001) and Catalans in Spain (Murphy, Diaz-Varela, & Coluccello, 2002) present their language as a typical and essential aspect of their cultural identity. Similarly, Scottish display their accent as a marker of cultural identity (Abrams & Hogg, 1987). For this reason, language has been described as "both a symbol and a tool of membership, functioning simultaneously as the means of communication and as a meaning-laden indicator of group membership" (Waldinger, 2015, p. 45). Not only is language an important marker of cultural identity, its association with the culture of a group is further established by its visibility, as language behaviours are seen in most interactions with or between members of that cultural group. As such, language and language behaviours are actions that can be "typically observed in the new group" (Cárdenas & de la Sablonnière, 2017, p. 16), and are hence a form of participation.

In the context of Kyrgyzstan, the association between English and American culture has been widespread since the Soviet period, when English was seen as a sign of Western imperialism (e.g., Dushku, 1998) of which the U.S.A. was the leader. After the fall of the USSR in early 1990's, the United States government continuously attempted to influence policy and culture in Kyrgyzstan (e.g., Silova & Steiner-Khamsi, 2008), ensuring that the link

between English usage and American culture persisted. The country of Kyrgyzstan is thus no stranger to American influence, including its association with the English language. In the present article and across the four studies presented below, speaking the language associated with the new group is used as a measure of participation in the new group. In the current study, we expected that speaking English, as a form of group participation, would positively predict identification with Americans (H1), which would in turn positively predict identification with Kyrgyz in this similarity-promoting context (H2a).

## Methods

### *Participants and procedure*

Two hundred fifty-seven first-year university students took part in the first wave of the study, which consisted of answering a questionnaire in class during their first week of class (Time 1 or T1, first week of September). Considering how the present study focuses on identification with Kyrgyz, only participants who reported being born in Kyrgyzstan were kept, for a final sample of 218 at T1. Of the initial sample, 158 participated in the second phase, completing the questionnaire in the middle of their second semester (T2; March and April). Participants who completed a single wave of the study did not differ from those who completed both waves on the main variables (all  $t$  values  $< 1.09$ ;  $p < .279$ ). Women represented 60.6% of the sample, and the mean age of participants was 17.89 ( $SD = 1.08$ ). Most participants reported Kyrgyz as their mother tongue (55.1%), followed by the Russian language (35.6%). Most of participants were of Kyrgyz ethnicity (62%), followed by Russian (19%) and other Central Asian ethnicities (e.g., Tatar, Uzbek and Kazak; 19%). The ethnicity of participants' parents was of similar composition; most of the mothers were of Kyrgyz ethnicity (53.2%; Russian, 18.1%; other Central Asian ethnic groups, 28.7%) as were the fathers (Kyrgyz, 61.6%; Russian, 17.1%; other Central Asian ethnic groups, 21.3%). Less than half of students had travelled abroad (44%).

## Materials

### *Participation in the American group*

In this study (as in the other three studies), participation was conceptualized as speaking English, a behavior associated with the American cultural group in the Kyrgyz context. Since this study was conducted at a university, individuals were asked to report the number of hours that they spoke with professors in English per week, as this reflects participation in the new group in the context where the study took place. Furthermore, using a second language in an educational context, even in second-language classes, allows students to associate the language with the cultural groups that use it (e.g., Chan, Bhatt, Nagami, & Walker, 2015). By teaching in English at the *American University*, all English-speaking professors are subjectively associated with the American group regardless of their original nationality. This measure of participation thus captures a specific and clear behavior associated with the American group, without confounding it with other behaviors or with attitudes.

### *Identification with Kyrgyz and American groups*

A cognitive identification scale adapted from Jackson (2002) was employed in the present study (see also de la Sablonnière et al., 2016) to measure identification with

Kyrgyz and with Americans. Cognitive identification refers to the awareness that one is a member of a social group (Ellemers, Kortekaas, & Ouwerkerk, 1999; Jackson, 2002). The scale contains five items per group. An example of an item is “I identify with Kyrgyz” (1 = *do not agree at all*; 5 = *completely agree*). The alphas for Kyrgyz identification ( $\alpha$  T1 = .81 and  $\alpha$  T2 = .85) and American identification ( $\alpha$  T1 = .74 and  $\alpha$  T2 = .74) were adequate.

### English competency

Previous studies have shown that competency in a new language is positively related to identification with the group associated with the language (e.g., Phinney, 2003). To ensure that it is participation in the new group by using its language that promotes identification with the new group, as opposed to perceived competency in the language, the current studies measured and controlled for English competency. Subjective perception of competency in English was measured by asking participants how well they read, wrote, spoke, and understood English (1 = *not at all*; 5 = *fluently*;  $\alpha$  T1 = .87;  $\alpha$  T2 = .81).

## Results

### Preliminary analyses

Data were inspected for missing data, univariate and multivariate outliers, as well as data normality. Considering the dropout rate of 26.55% from T1 to T2, the EM imputation procedure, based on multiple imputed data sets, was used to replace missing data. It should be noted that only three individuals answered the question about speaking English with a professor at T1. Since this measure was collected within the first week of their first academic year, participants may have considered that answering this question would be misleading given the limited opportunities they have had to engage in this behavior. Missing data for this variable were thus not imputed; rather, we chose to ignore this variable and use the T2 measure of group participation instead. Little’s missing completely at random (MCAR) test indicated that data are probably not missing completely at random,  $\chi^2(1, 7334) = 25,569.51, p < .001$ . As recommended by Enders (2010), twenty data sets were computed and then merged into one data set in order to be analyzed by PROCESS.

Two univariate and multivariate outliers were found, who felt highly incompetent in English (a z score of  $-5.17$ ) and were hence removed from the analyses. As for the normality of the data, all variables had acceptable levels of kurtosis and skewness at T1 and T2 (Kline, 1998). For means, standard deviations, and correlations see Table 1.

### Main analyses

Mediation analyses were performed with PROCESS (Model 4; Hayes, 2013) on SPSS, to test whether identification with Americans at T2 mediated the relation between the number of hours spoken with professors at T2 and identification with Kyrgyz at T2 after controlling for T1 levels of identification with Americans and Kyrgyz, as well as English competency (T1 and T2). As can be seen in Table 2, the more hours participants spoke in English with professors at T2, the more they identified with Americans at T2 ( $B_a = 0.0357$ ) in line with H1; furthermore, higher identification with Americans

**Table 1.** Study 1: Means and correlations.

	Mean (SD)	1	2	3	4	5	6	7
1. Identification with Kyrgyz T1	3.57 (1.12)	-	.17*	.00	.59***	.03	-.04	.08
2. Identification with Americans T1	2.71 (0.85)		-	-.02	.05	.24***	.02	.06
3. Competency English T1	4.30 (0.64)			-	.05	-.04	.60***	.17*
4. Identification with Kyrgyz T2	3.43 (0.91)				-	.11	.04	.14
5. Identification with Americans T2	2.40 (0.66)					-	-.06	.15*
6. English competency T2	4.24 (0.45)						-	.17*
7. Hours spoken in English T2	6.18 (2.78)							-

Notes. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 2.** Study 1: Model coefficients for mediation analyses.

Independent variables	Dependent variables						
	Identification with Americans T2 (M)			Identification with Kyrgyz T2 (Y)			
	Unstandardized coefficient	SE	P	Unstandardized coefficient	SE	p	
Hours spoken in English T2 (X) a	0.0357	0.0160	.0270	c'	0.0219	0.0185	.2388
Identification with Americans T2 (M)	-	-	-	b	0.1440	0.0785	.0671
Identification with Americans T1	0.1815	0.0521	.0006		-0.0845	0.0612	.1689
Identification with Kyrgyz T1	-0.0164	0.0395	.6779		0.4859	0.0452	<.0001
English competency T1	-0.0155	0.0859	.8568		0.0160	0.0982	.8709
English competency T2	-0.1171	0.1220	.3381		0.1050	0.1396	.4528
Constant	2.3119	0.4578	<.0001		0.9286	0.5534	.0948
	$R^2 = .0812$				$R^2 = .3719$		
	$F(5, 212) = 3.7456, p = .0029$				$F(6, 211) = 20.8234, p < .0001$		

marginally predicted higher identification with Kyrgyz at T2 ( $B_b = 0.1444$ ; H2a). More importantly, and in line with both H1 and H2a, the 95% confidence interval for the indirect effect of hours spoken in English on Kyrgyz identification ( $B_{ab} = 0.0052$ ) based on 5000 bias-corrected bootstraps was positive and above zero (0.0001 to 0.0159;  $SE = 0.0038$ ). According to Hayes (2013), this indicates that Kyrgyz identification is impacted by speaking English via American identification, beyond the specific links between these variables. Lastly, the direct effect of hours speaking with professors did not reach statistical significance,  $B_c = 0.0219, p = .234$ .

Overall, these results support our hypotheses that participating in the new American group predicted higher identification with this new group (H1), which in turn positively predicted identification with the group of origin (additive pattern of identification; H2a). Nevertheless, the present study took place in the particular setting of the *American University of Central Asia*, a university that, through its mission and its application, promotes a more global thinking style that underscores group similarities. Such perceived similarities should have encouraged the additive pattern of identification. Yet, the subtractive pattern of identification between these same identities could still occur in settings that do not promote similarities between these cultural groups and their characteristics. One such setting is the *Kyrgyz National University named after Jusup Balasagyn* (or *Kyrgyz University* in this article), the oldest university in the country whose mission is to form the next generation of Kyrgyz professionals. As the national university, it places an emphasis on traditional post-Soviet style of education and focuses on local citizenship and values as opposed to global citizenship. As such, this

university should promote a more local and detailed-oriented thinking style, which in turn could make it difficult to perceive abstract similarities between objects, groups, and identities (Mok & Morris, 2012). Given the sharp contrast between the *American* and the *Kyrgyz Universities'* missions and applications, comparing these universities would allow us to contrast identification patterns in two different settings, one that promotes the perception of similarities (i.e., the *American University*) and another that does not promote such similarities (i.e., the *Kyrgyz University*).

## Study 2

Study 2 aimed at replicating and comparing the results from Study 1 in the *American* versus the *Kyrgyz University*. It was expected that, in both universities, the number of hours spoken in English with professors would promote identification with Americans (H1), which would in turn predict identification with Kyrgyz. However, the nature of the mediation was expected to differ in the *American* versus the *Kyrgyz University*. At the *American University*, it was expected that American identification would have a non-negative association with Kyrgyz identification (i.e., additive identification pattern; H2a) while at the *Kyrgyz University*, identification with Americans was expected to negatively predict identification with Kyrgyz (i.e., subtractive pattern of identification; H2b). This pattern of results was expected even when controlling for English competency.

## Method

### *Participants and procedure*

A total of 304 university students were recruited in two Kyrgyz universities during class. Only participants who were born in Kyrgyzstan and who identified their university as either the *American University* ( $n = 105$ ) or the *Kyrgyz University* ( $n = 172$ ) were kept, resulting in a final sample of 277. Women represented 64.7% of the sample (70.5% in the *American University* sample and 61.6% in the *Kyrgyz University* sample), and the mean age of participants was 19.16 with a standard deviation of 2.53 ( $M = 19.51$ ,  $SD = 1.51$  in the *American University*;  $M = 18.94$ ,  $SD = 3.08$  in the *Kyrgyz University*). Most participants reported Kyrgyz as their mother tongue (90.6%; 82.9% in the *American University*; 98.3% in the *Kyrgyz University*), followed by the Russian language (6.6%; 14.3 % in the *American University*; 1.7% in the *Kyrgyz University*). All participants were of Kyrgyz ethnicity. The ethnicity of participants' parents was of similar composition; most of their mothers were of Kyrgyz ethnicity (91.3%; 89.5% in the *American University* and 92.4% in the *Kyrgyz University*) as were their fathers (97.5%; 96.2% in the *American University* and 98.3% in the *Kyrgyz University*). More than half of students had not travelled abroad (61.7%; 39% in the *American University* and 75.6% in the *Kyrgyz University*).

## Materials

### *Participation in the American group*

The same measure of group participation employed in Study 1 was used (the number of hours that they spoke with professors in English per week).

### Identification with Kyrgyz and American groups

Instead of focusing on the cognitive sense of group belongingness, Study 2 measures situational identity, or how one identifies with particular cultural groups across various situations. This measure better captures whether group participation impacts identification across situations. A shortened version of the Situated Identity Questionnaire (SIQ, Clément & Noels, 1992), previously adapted to the context of Kyrgyzstan, was used to assess identification with both Kyrgyz and American cultures (de la Sablonnière et al., 2016). Respondents 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*) in fourteen everyday scenarios (e.g., When I am at my university; When I think about politics). Total scores were computed separately for the Kyrgyz and American identities. Reliabilities for the Kyrgyz and American identities were adequate ( $\alpha = .93$  and  $.92$ , respectively).

### English competency

Subjective perception of competency in English was measured as in Study 1 by asking participants how well they read, wrote, spoke and understood English (1 = *not at all*; 5 = *fluently*;  $\alpha = .94$ ).

## Results

### Preliminary analyses and descriptive statistics

Data were inspected for missing data, univariate and multivariate outliers, as well as data normality. A total of 198 participants had no missing data on the main variables; missing data were handled with the same procedure as in Study 1 (the EM imputation procedure, merging 20 computed data sets; Little's MCAR  $\chi^2(1, 12,092) = 11,885.215$ ,  $p = .909$ ).

The main variables had acceptable levels of skewness and kurtosis (Kline, 1998). Lastly, three univariate and multivariate outliers were identified; results were identical when the outliers were removed and were kept in all subsequent analyses. Table 3 presents the means, standard deviations, and correlations of the main variables.

### Main analyses

Moderated mediation analyses were performed with PROCESS (Model 14; Hayes, 2013) in SPSS to test whether identification with Americans mediated the relation between the number of hours spoken with professors and identification with Kyrgyz, and if this mediation was moderated by membership to the *American* versus the *Kyrgyz*

**Table 3.** Study 2: Means and correlations for the American University and the Kyrgyz University.

	American University <i>M</i> ( <i>SD</i> )	Kyrgyz University <i>M</i> ( <i>SD</i> )	1	2	3	4
1. Identification with Kyrgyz	3.82 (1.03)	4.33 (0.75)	-	.29**	.11	.03
2. Identification with Americans	2.55 (0.88)	2.31 (0.96)	-.30***	-	.00	.26**
3. Competency English	4.39 (0.51)	3.52 (1.00)	-.11	.40***	-	.20*
4. Hours spoken in English	8.84 (6.37)	6.11 (6.80)	-.05	.35***	.48***	-

Notes. Correlations above the diagonal are the correlations for the American University; correlations below the diagonal are those for the Kyrgyz University. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .



**Table 4.** Study 2: Model Coefficients for Moderated Mediation Analysis.

Independent variables	Dependent variables							
	Identification with Americans (M)			Identification with Kyrgyz (Y)				
	Unstandardized coefficient	SE	p	Unstandardized coefficient	SE	p		
Hours spoken in English (X)	<i>a</i>	0.0331	0.0086	.0001	<i>c'</i>	-0.0002	0.0085	.9828
Identification with Americans (M)	-	-	-	<i>b</i> <sub>1</sub>	0.9308	0.1986	<.0001	
Competency English	0.2128	0.0613	.0006		0.0405	0.0160	.5479	
University	-	-	-	<i>b</i> <sub>2</sub>	1.9991	0.3206	<.0001	
Identification with Americans X University	-	-	-	<i>b</i> <sub>3</sub>	-0.5918	0.1166	<.0001	
Constant	1.3471	0.2223	<.0001					
		<i>R</i> <sup>2</sup> = .1486				<i>R</i> <sup>2</sup> = .1600		
		<i>F</i> (2, 274) = 23.9022, <i>p</i> < .0001				<i>F</i> (5, 271) = 10.3267, <i>p</i> < .0001		

Note: University was coded so that *American University* = 1 and *Kyrgyz University* = 2

*University*. The results presented in Table 4 show that, in line with H1, the more hours participants spoke in English with professors, the more they identified with Americans ( $B_a = 0.0331$ ). Results also show that both identification with Americans ( $B_{b_1} = 0.9308$ ) and University ( $B_{b_2} = 1.9991$ ; coded as follows *American University* = 1 and *Kyrgyz University* = 2) predicted higher identification with Kyrgyz, but so did the interaction between university membership and identification with Americans ( $B_{b_3} = -0.5918$ ), offering initial support for H2a and H2b (i.e., that the relation between identification with Americans and with Kyrgyz varies across universities). Additionally, and in line with our hypotheses, the indirect effect of hours spoken in English on identification with Kyrgyz via identification with American was also moderated by university membership (the index of moderated mediation is  $-0.0196$ , with a 95% confidence interval ranging from  $-0.0352$  to  $-0.0087$  based on 5000 bias-corrected bootstraps;  $SE = 0.0066$ ).

Further inquiry revealed that, as expected, at the *American University*, hours spoken with professors had a positive indirect effect on identification with Kyrgyz through identification with Americans ( $B_{ab1 \text{ American University}} = 0.0112$  with a 95% confidence interval ranging from 0.0051 to 0.0033;  $SE = 0.0051$ ). In other words, speaking in English predicted an additive pattern of identification (H2a). In contrast and in line with H2b, hours spoken with professors at the *Kyrgyz University* had a negative indirect effect on identification with Kyrgyz through identification with Americans ( $B_{ab2 \text{ Kyrgyz University}} = -0.0084$  with a 95% confidence interval ranging from  $-0.0156$  to  $-0.0036$ ;  $SE = 0.0029$ ), revealing a subtractive pattern of identification.

The results from the mediated moderation analyses support the hypotheses that participating in a new cultural group by speaking its language predicts higher identification with the new group (H1), which then predicts identification with the group of origin. The direction of this relation was different in the two universities: an additive identification pattern was observed in a context that promotes similarities (*American University*; H2a), whereas a subtractive pattern was noted in a context that does not promote such similarities (*Kyrgyz University*; H2b). Yet, differences in perceived similarity were only presumed in this study; hence, it is not possible to know whether the differences observed between the two universities were influenced by variables other than perceptions of similarity. The following study goes a step further by sampling

participants from three Kyrgyz universities, directly measuring perceived similarity between Kyrgyz and Americans and testing its role in predicting the additive versus subtractive patterns of identification.

### Study 3

This study, conducted in Kyrgyzstan, was designed to test the hypotheses that the number of hours spoken in English with professors will promote identification with Americans (H1), which in turn will predict identification with Kyrgyz; this relation should be moderated by perceived similarities, revealing an additive identification pattern when high similarities between the cultural groups are perceived (H2a). In contrast, a subtractive identification pattern is expected when little similarities are perceived (H2b). This moderated mediation was expected even when controlling for English competency and for university affiliation ( $n$  American University of Central Asia = 148;  $n$  Kyrgyz Russian Slavic University = 90;  $n$  Bishkek Humanities University = 145). By controlling for university affiliation, we ensure that it was the perceived level of similarity, and not the specific mission of each university, predicts the identification patterns.

Additionally, since previous research shows that status and legitimacy can also predict the emergence of the subtractive pattern of identification (de la Sablonnière et al., 2016), the present study extends Study 2 by testing whether perceived similarity predicts identification patterns over and above the impact of status and legitimacy<sup>1</sup>.

### Methods

#### Participants and procedure

Three hundred and ninety Kyrgyz from three universities took part in this study during one of their classes; as in Studies 1 and 2, only participants born in Kyrgyzstan were kept ( $N = 383$ ). In the present sample, 70.8% were women and the mean age was 20.65 ( $SD = 4.38$ ). Most participants mentioned Kyrgyz as their mother tongue (95.3%). Most participants were of Kyrgyz ethnicity (98.2%). Additionally, most of the mothers were of Kyrgyz ethnicity (94.7%) as were the fathers (97.1%). More than half of students had not travelled abroad (64.8%).

### Materials

#### Participation in the American group

Participation was once more measured by asking individuals to report the weekly number of hours spoken with professors in English.

#### Identification with Kyrgyz and American groups

Identification was measured with the same adapted version of the Situational Identification Scale employed in Study 2. Reliabilities for the Kyrgyz and American identities were adequate ( $\alpha = .92$  and  $.92$ , respectively).

### Similarity

Perception of similarity was measured with the following single item: How similar are Kyrgyz and Americans? (1 = *not similar at all*; 5 = *extremely similar*).

### English competency

Subjective perception of competency in English was measured by asking participants how well they read, wrote, spoke and understood English ( $\alpha = .94$ ).

### Status

Status was measured with a single item (Terry & O'Brien, 2001): "What is the social status of Kyrgyz people compared to Americans?" (1 = *much lower*; 5 = *much higher*). The score was reversed so that a high score meant that Americans had a higher perceived status than Kyrgyz.

### Legitimacy

Legitimacy was measured by a single item that asked participants how legitimate was the status differential between Kyrgyz and Americans (Terry & O'Brien, 2001; 1 = *totally legitimate*; 5 = *totally illegitimate*). This item was also reversed so that a high score reflects high legitimacy.

## Results

### Preliminary analyses and descriptive statistics

Data were inspected for missing data, univariate and multivariate outliers as well as data normality. Three hundred forty-one participants had no missing data in the main variables; missing data were handled with the same procedure as in Studies 1 and 2 (the EM imputation procedure, merging 20 computed data sets; Little's MCAR test  $\chi^2(1, 10,845) = 11,191.76, p = .010$ ).

The main variables were normally distributed, showing normal ranges of skewness and kurtosis except for group participation (kurtosis = 3.30) and similarity (kurtosis = 9.10). Log transformations successfully normalized these two variables. The results with the transformed variables were very similar to the non-transformed data, and hence the non-transformed variables were kept in the following analyses for ease of interpretation. Lastly, eight univariate and multivariate outliers were identified. Results remained unchanged when the outliers were removed and they were hence kept in the main analyses. Table 5 presents the means, standard deviations, and correlations among the main variables.

**Table 5.** Study 3: Means and correlations.

	Mean (SD)	1	2	3	4	5	6	7
1. Identification with Kyrgyz	4.34 (0.76)	-	-.35***	-.15**	.05	-.20***	-.16**	-.08
2. Identification with Americans	1.85 (0.82)		-	.37***	.03	.35***	.12*	-.01
3. Hours spoken in English	5.01 (6.72)			-	.03	.53***	.04	.12*
4. Perceived similarity	1.31 (0.65)				-	.00	-.17**	-.03
5. Competency English	3.62 (1.04)					-	.06	.15**
6. Status	4.56 (0.76)						-	.15**
7. Legitimacy	3.65 (1.20)							-

Notes. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

### Main analyses

PROCESS (Model 14; Hayes, 2013) on SPSS was employed to test whether identification with Americans mediated the relation between number of hours spoken in English with professors and identification with Kyrgyz, and whether this mediation was conditional to (or moderated by) perceived similarity. Four covariables were utilized in this study, namely university membership, English competency, status, and legitimacy ensuring that our results were not due to other differences between universities. The results presented in Table 6 supported the hypotheses. More specifically, and in agreement with H1, the more hours participants spoke in English with professors, the more they identified with Americans ( $B_a = 0.0298$ ). In turn, higher identification with Americans predicted lower identification with Kyrgyz ( $B_{b1} = -0.4990$ ). Similarity did not significantly predict lower identification with Kyrgyz ( $B_{b2} = -0.2119$ ) but its interaction with American identification did ( $B_{b3} = 0.1562$ ), indicating a moderating effect on the relation between identification with Americans and identification with Kyrgyz.

The analysis also showed the indirect effect of hours spoken in English on identification with Kyrgyz via identification with American to be moderated by similarity (the index of moderated mediation is 0.0047, with a 95% confidence interval ranging from 0.0003 to 0.0117 based on 5000 bias-corrected bootstraps;  $SE = 0.0029$ ), offering support for H2a and H2b<sup>2</sup>. Considering the evidence for a moderated mediation, and to further explore the moderation of similarity, the Johnson–Neymann (J–N) technique was utilized. The J–N technique identifies the range of similarity scores at which the relation between identification with Americans and Kyrgyz becomes significant (Hayes, 2013). Results show that the effect of identification with Americans on identification with Kyrgyz is negative and significant at a similarity score of 2.1991 and below (unstandardized coefficient = 0.1553, with a 95% confidence interval ranging from  $-0.3108$  to  $0.0000$ ). In other words, only for individuals who scored 2.1991 or lower on perceived similarity between Kyrgyz and Americans does identification with Americans predict negatively and significantly identification with Kyrgyz (i.e., the subtractive pattern of identification; H2b). For individuals scoring above 2.1991 in similarity, identification with Americans no longer predicted identification with Kyrgyz (i.e., an additive pattern of identification; H2a).

**Table 6.** Study 3: Model coefficients for moderated mediation analysis.

Independent variables	Dependent variables							
	Identification with Americans (M)			Identification with Kyrgyz (Y)				
	Unstandardized coefficient	SE	p	Unstandardized coefficient	SE	p		
Hours spoken in English (X)	<i>a</i>	0.0298	0.0072	<.0001	<i>c'</i>	0.0013	0.0070	.8542
Identification with Americans (M)	-	-	-	<i>b</i> <sub>1</sub>	-0.4990	0.1076	<.0001	
Competency English		0.1674	0.0444	.0002		-0.0601	0.0426	.1595
Status		0.1132	0.0509	.0267		0.1077	0.0490	.0284
Legitimacy		-0.0596	0.0326	.0681		-0.0410	0.0309	.1851
University		-0.0502	0.0575	.3831		-0.0084	0.0544	.8768
Similarity		-	-	-	<i>b</i> <sub>2</sub>	-0.2119	0.1320	.1093
Identification with Americans X Similarity		-	-	-	<i>b</i> <sub>3</sub>	0.1562	0.0720	.0306
Constant		0.8873	0.3142	.0050		6.0219	0.3655	<.0001
		$R^2 = .1888$				$R^2 = .1570$		
		$F(5, 376) = 17.5023, p < .0001$				$F(8, 373) = 8.6838, p < .0001$		

Overall, these results support our hypotheses that participating in the American group by speaking English with professors promoted identification with Americans (H1) and that identification with Americans mediated the relation between number of hours spoken in English with professors and identification with Kyrgyz; however, this mediation was moderated by perceived similarity. Speaking English with professors promoted a subtractive pattern of identification when there was little perceived similarity between Americans and Kyrgyz (H2b). In contrast, speaking English encouraged an additive identification pattern when moderate and high levels of similarity were perceived (H2a). This pattern was obtained even when controlling for variables that have previously been shown to predict the subtractive identification pattern (status and legitimacy), the degree of English competency, as well as for university membership.

The results from the previous three studies support the importance of participating in a new cultural group via linguistic behaviors in predicting identification with this new cultural group. They also highlight how perceived similarity (assumed to differ across contexts in Study 2 and explicitly measured in Study 3) is useful to predict the additive versus subtractive identification pattern is likely to occur following participation in a new culture. The goal of Study 4 is to investigate these relations over time and in a different cultural context (i.e., with Franco-Ontarians).

## Study 4

The fourth study tests whether participating in a new group can predict identification shifts using a repeated measures design. More specifically, it tests whether participating in a group at T1 predicts identification with the new group at T1 and at T2 (H1), and whether this increased identification with the new group results in different levels of identification with the group of origin at T2 as a function of perceived similarity between the two groups (H2a and H2b). By using a repeated measures methodology, this study offered a more stringent test of the relations proposed in the article. Additionally, the present study tests the proposed relations with Franco-Ontarian high school students in Canada whose mother tongue is French (i.e., Francophone). These students come from Francophone families but are living in an Anglophone province (Ottawa) and community (Cornwall). Thus, although they officially use their mother tongue (French) at school, they are surrounded by English culture and group (i.e., Anglophones), allowing them to easily participate in the Anglophone culture in daily life. By changing the setting and population, Study 4 tests the replicability of the previously obtained results and the validity of the hypotheses beyond the Kyrgyz context.

## Methods

### *Participants and procedure*

A total of 268 high school students from a French high school in Ontario participated in the first wave of the study (T1). Considering how the present study assumes Francophone identity to be the identity of origin, only participants who identified

French as their mother tongue were kept ( $N$  final = 171). The second wave of the study (T2) took place five years after the initial wave. Participants were contacted via e-mail and mail addresses they had provided in the first wave. A total of 39 francophone participants completed the second wave of the study (T2). Students who participated in both waves of the study did not differ from those who only participated to T1 on any of the main T1 variables (all  $t$  values < 1.65;  $p$  < .104). In the present sample, women represented 63.2% of the sample, and the mean age of participants was 14.62 ( $SD$  = 1.70) at T1 and 20.06 ( $SD$  = 1.76) at T2. Most participants were living with both of their parents at T1 (70.6%); most of their mothers were francophone (83.5%; Anglophone 12.5% and other 4.1%), as were most of their fathers (68.3%; Anglophone 26.3% and other 5.4%). At T1, participants were similarly distributed across most grades (7<sup>th</sup> grade = 26.9%; 8<sup>th</sup> grade = 15.8%; 9<sup>th</sup> grade = 12.3%; 10<sup>th</sup> grade = 23.4%; 11<sup>th</sup> grade = 9.9%; 12<sup>th</sup> grade = 11.7%).

### Measures

Participation in Anglophone culture, and identification with Anglophones and Francophones were measured at T1 and T2, while similarity and the control variables (status, legitimacy and English competency) were measured at T2. Different measures of participation in the Anglophone culture and similarity were utilized in this study. More specifically, since students were in a French high school, the measure of group participation focuses on speaking English with friends and family members rather than with teachers. Furthermore, the measure of similarity varies from the approach utilized in Studies 1 to 3. Studies 1 to 3 focus on the general similarity between groups; however, previous research has already begun to identify specific group characteristics that when dissimilar promote the subtractive pattern (i.e., status and legitimacy differentials, de la Sablonnière et al., 2016). To further tease apart which dissimilarities are important, the current study focuses on the differences between English and French, a highly defining characteristic of the Anglophone and Francophone cultural identity in Ontario, Canada. By using different measures of participation and similarity, we ensure that our results generalize across measures, hence strengthening our conclusions.

### Participation in Anglophone culture

Participation was measured at T1 and T2 by asking individuals what language they used more often when they were speaking with friends and family using three items (1 = *Only French*; 5 = *Only English*). The alpha levels were acceptable ( $\alpha$  T1 = .73 and  $\alpha$  T2 = .79).

### Identification with Anglophone and Francophone groups

Identification was measured at T1 and at T2 with a shortened version of the Situated Identity Questionnaire (Clément & Noels, 1992). Four items were used to measure identification with Anglophones and Francophones. The internal reliability scores were acceptable at T1 ( $\alpha$  Anglophone identification = .75;  $\alpha$  Francophone identification = .76) and T2 ( $\alpha$  Anglophone identification = .89;  $\alpha$  Francophone identification = .79).

### Similarity

Similarity between languages was measured with five items that evaluated the extent to which the English and French languages are similar to each other (1 = *Do not agree at all*; 7 = *Very strongly agree*). Similarity was only measured at T2 with items such as: the English language and the French language are similar ( $\alpha = .76$ ).

### English competency

Subjective perception of competency in English at T2 was measured by asking participants how well they read, wrote, spoke and understood English ( $\alpha = .89$ ).

### Status

Status at T2 was measured with a single item (Terry & O'Brien, 2001) that asked participants how Francophones are seen compared to Anglophones in their city (1 = *Inferior*; 7 = *Superior*).

### Legitimacy

Legitimacy at T2 was measured with a single item that asked participants how legitimate was the status differential between Anglophones and Francophones (Terry & O'Brien, 2001; 1 = *totally illegitimate*; 7 = *totally legitimate*).

## Results

### Preliminary analyses and descriptive statistics

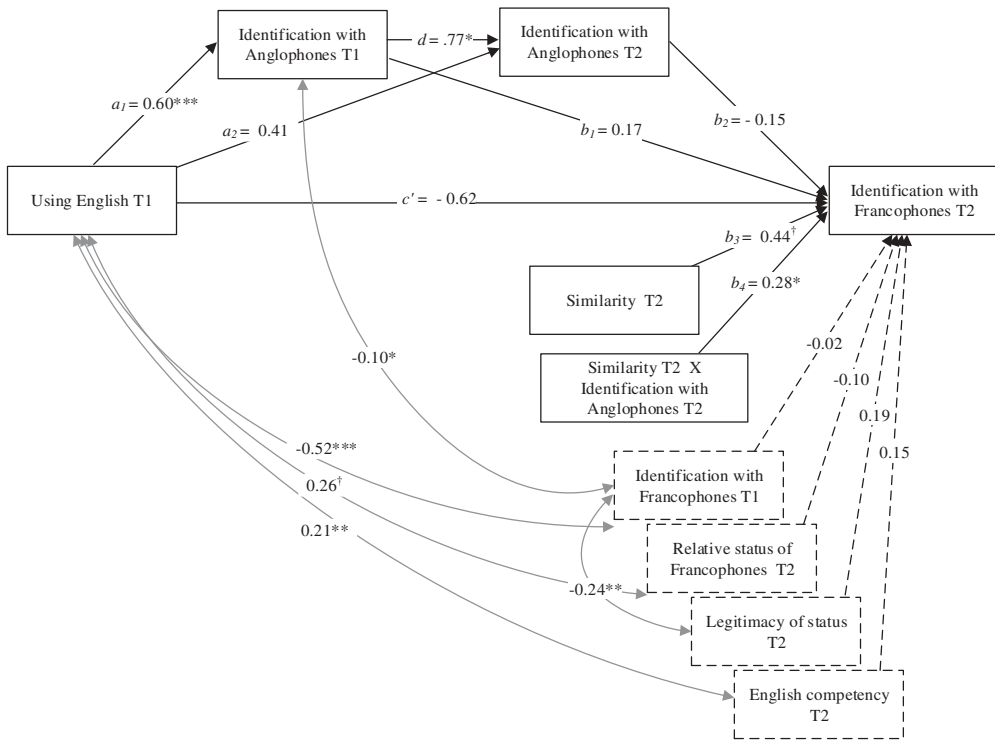
Data were inspected for missing data, univariate and multivariate outliers as well as data normality. Little's missing completely at random (MCAR) test indicated that data were probably not missing completely at random,  $\chi^2(1, 10,845) = 11,191.76$ ,  $p = .010$ . Considering the high dropout rate, the missing data were estimated using the full information maximum likelihood in MPLUS (Allison, 2012). This statistical program has been shown to outperform other procedures with high numbers of missing data (Buhi, Goodson, & Neilands, 2008; Schlomer, Bauman, & Card, 2010). Skewness and kurtosis levels were acceptable across all variables (Kline, 1998). Table 7 presents the means, standard deviations, and correlations.

**Table 7.** Study 4: Means and correlations.

	Mean (SD)	1	2	3	4	5	6	7	8	9
1. Identification with Francophones T1	3.36 (0.89)	-	-.51***	-.65***	.31***	-.33***	-.03	-.04	.20**	-.44***
2. Identification with Anglophones T1	3.53 (0.88)		-	.61***	-.33***	.57***	-.14 <sup>†</sup>	.27***	.18*	.21**
3. Using English T1	3.53 (0.89)			-	-.45***	.48***	.15*	.24***	-.07	.41***
4. Identification with Francophones T2	4.95 (1.43)				-	-.36***	.25***	-.33***	.23**	-.15*
5. Identification with Anglophones T2	4.48 (1.58)					-	-.25***	.19**	.09	.09
6. Similarity T2	2.57 (1.09)						-	-.26***	-.19**	.12
7. Status T2	3.32 (1.21)							-	-.26***	.00
8. Legitimacy T2	4.48 (1.36)								-	-.29***
9. Competency English T2	6.54 (0.34)									-

Notes. <sup>†</sup>  $p < .10$  \* $p < .05$ ; \*\* $p < .01$ ; \*\*\*  $p < .001$ .





**Figure 1.** The moderated mediation tested in study 4.

Notes. Only the significant covariances are added in the figure for the sake of simplicity. †  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

### Main results

The moderated mediation was tested by using the equations developed for PROCESS (Model 14; Hayes, 2013) in path analysis (in the MPLUS program; Stride, Gardner, Catley, & Thomas, 2015). Figure 1 depicts the tested model, where the use of English T1 predicted identification with Anglophones at T1 ( $a_1$ ), which in turn predicted identification with Anglophones at T2 ( $d$ ), to predict identification with Francophones at T2 ( $b_2$ ). In addition, similarity at T2 was modeled to moderate the link between identification with Anglophones at T2 and identification with Francophones at T2 ( $b_4$ ). Lastly, identification with Francophones at T1, status at T2, legitimacy at T2 and English competency at T2 were added as control variables (predicting identification with Francophones at T2) to ensure that the moderated mediation existed beyond the influence of these variables.

The indices of fit indicate that the model fits the data well:  $\chi^2(8, N = 171) = 7.75$  ( $p = .458$ ), RMSEA = .00 ( $p = .725$ ) and CFI = 1.00. As can be seen in Figure 1, our hypothesis of moderated mediation is supported. Specifically, the more individuals use English with friends and family at T1, the more they identified with Anglophones at T1 ( $B_{a1} = 0.604$ ,  $p < .001$ ), which is in line with H1. In turn, identification with Anglophones at T1 predicted higher identification with Anglophones at T2 ( $B_d = 0.768$ ,  $p = .05$ ). Identification with Anglophones at T2 did not predict identification with Francophones at T2 ( $B_{b2} = -0.158$ ,  $p = .415$ ); importantly, and as expected by H2a and H2b, the interaction term between similarity at T2 and identification with Anglophones at T2

did ( $B_{b4} = -0.281, p = .048$ ), indicating a moderating effect on the relation between identification with Anglophones at T2 and identification with Francophones at T2.

The analysis also showed the indirect effect of using English at T1 on identification with Francophones at T2 via identification with Anglophones at T1 and at T2 to be moderated by similarity at T2 (the index of moderated mediation is .130, with a 95% confidence interval ranging from 0.002 to 0.404 based on 5000 bias-corrected bootstraps;  $SE = 0.106$ ). In other words, the effect of using English at T1 on identification with Francophone is carried via identification with Anglophones at T1 and, then, identification with Anglophones at T2, a mediation that is moderated by similarity. The mediation paths via identification with Anglophones at T1 alone (indirect effect index = 0.105, a 95% confidence interval ranging from -.0300 to 0.511,  $SE = 0.203$ ), or via identification with Anglophones at T2 alone (index of moderated mediation = 0.115, a 95% confidence interval ranging from -0.046 to 0.422;  $SE = 0.120$ ) were not supported by the data.

Considering the evidence for a moderated mediation, and to further explore how similarity moderates the mediation, the J–N technique was utilized. Results show that the conditional effect of identification with Anglophones at T2 on identification with Francophones at T2 is negative and significant at a similarity score of 1.59 and below (unstandardized coefficient =  $-0.200$ , with a 95% confidence interval ranging from  $-0.747$  to  $-0.001$ ). That is, perceiving very little similarities between French and English results in a subtractive pattern of identification, where the relation between identification variables is negative.

To provide further evidence for the validity of the model, a reversed model was also tested. In this reversed model, identification with Francophones at T1 was the independent variable while using English at T2 as the dependent variable. The mediating variables (identification with Anglophones at T1 and at T2), the moderating variable (similarity at T2), and the control variables remained unchanged (except for the addition of using English at T1 instead of identification with Francophones at T1). This model had lower fit indexes than the original model,  $\chi^2(8, N = 171) = 13.34, p = .101, RMSEA = .06, p = .314, CFI = .96$ , and, importantly, the only variable that significantly predicted using English at T2 (the dependent variable) was using English at T1,  $B = 0.74, p = .012$ .

To summarize, the results from Study 4 support our hypotheses that participating in the Anglophone group by using English with friends and family impacts identification with Francophones at T1 and in turn at T2 (H1). The results also offered support for H2a and H2b by showing that the relation between identification with Anglophones and identification with Francophones at T2 is dependent on the perceived similarities between the groups' characteristics, in this case, language. These results, while correlational, support a directional link where participation predicts identification patterns over a five-year period.

## Discussion

In a world that is increasingly interconnected, individuals have unprecedented knowledge about cultural and social groups outside of their immediate physical borders. This global connection offers countless opportunities to participate in new cultural groups even when physically remaining within the borders of one's own groups. In the present article, four studies examined how participating in a new group by using its language

impacted group identities. More specifically, these studies tested whether participating in a new group from within one's country of origin would predict higher identification with this group (H1). The studies also test whether this increased identification would result in an additive or subtractive identification pattern. It was hypothesized that an additive pattern would be observed when the groups are perceived as similar (H2a) while a subtractive pattern would emerge when individuals perceive that the new group and their group of origin are dissimilar to each other (H2b).

The results of four studies support our hypotheses. Study 1, conducted in a university that promoted similarities, showed that participation in the new group predicted identification with this new group, which in turn positively predicted identification with the group of origin. Study 2 compared two universities: one that promotes similarities and one that does not. The results of this study showed that, at the university promoting similarity, participation in the new group predicted higher identification with this group, which in turn predicted higher identification with the group of origin (i.e., additive identification pattern). The subtractive identification pattern was, however, observed at the university that did not promote similarities, where identification with the new group negatively predicted identification with the group of origin. Study 3 replicated these findings by explicitly measuring perceived similarity. More specifically, participating in the new group predicted the subtractive pattern of identification only when few similarities were perceived between the new group and the group of origin. Study 4 provided further support for this hypothesis by showing that participation in a new group impacts identification with the group of origin across time; more specifically, Study 4 shows that this relation is mediated by identification with the new group, and that the subtractive pattern of identification emerges as a function of the perceived dissimilarities between groups' characteristics.

At a theoretical level, these results highlight how our actions can impact our self-concept. Indeed, the link between behaviors and attitudes have been widely studied. Research ranging from the classic Stanford prison experiment (Zimbardo, 2007) to studies on the foot-in-the-door phenomenon (Freedman & Fraser, 1966) illustrate that when we take actions, our beliefs, feelings, and thoughts often reorganize to become coherent with our behavior. In the present study, we extend such logic to the realm of cultural identities and self-concept. More specifically, results from four studies demonstrate that taking actions that are associated with the new group (i.e., participating in the new group) are linked to the importance that individuals give to this group in their self-concept and the importance given to the group of origin. In other words, we are how we act, even at a social-cultural level.

A second theoretical implication concerns the role of similarity in predicting the additive and subtractive pattern of identification. Most current identity integration theories (Benet-Martinez & Haritatos, 2005; Berry, 2001, 2005, 2010) generally assume that new cultural identities can be added freely while the importance of the identity of origin remains unchanged. In the present article, and contrary to the current zeitgeist, we illustrate that under certain circumstances, adopting a new identity can mean losing one's identity of origin. It appears that when increased identification with a new group results from participation, the perceived similarity between groups is an important predictor of the patterns of identification. Understanding the emergence of the additive and subtractive patterns is important because it clarifies when and how individuals are

at risk of losing their identity of origin. As such, individuals may rightfully fear and be threatened by contact with new groups even from within their country of origin. On the other hand, experiencing subtractive identity integration might be a valuable strategy for reorganizing the self-concept when two identities are very different from each other. When little similarity between the groups is perceived, a decrease in identification with the group of origin might ensure a sense of overall coherence while still allowing the individual to acknowledge his/her origins, maximizing well-being.

### *Limitations and future research*

Some of the limitations of the current studies are methodological. For example, in Studies 1, 2 and 3, speaking English with professors was conceptualized as a form of participation because speaking English is a behavior typically observed in the American group, particularly in the *American University*. While learning and using the language of the new group has been identified as a form of participation (e.g., Ministère d'immigration, diversité et inclusion, 2015, 2016), future research in Kyrgyzstan could focus on other forms of linguistics participation (e.g., speaking English with friends and family) and other forms of participation (e.g., cultural participation, social participation; Ministère d'immigration, diversité et inclusion or MIDI, 2015, 2016). Similarly, in Studies 1 and 2 we assumed that the *American University* promoted similarity, but this assumption was not directly tested. Furthermore, the studies presented above are correlational, which does not allow us to establish cause and effect relations. While Study 4, with its repeated measures methodology, offers initial support for the directionality of the relation between participation and identification patterns, future research should employ longitudinal methodologies (i.e., more than two measurement waves) and experimental designs to specifically test the causal relations hypothesized in this article

Moreover, future studies could explore how participation in a new group impacts identification with it. Indeed, while the present studies consistently found that participating in the new group predicted identification with the new group, it did not explore the exact mechanisms by which participation helps identification. Cárdenas and de la Sablonnière (2018a) postulated two such mechanisms: perceived prototypicality and the need for coherence. More specifically, given that participating in a new group is essentially adopting a behavior that is prototypical of the group (Hogg, 2005), participation can activate the process of self-categorization, encouraging identification as a member of the new group. In addition, people who participate in a new group could also identify more strongly with this new group to increase coherence between their attitudes and behaviors. Future studies could test whether these two mechanisms can explain the impact of participation on identification as well as their relative complementarity.

Future research could also focus on further dissecting and understanding the role of perceived similarity in predicting identification patterns. On the one hand, similarity was postulated to help create cognitive links between identities and facilitate their simultaneous importance. On the other hand, when a superordinate identity is presented as being very similar to the identity of origin, individuals feel that the distinctiveness of their identity of origin is threatened (Hornsey & Hogg, 2000). As such, there might be an

optimal level of perceived similarity that promotes the additive pattern of identification. Furthermore, in the present article we assume that dissimilar groups are seen as inherently incompatible. However, groups may be seen as different yet complementary in their function (e.g., Costa-Lopes, Vala, & Judd, 2012), in which case an additive pattern of identification could be expected. Future research is thus needed to further illuminate why, when and how similarity predicts the additive versus subtractive identification patterns.

In a similar line of thought, social identity complexity (Roccas & Brewer, 2002) can be conceptualized in two ways. First, someone who considers that he or she is a member of two groups with overlapping or similar characteristics is conceptualized as having low social identity complexity; in essence, the two groups are so similar to each other that they are essentially the same group. In contrast, someone with high social identity complexity would be able to maintain group membership with two dissimilar groups. In the current article, low perceived similarity between groups, or high social identity complexity, was followed by a subtractive identification pattern. A second way of conceptualizing social identity complexity is as the degree of overlap in group members. In this case, individuals with low social identity complexity perceive high overlap between the members of their groups; those with high identity complexity would consider themselves members of groups that share very few of their members. Individuals with high identity complexity can thus experience group membership with groups that have unique members.

Future research could compare both conceptualizations of social identity complexity to determine if both forms of social identity complexity lead to the same pattern of results. On the one hand, high overlap between group characteristics and high overlap between group members may both lead to additive identification pattern, as both forms of social identity complexity focus on similarity. On the other hand, overlap between memberships may lead to different results than overlap between characteristics. Having high identity complexity in terms of group membership (seeing little overlap between group members) may motivate individuals to maintain these social relations and thus their respective identities, allowing for the additive identification pattern. This would stand in contrast with high social identity complexity that focusses on group similarity (as done in this article), where little overlap between characteristics promoted the subtractive pattern. Future research could elucidate these relations.

To conclude, in a world where contact with a new social and cultural group is increasingly unavoidable, the present studies highlights its consequence on identity processes. In this article it was argued that globalization offers individuals the possibility to participate in a new group while remaining in full contact with the group of origin. This participation can promote identification with this new group and, when dissimilarities are observed, potentially triggers lower identification with the group of origin. Yet, it also shows that losing one's identity of origin is by no means an automatic result of integrating a new identity. Future research will help identify the prerequisites of subtractive and additive identification patterns, thereby shedding some light on the potential consequences of globalization for the self.

## Notes

1. Some of the data from this study were originally presented in a previous article (de la Sablonnière et al., 2016): the identification variables (identification with Americans and identification with Kyrgyz) as well as status and legitimacy. The goal of the previous article was to use status and legitimacy to explain the emergence of the subtractive pattern. However, the present article tests a moderated mediation employing a different independent variable (number of hours spoken with professors) and different moderating variable (similarity) while controlling for status and legitimacy, and hence makes a different contribution to the literature.
2. When status and legitimacy were not controlled for, the results were very similar to those obtained when controlling for status and legitimacy. The more hours participants spoke in English with professors, the more they identified with Americans ( $B_a = 0.0318, p < .001$ ), and higher identification with Americans predicted lower identification with Kyrgyz ( $B_{b1} = -0.4771, p < .001$ ). Similarity did not significantly predict lower identification with Kyrgyz ( $B_{b2} = -0.1627, p = .2082$ ), but its interaction with American identification did ( $B_{b3} = 0.1376, p = .0492$ ), indicating a moderating effect on the relation between identification with Americans and identification with Kyrgyz. The analysis also showed the indirect effect of hours spoken in English on identification with Kyrgyz via identification with American to be marginally moderated by similarity (the index of moderated mediation is .0044, with a 95% confidence interval ranging from -.0001 to .0117 based on 5000 bias-corrected bootstraps).

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## ORCID

Geneviève A. Mageau  <http://orcid.org/0000-0002-5723-6554>

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