

The Interplay of International Students' Acculturative Stress, Social Support, and Acculturation Modes

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Abstract

This study examined the relationship between acculturation modes (assimilation, integration, separation and marginalization), social support, and acculturative stress in undergraduate and graduate international students (N=104) at a medium-sized public university in the Midwestern United States. The study found that international students with broad-based social support and an Integration approach to acculturation experienced lower levels of acculturative stress. Implications for more effective counseling with international students are addressed.

Keywords: international students, acculturation, acculturative stress, social support

University-level study is fraught with stress and difficulties (Sharkin, 2006). For many undergraduate students, going away to college is the first of many important changes: life away from the security of home and family, independence, and growing responsibility. Graduate study is, in turn, another change requiring yet better time management skills with additional academic requirements and pressure. These common stresses and challenges associated with university study are substantially increased for the 820,000 international students currently in the United States (IIE, 2013). In addition to having to deal with all of the challenges and changes their U.S. classmates do, international students are also confronted with a wide variety of potential new challenges: language barriers, lack of familiarity with the academic system, immersion in a new culture, and the loss of closeness to family and friends (Misra, Crist, & Burant, 2003; Searle & Ward, 1990; Wilton & Constantine, 2003).

International students in the U.S. have long been the subject of studies. Much of the research done in recent years has investigated international student distress associated with culture shock (e.g., Furnham, 2004; Ward, Bochner, & Furnham, 2001), psychological difficulties associated with their arrival in the US (e.g., Clark Oropeza, Fitzgibbon, & Baron, 1991; Sandhu, 1994), and help seeking behaviors (e.g., Hayes & Lin, 1994; Komiya & Eelss, 2001). Acculturative stress is another prominent factor for international students and has also been of interest to a number of researchers (Yeh & Inose, 2003; Poyzrali, Kavanaugh, Baker, & Al-Timimi, 2004; Constantine, Okazaki, & Utsey, 2004; Olaniran, 1993). Acculturative stress has been defined as "one kind of stress, in which the stressors are identified as having their source in the process of acculturation; [with] a particular set of stress behaviors that occur during acculturation, such as lowered mental health status (especially confusion, anxiety, depression), feelings of marginality and alienation, heightened psychosomatic symptoms, and

identity confusion” (Berry, 1995, p. 479). While these symptoms of distress are similar to other stress responses, acculturative stress has been identified as resulting from and arising out of the act of moving to and living in a new culture, including somatic manifestations, depression, anxiety and decreased self-esteem. In addition to the difficulties international students experience with cultural change, several researchers have explored how academic demands and perfectionism are also associated with elevated levels of acculturative stress (Nilsson, Butler, Shouse, & Joshi, 2008; Rice, Choi, Zhang, Morero, & Anderson, 2012).

Closely associated with the formulation of acculturative stress is the larger matter of how individuals adapt to a new culture, a process referred to in the literature as acculturation, with Berry’s (1980) bidirectional model the most widely referred to and used (Berry, 1995). The acculturation mode is identified as an individual’s level of desired contact with the host culture as well as the home culture. The four resulting categories are related to the attitude or perspective acculturating individuals take with regards to the host culture and people (host nationals) as well as toward the individual’s home culture and people (co-nationals). Table 1 outlines these modes, which have also been referred to as “orientations,” “strategies,” or “attitudes” (Arends-Toth & van de Vijver, 2006). In the case of a French student in the U.S., if she values maintaining her French identity and connections to other French students (co-nationals), as well as building relationships with U.S. students (host nationals), she would be considered to have an Integration acculturation mode. As another example, a Japanese student who values maintaining his Japanese identity, while not engaging with U.S. students or culture would be considered to be pursuing a Separation acculturation mode.

Table 1
Berry’s Modes of Acculturation (Berry, 1980)

	Is it considered to be of value to maintain own cultural identity and characteristics?		
		Yes	No
Is it considered to be of value to maintain relationships with the host culture?	Yes	Integration	Assimilation
	No	Separation	Marginalization

The relationship between the modes of acculturation and acculturative stress has been clearly established in studies involving immigrants (Berry, 1998; Zheng & Berry, 1991), ethnic minorities (Berry, 2003), native peoples (Berry & Annis, 1974), and expatriate workers (Ward & Rana-Deuba, 2000). Adjustment has consistently found to be most stressful for individuals with a Marginalization mode and least stressful for those with an Integration mode, with Separation and Assimilation falling in the middle. There has been much less research focus on whether these results are the same for international students in the United States (Smith & Khawaja, 2011), although there appear to be several compelling differences between international students and other acculturating groups. Typically, international students are compelled to adapt to the United States cultural and academic environment immediately after arriving on campus and may find it difficult to maintain home ties to the exclusion of local ones (Charles & Stewart, 1991). International students are also generally younger, come on their own without a network of family, are more inclined to be interested in U.S. culture, and generally have greater access to U.S. nationals by virtue of being on a university campus (Johnson & Sandhu, 2007; Pedersen, 1991). The sum total of these characteristics is considerably different from other acculturating groups.

In addition to considering the relationship between the different acculturation modes and acculturative stress, the current study also took social support into consideration. Social support has long been shown to be an important factor in buffering the effects of stress (Cohen & Wills, 1985). The importance of the individual’s social network has also been shown to be a significant factor in assisting with the stressful situations associated with living in a new culture (Kuo & Tsai, 1986). Studies

examining the social support network of international students have focused on international students' host national and co-national social networks and generally found that host nationals are of greater benefit in mitigating acculturative stress by being sources of information and guidance on local cultural expectations and norms (e.g., Hayes & Lin, 1994; Olaniran, 1993; Yan & Berliner, 2011). Extending this, Zhang and Goodson (2011) found that social interaction with host nationals provided both moderating and mediating effects related to decreased levels of depression and the difficulties associated with cultural adaptation, while Lee, Koeske and Sales (2004) found that higher levels of social support in addition to higher levels of identification with American culture were associated with lower levels of acculturative stress with Korean graduate students in the United States. Beyond considering the role of host and home national supports in adapting to studying in the U.S., there has been less consideration of the role of other international students. Bochner's Functional Model of Friendship proposed that host national contacts are important professional, academic, and career supports, while home country contacts maintain a connection to the home culture. Different from these two groups, international students from other countries play the primary role in providing recreation opportunities, as well as being important social contacts (Bochner, McLeod, & Lin, 1977; Furnham & Alibhai, 1985; Gareis, 2012). Although these studies have explored friendship networks among international students, less emphasis has been given to how these networks are related to the experience of acculturative stress. Consequently, the current study examined the connection between acculturative stress and the acculturation mode, while taking into consideration how the different sources of social support were associated with different levels of acculturative stress.

Hypotheses

The purpose of this study was to examine if the amount of acculturative stress international student reported was related to their acculturation orientation and source of social support. Specifically, the present study investigated the following hypotheses: (a) international students with an Integration acculturation mode would have the lowest level of acculturative stress, while those with a Marginalization mode would have the highest; (b) international students with broad based sources of support, particularly with host nationals and other international students, would report lower levels of acculturative stress; and (c) international students' acculturation mode would correspond to their source of support: Assimilation with host nationals, Integration with all three sources, Separation with home country, and Marginalization with none.

Method

Participants

The current study is intended to increase our understanding of relationships between acculturative stress, acculturation orientations, and sources of social support in international students in the United States. These results could possibly lead to additional interventions being developed by counselors working with international students experiencing acculturative stress, as well as the development of new programs by international student offices to assist international students with the transition to living and studying in the United States.

The final sample for the study was 104 international students enrolled at a medium-sized public, urban university in the Midwest. The participants were from 44 different countries, with 60 (58.8%) participants from Asia, 24 (23.5%) from Europe, 7 (6.9%) from South America, and 3 (3.9%) each from Africa, the Middle East, and North America. Almost half were graduate students ($n=47$; 45.2%), while the rest were undergraduates ($n=57$; 54.8%). There were 64 women (61.5%) and 39 men (37.5%), with a mean age of 25.43 (range 18-42, $SD=5.23$). The participants had been in the United States for a mean of 2.11 years (range 0.17-8 years, $SD=1.78$). A wide range of majors were represented: business (46.1%), social sciences (14.7%), natural sciences (13.7%), humanities (11.8%), and education (9.8%). More than half of the participants reported being in a relationship or married (54.4%), with 91.7% identifying as heterosexual, 3.1% as lesbian or gay, and the remaining 5.2% as bisexual or other.

Measures

Demographics. Information was collected related to demographic characteristics such as: (a) gender, (b) age, (c) academic level (graduate or undergraduate), (d) academic program, (e) relationship status, (f) sexual orientation, (g) length of time in the United States, (h) length of time on current campus, (i) country and region of origin, (j) religion, and (k) ethnicity and race. Respondents were asked about their level of comfort with the English language using three questions (with five point Likert-type scales): (a) What is your present level of English? (*not proficient* to *very proficient*); (b) How comfortable are you communicating in English? (*not comfortable* to *very comfort*); and (c) How often do you communicate in English? (*rarely to never* to *almost always to always*) (Yeh & Insoe, 2003).

Acculturative Stress. Acculturative stress was measured using the *Acculturative Stress Scale for International Students* (ASSIS; Sandhu & Asrabadi, 1998). The ASSIS was developed to measure cultural stress reported by international students living and studying in the U.S. It consists of 36 items scored on a 5 point Likert-type scale, ranging from *strongly disagree* to *strongly agree*. Reliability has been shown in other studies with samples of international students attending college in the U.S. to range from 0.87 to 0.95 (Constantine et al., 2004; Sandhu & Asrabadi, 1994, 1998). The Cronbach alpha coefficient for the current study was .94. Sample questions include: “I am treated differently in social situations”; “I feel lost leaving my relatives behind”; and “I miss the people and my country of origin.”

Acculturation Orientation. Acculturation orientation was measured using a modified version of the *East Asian Acculturation Measure* (EAAM) (Barry, 2001). The EAAM was developed to categorize acculturating individuals into one of Berry’s (1980) four categories: Assimilation, Integration, Separation and Marginalization, as shown in Table 1. Items were changed from referring specifically to Asian students to refer to international students in general. The EAAM consists of 29 items and is scored on a 7-point Likert-type scale, ranging from *strongly disagree* to *strongly agree*. Sample items include: “I write better in English than in my native language” (weighted for Assimilation); “I tell jokes both in English and in my native language” (weighted for Integration); “I prefer going to social gatherings where most of the people are not Americans” (weighted for Separation); and “Generally, I find it difficult to socialize with anybody, people from other countries or American” (weighted for Marginalization). The reliability estimates have ranged from .74 to .85 in studies with Asian international students in the U.S. and Asian immigrants in the U.S. (Barry, 2001; Barry & Grilo, 2002; Barry & Grilo, 2003), although the current study showed Cronbach alpha coefficients of .68, .62, .63, and .82 for the Assimilation, Integration, Separation, and Marginalization orientations, respectively.

Social Support. A modified version of the *Index of Sojourner Social Support* (ISSS) (Ong & Ward, 2005) was used to assess for sources of social support. The ISSS was developed to measure the amount of social support people living and working abroad receive from others. The ISSS consists of 18 items scored on a 5-point Likert-type scale, ranging from *no one would do this* to *many would do this*. Respondents were asked to consider a variety of helpful behaviors and evaluate how likely it would be for someone to perform the helpful behavior. Sample items included assistance with understanding local culture and food, spending time with others, and getting assistance with difficulties. The answer set was modified so that respondents answered each question with regard to host nationals, other international students and co-nationals. This provided data regarding the participants’ social support network for each group separately. Reliability estimates have ranged from .94 to .96 in studies with participants working or studying abroad (McGinley, 2008; Ong & Ward, 2005), with the current study reporting a Cronbach alpha coefficient of .96.

Procedure

After the researchers obtained IRB approval, the international student office at the university assisted with distributing information on the study by emailing all enrolled international students inviting them to participate in an online survey about the challenges confronting international students living and studying in the U.S. and the impact of friends and support. Approximately 480 international students were invited to participate in the study, with 139 (29%) responding. Of this number, 14 (10.1%) were eliminated for failing to complete at least 90% of the items, as well as 5 (3.6%) who answers indicated

stereotyped responses (e.g. scoring all items with a 3). A further 4 (2.9%) were identified as outliers on key variables such as time spent in the United States or markedly elevated scores. As an incentive for participation, 20 \$25 gift certificates were offered, with the recipients randomly selected from among those who chose to enter their contact information on a second webpage created to make sure data remained anonymous.

Results

Preliminary Analyses

All variables were checked for normality of distribution by examining skewness and kurtosis values; the variables had a normal distribution and transformation of the data was not indicated. In addition, analysis of variance (ANOVA) tests revealed no statistically significant differences between levels of acculturative stress by sex, sexual orientation, relationship status, housing, or academic level. Unfortunately, due to the combination of an overall small sample size and group variances varying widely, it was not possible to test for differences according to field of study or regional origin (Tabachnick & Fidell, 2007). Negative correlations ($p < .05$) were identified between acculturative stress and comfort with understanding ($r = -.18$) and communicating in English ($r = -.21$), indicating that less comfort with English was only modestly associated with higher levels of acculturative stress.

Major Analyses

Following the practice of other studies using the mode of acculturation model (Barry, 2001; Berry, Kim, Young, & Bujaki, 1989; Dona & Berry, 1994), participant scores on the modified EAAM were standardized and then categorized according to the highest resulting Z score, leaving the distribution of acculturation orientations as follows: Integration (30.8%, $n=32$), Assimilation (18.3%, $n=19$), Separation (26.0%, $n=27$), and Marginalization (25.0%, $n=26$).

A one-way between-groups ANOVA was conducted to explore differences by acculturation mode on levels of acculturative stress. Results (see Table 2) revealed that there was a significant difference: $F(3, 100) = 10.71$, $p < .01$, $\eta^2 = .24$. Post-hoc comparisons using the Tukey HSD test indicated that students in the Integration group reported statistically significant lower levels of acculturative stress ($M = 3.15$, $SD = .42$) than students categorized in the Separation ($M = 3.54$, $SD = .49$) and Marginalization group ($M = 3.92$, $SD = .67$). Similarly, students in the Assimilation group ($M = 3.47$, $SD = .47$) reported statistically significant lower levels of acculturative stress than those in the Marginalization group. Lastly, students in the Separation group reported statistically significant lower levels than those in the Marginalization group.

Table 2
Mean Level of Acculturative Stress by Acculturation Mode

	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>SE</i>	95% Confidence Interval for Mean	
					Lower	Upper
Assimilation	19	3.47 ^a	.47	.11	3.25	3.70
Integration	32	3.15 ^b	.42	.08	2.99	3.30
Separation	27	3.54 ^{b, c}	.67	.10	3.65	4.19
Marginalization	26	3.92 ^{a, b, c}	.59	.13	3.39	3.61

^{a, b, c} Compared by groups, the mean differences are significant at the 0.05 level.

Pearson correlations were used to determine if there was a statistically significant relationship between acculturative stress and the source of social support. A negative relationship was identified between social support from host nationals and the reported level of acculturative stress ($r = -.35$, $n = 104$, $p < .01$), indicating that higher levels of social support from host nationals were associated with lower levels of acculturative stress.

Table 3
Mean Level of Social Support by Source (Host Nationals, Other International Students, and Home) and Acculturation Mode

	N	Host		Other International		Home	
		Mean	SD	Mean	SD	Mean	SD
Assimilation	19	3.38*	.78	3.04	.85	2.06	.59
Integration	32	3.49*	.61	3.30*	.83	2.59	1.11
Separation	27	2.59*	.61	2.81	.81	2.40	.85
Marginalization	26	2.70*	.51	2.62*	.80	2.31	.87

*By source of support, the mean differences are significant at the 0.05 level.

A second one-way between-groups ANOVA was conducted to explore whether the source of social support differed between participants in the different acculturation modes. Results revealed that there was a statistically significant difference with regards to support from host nationals: $F(3, 100) = 14.56, p < .01, \eta^2 = .30$, and other international students: $F(3, 100) = 3.67, p < .05, \eta^2 = .10$. Post-hoc comparisons using the Tukey HSD test indicated that participants in the Integration ($M = 3.49, SD = .61$) and Assimilation ($M = 3.38, SD = .78$) groups were found to have statistically significant higher levels of support from host nationals than those in the Separation ($M = 2.59, SD = .61$) and Marginalization ($M = 2.70, SD = .51$) groups, while participants in the Integration group ($M = 3.30, SD = .83$) were found to have higher levels of support from other international students than participants in the Marginalization group ($M = 2.62, SD = .80$).

Discussion

This study examined the relationship between international students' levels of acculturative stress as related to their acculturation mode and source of social support. Berry's acculturation model has been used to examine a wide variety of immigrant and minority populations all over the world (Barry & Grilo, 2002; Berry et al., 1989; Dona & Berry, 1994), while much less work has been done testing how the model might apply to international students studying in the United States. Our first hypothesis held that students in the Integration category would report lower levels of acculturative stress than those in the Separation and Marginalization categories. Our findings suggest that this is the case for international students, as has similarly been found with other acculturating groups. Our second hypothesis held that broad based social support, particularly including host nationals, would be associated with lower levels of acculturative stress. This was also confirmed and findings suggest that those with the lowest levels of social support reported statistically significant higher levels of acculturative stress. Lastly, our third hypothesis held that acculturation modes would be associated with specific sources of support; Assimilation with host nationals, Separation with home country, Integration with host nationals, other international students, and home country, and Marginalization with none. This was only partially confirmed, with our findings suggesting that both the Assimilation and Integration modes were associated with higher levels of support from host nationals and that Integration was associated with higher levels of support from other international students. No significant relationships were found with regards to home country support.

International students undergo a wide range of changes as they transition to life and studies in the United States. Although there is a growing body of research on acculturating groups and acculturative stress, questions are starting to be raised about the applicability of this research with international students (Smith & Khawaja, 2011). This study identified one notable difference with the comparatively large number of students with a Marginalization acculturation mode. Previous studies have generally found the Marginalization mode to be rarely endorsed (Ataca & Berry, 2002; Bektas, Demir, & Bowden, 2009; Dona & Berry, 1994). This new finding could be accounted for by the different experience of being an international student, compared with being a member of an immigrant group. Relevant factors may include that international students are granted temporary visas, struggle

with isolation and distance from family and friends, and are under considerable pressure to perform well in a new and demanding academic and cultural environment (Constantine et al., 2004; Misra et al., 2003; Olaniran, 1993). Furthermore, taking into consideration that no statistically significant differences of acculturative stress with regard to different demographic considerations like age, gender, or level of study, implies that as a whole international students have similar levels of difficulty as they are confront with the challenge of studying in the United States. These characteristics suggest that international students experience the process of adapting to life in the U.S. differently from immigrant groups, particularly with regards to the higher rates of marginalization and levels of acculturative stress that were reported.

As previous studies have found with other acculturating groups, the current study found that acculturative stress was associated with both the acculturation mode and level of social support. Consistent with those studies, the participants who were categorized in the Integration and Assimilation modes reported lower levels of acculturative stress. These results suggest that intentionally developing connections to the host country and having higher levels of social support from host nationals are important aspects in minimizing acculturative stress. It is interesting to note that the level of support from host nationals was the one source of social support that differentiated among the four acculturation modes. This implies that a higher level of contact with host nationals is related not only to the acculturation modes but also related to lower levels of acculturative stress.

The finding that participants in the Integration mode were associated with the lowest levels of acculturative stress implies that a cultural adaptation approach incorporating aspects of both the home and host culture is associated with lower levels of acculturative stress. It seems that maintaining connection to the home culture while exploring and developing positive connections to the host culture leads to a decrease in difficulties in cultural adaptation. Additionally, the results indicate that a wider social network, extending beyond both co-nationals and host nationals to include other international students as well, is similarly beneficial in adapting to studying in the United States.

Home country support and an emphasis on maintaining ties to the home culture were not found to be beneficially associated with adapting to studies in the United States. Several studies have identified the tendency of international students to have a large cohort of home country friends (Brown, 2009; Neri & Ville, 2008). These groups were found to emphasize maintaining connection to the home country, which in turn led to a corresponding lack of English language skills and knowledge about the host culture. As these studies have alluded, having primary social connections based in the home country seems to prevent the establishment of stronger ties and adaptability in the host country environment. Extending these considerations, Hendrickson, Rosen, and Aune (2011) found a positive association between host country friendships and increased levels of satisfaction, contentment, and social connectedness, while at the same time diminishing homesickness. Consistent with these findings, emphasizing the development of host country rather than home country social support is an important part of decreasing acculturative stress and encouraging successful adaptation to living and studying in the United States.

As with any research study, several limitations arose that need to be taken into consideration. The study sample was limited due to a low response rate, although this is frequently a difficulty with research with international students (Constantine et al., 2004; Kagan & Cohen, 1990; Poyzrali et al., 2004). The issue of English language ability is always a concern with international populations and raises the question in this particular study as to whether or not participants' language skills are adequate to initiate and maintain significant interpersonal relationships in English. This could skew the distribution of acculturation modes toward the Separation or even Marginalization modes, as well as be associated with increased levels of acculturative stress. These are both important considerations, as well as the challenges of using self-report instruments that could skew study results. Unfortunately these are common concerns in studies involving international students in general.

Moving beyond these limitations will involve additional research into how international students define and develop their connections to the home and host culture. Additional studies could be utilized to gain more insight into the challenges international students face with regards to developing new cultural connections on U.S. campuses while still maintaining connections back home. Quantitative

studies could be used to identify whether or not there are specific areas or aspects of the host culture with which they identify or which might prove to be a basis for greater integration, while qualitative studies could explore the process of balancing the two cultural identities. Further information would also be useful identifying the challenges international students encounter in making more significant social connections with host students.

Somewhat surprisingly, there were not found to be significant statistical differences among different groups of international students. Further studies could be focused on identifying how differences such as academic level, regional origin, and field of study might fit into the experience of acculturative stress and acculturation mode. Lastly, the surprising presence of so many students with a Marginalization mode merits further investigation, in order to ascertain whether this is a generalized difficulty among international students to fit into the host culture or a reflection of the campus where the present study took place.

Implications for Practice

Results of this study point counselors in several different directions in their efforts to be of assistance to international students. In particular, addressing difficulties associated with acculturative stress can be done by helping students: (a) develop more diverse social networks; (b) adapt to local academic norms and expectations; and (c) develop additional ties and connections to the campus and local community.

Encouraging international students to expand their social network beyond students from their countries of origin may help to limit the negative effects of acculturative stress. This is a considerable challenge for international students who come to campuses with large numbers of fellow students from the same country. Although students may find it comforting and easier to make friends and connections with people from the same country, developing social ties with a more diverse group of students is important in adapting to studies and life in the United States. Counselors can assist with this process when counseling international students by actively encouraging the development of wider social networks involving a broader range of nationalities. This may entail assisting students with developing additional social skills and providing guidance on making friends in a U.S. context, as well as giving information about how to meet other people on campus not only in the classroom but also through campus organizations and activities.

Counselors need to be aware of the importance of acculturative stress and the unique challenges this presents to international students. As has been demonstrated in the studies on acculturative stress for international students, academic pressures are an important aspect counselors need to take into consideration. The demand that international students quickly begin thriving in a new academic culture with new expectations is clearly difficult and a major source of stress. Working with students to identify and clarify these expectations can assist with minimizing some of the uncertainty and academic stress. In addition to the organizational, social, and coping skills all university students need, international students can benefit from exploring how these skills can be adapted while taking into account their cultural background and expectations (Sharkin, 2006). Faculty can be included in these efforts by making classroom and academic expectations more clear through class discussions and course information as well as by promoting an open and accepting classroom environment in order to embrace the benefits international student diversity brings to campus.

Lastly, the results of this study indicate that many international students struggle with isolation and marginalization. Counselors can assist their clients to address social alienation by helping students to be more engaged and to be active members of the campus and larger community. An important aspect of this will be to identify campus and community groups and organizations where students are more likely to encounter host national students. Student affairs personnel and international student advisors can assist by developing programs that emphasize opportunities for cross-cultural contact by developing student mentor programs to engage a broad range of students in welcoming international students to campus, as well as building additional partnerships through host friend and family programs

in the local community. Campus efforts could also be made to involve domestic students in order to facilitate contact through on-campus host friend programs, conversation circles, or clubs that directly promote contact between U.S. students and international students. Counselors can also assist international students to identify relevant community organizations and encourage exploring community resources.

Faced with a wide array of challenges and difficulties, international students can benefit greatly from the support and assistance college campuses can provide. Counselors can play a valuable role in assisting students by identifying areas of difficulty as well as developing additional strategies for adapting to a new academic and cultural environment. By helping to promote a more welcoming and inclusive campus and community environment, the entire campus community can work together to be an important resource in assisting international students to have a positive and productive stay in the United States.

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