

IMMIGRANTS AND ATTACHMENT STATUS: RESEARCH FINDINGS WITH DUTCH AND BELGIAN IMMIGRANTS IN CALIFORNIA

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Although immigrants are an extremely diverse group, adults who emigrate nearly always experience separation from family of origin, extended family and country. This research examines state of mind with respect to attachment, using the Adult Attachment Projective (George & West, 2003; George, West, & Pettem, 1999), and compares the attachment status of adult Californians who still live near their family of origin in the area in which they were born and raised (m 12, f 18) to that of individuals who emigrated from the Netherlands and Belgium as adults to California (m 29, f 41). The findings showed a significant relationship between being an immigrant and unresolved attachment status ($n= 100$, $X^2 = 5.81$, $p < 0.0160$) unrelated to time in the US, reason for immigration, being married or single. Implications and limitations of these findings are discussed.

Today in the United States, immigrants are the parents of over 20% of children in the country (Landale & Oropesa, 1995). At the University of California, Berkeley in 2002, 65% of incoming freshmen had at least one foreign-born parent (Schevitz, 2002). Many immigrants and their children are quite successful in American society (Simon, 1995; U.S.B.O.L., 2000), yet the four different

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stages of the process (premigration, transit, settlement and postimmigration conditions) can become traumatic under conditions related to language barriers, discrimination and poverty (Perez-Foster, 2001). Risk factors in the early years in the new country include unemployment, lack of familiarity with the environment, and not having relatives there (Aroian & Norris, 2002) while later on the factor of not being married or otherwise attached appears to contribute to continued depression (Beiser, 1988). Poorer mental health in the second generation, that is, children of immigrants (Abouguendia & Noels, 2001) appears related to acculturation and alienation from family. Mental health improvements over time are due less to economic prosperity than to improved social networks and attachments.

Attachment theory suggests that early on in life, before we can talk, we form internal working models about how reliable, responsive and understanding our caregiver is (Bowlby, 1969/1982). These models continue to inform our behavior later in life, and become active when we experience separation or threat of loss from significant others, and during times of stress, frustration, or anger. Attachment is formed very early and is a universal (Main, 2002), psychobiological process in that attachment system activation is related to stress hormones (Fox & Card, 1999). Generally four attachment statuses are recognized: one is secure attachment, also called autonomous (F), the other three are insecure and are called dismissive (Ds), preoccupied (E) and unresolved (U). They are called *attachment representations*, or *states of mind with respect to attachment* by clinical and developmental psychologists (Arindell, Emmelkamp, Brilman, & Monsma, 1983; Choi, Lee, & Kim, 1998; de Haas, Bakermans-Kranenburg, & van IJzendoorn, 1994; George & Solomon, 1999; Main, 1999). In the case of secure attachment we have received consistent, sensitive caregiving, and later tend to respond in confident and flexible ways to ourselves and others. The three categories of insecure attachment develop in different ways in early childhood: Dismissive attachment is developed when the caregiver rejects the child's feelings of need, fear or anger, which the child, in turn, learns to suppress in order to get along with the attachment figure(s). Preoccupied attachment develops in response to inconsistent, even needy caregiving causing the child to have increased sensitivity to fear, anger or neediness in order to stay connected to the attachment figure. The fourth category, unresolved attachment, results from threats of being abandoned, hurt or ignored by our attachment figures when we are most needy, or as a consequence of not being able to do anything about loss or hurt.

TABLE 1
ADULT ATTACHMENT STATUS OVERVIEW

Adult attachment status	Implicit assumptions about attachment relationships	Mental rules to handle attachment activation
Secure (F)	Needs for safety and security are acceptable and recognized. Support is there when needed.	Express what is needed or feared, because support is likely. Problems can be addressed and processed.
Dismissing (Ds)	Needs for safety and security are ignored, rejected or disapproved of. Support is not there when needed.	Do not express what is needed or feared. Disassociate from the source of anxiety. Do not depend on others.
Preoccupied (E)	Needs for safety and security are sometimes ignored, but sometimes care is intrusive. Sometimes the caregiver needs help instead of giving help. Care and security are inconsistent.	Be extra sensitive towards attachment figures as they are not dependable. Worry about them.
Unresolved	There is potential for isolation when needy, or even danger from those on whom you depend. There is the loss of those you need most. There is danger from those you need.	There is no resolution to a dangerous situation. Sometimes you are left to fate, isolated and/or threatened. There is no time to think or feel, and there are strong emotions that can overwhelm.

Although attachment status as developed in childhood becomes more stable as we age, changes in the way we feel treated can shift our attachment organization in a more or less favorable direction throughout life (Bowlby, 1988). Attachment status can be affected at any stage in life by profound influences such as loss, separation and trauma. In general we respond to separation with one of the three organized attachment statuses (secure, dismissive or preoccupied), unless the experience is traumatic such as abuse, loss or disaster, in which case we all exhibit signs of the fourth status, disorganized attachment. After a certain time, however, most of us reorganize our attachment representation through emotional change and cognitive restructuring. Bowlby notes that “this redefinition of self and situation is no mere release of affect but a cognitive act on which all else turns” (1982, p. 94), after which we revert to the organized status we had, that is, secure, dismissive or preoccupied.

Attachment theory views exploration as a normal, voluntary separation and a sign of secure attachment:

Exploring the environment, including play and varied activities with peers, is seen as a third basic component and one antithetic to attachment behavior. When an individual (of any age) is feeling secure he is likely to explore away from his attachment figure. When alarmed, anxious, tired or unwell he feels an urge towards proximity. (Bowlby, 1988, p. 121).

We apply Bowlby's perspective on exploration to emigration by viewing travel to other countries, in this increasingly international world, as a normal behavior the end result of which may be permanent residence in another country. We want to explore as long as we feel we have a secure base to return to, and we generally explore within boundaries of the familiar: "It is still too little realized, perhaps, that the individuals of a species...usually spend the whole of their lives within an extremely restricted segment of it, known as the home range." (Bowlby, 1973, pp. 146-147). While leaving one's country of origin is often exploration into what appears to be the familiar based on previous exposure to brochures, movies and books, being an immigrant goes further; it results in life characterized by separation from country, culture, extended family and (often) family of origin.

Arredondo-Dowd (1981) has proposed how attachment theory should serve as a model for understanding personal loss and grief as a result of immigration, and others have argued that whether emigration is voluntary or not, it is accompanied eventually by loss, grief and even trauma (Levenbach & Lewak, 1995; Marlin, 1992, 1994; Mendlovic, Ratzoni, Doron, & Braham, 2001). Given the characterization of immigration as a traumatic event, as well as existing evidence that ongoing loss and separation may relate to unresolved attachment status (Bowlby, 1969/1982; Hesse & van IJzendoorn, 1998; Main, 1996; Sable, 1995; van IJzendoorn, Feldbrugge, Derks, & de Ruiter, 1997), we tested as **hypothesis 1**: whether immigrants are characterized more by unresolved attachment than nonimmigrants are. As **hypothesis 2**: we examined whether being with an attachment figure (being married) was related to lower rates of unresolved attachment, and as **hypothesis 3**: whether length of stay in the new country decreased the rate of unresolved attachment.

Hazan and Shaver (1990) showed that those with secure attachment view exploration (work) as equally important to home base (personal relations), while those with dismissive attachment assign work a higher priority, and those with preoccupied attachment give more priority to personal relations. We have argued that the initial emigration process is one of exploration. We tested as **hypothesis 4** whether reason for emigration was linked to attachment status, in that those with dismissive attachment would more frequently report emigrating for education and work, while those with preoccupied attachment would emigrate for love, and those with secure attachment would emigrate more often as a result of tourism.

METHOD

MEASURES

Research participants were assessed for attachment state of mind with the Adult Attachment Projective (AAP; George & West, 2003; George, West, & Pettem, 1999), a series of eight drawings about which the individual is asked to tell a story. He or she is asked to say (1) what is happening, (2) what led up to this situation, (3) what might happen next, and (4) what the story subject might be feeling or thinking. The entire set of 8 stories is taped, then transcribed, and decoded by a trained, reliable coder to assess the subject's state of mind with respect to attachment. The instructions are similar to those given with administration of the Thematic Apperception Test (Murray, 1943). Coding AAP story transcripts for attachment status requires a lengthy training and acquiring reliability as a coder. The process of coding is quite detailed and systematic. A summary of the process may be helpful at this point.

The AAP coder first assesses the coherence of the stories, based on manner of storytelling, lack of personal relations brought up in the story, as well as the quantity and quality of the story. This is not unlike coding rules for AAI transcripts that the storyteller will adhere to Grice's principles of cooperative discourse Quality, Quantity, Relation and Manner (Hesse, 1999). Next the coder assesses other aspects of attachment that are revealed in the story such as the character acting on his or her own behalf and being connected to others which can provide evidence of an internalized secure base, and creating the story so others are physically near to – or described in terms of – oneself, but only in those stories about drawings with one individual in them. This is followed by deciding the level of synchrony (a feature of a goal-corrected relationship) in the stories about drawings with more than one person. The coder also examines all stories for defensive processing against attachment system activation, which are infrequent and mild in stories evidencing secure attachment. These defensive processing markers are hallmarks of insecure attachment. Words and themes in the story that show deactivation of attachment-related anxiety indicate dismissive attachment. Cognitive disconnect markers – signs of hyperactivation of attachment anxiety, such as indecision, worry and emotionality – are signs of preoccupied attachment status. Finally the stories are examined for segregated systems markers – indicators of danger, isolation and fear – which when they are not resolved, indicate unresolved attachment.

The AAP assesses the same four adult attachment status classifications as the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1984, 1985, 1996), secure, dismissive, preoccupied and unresolved. These are, as is customary with the AAP, also sometimes abbreviated as F (secure), Ds (dismissive), E (preoccupied), and U (unresolved).

The AAP was tested on individuals drawn from samples in the United States and Canada (see George & West, 2001 for details). Individuals were predominantly middle-class, Caucasian women ranging in age from 19-65. Participants in these samples represented community and clinical populations. The authors report strong interrater reliability of .97 for secure versus insecure classifications, and of .92 for the four major attachment groups of secure, dismissive, preoccupied and unresolved. Construct validity evidence for the AAP was evaluated based on the convergence between AAP and the AAI classifications. Convergence between the AAP and the AAI for the four attachment classifications of secure, dismissive, preoccupied and unresolved was .94 ($kappa = .86$,) (George & West, 2001, 2003). Information on reliability and validity of AAP studies, is also reported on www.attachmentprojective.com, which shows one of the AAP drawings as well.

Although the AAI has more validity evidence than the AAP, we found that there was enough preliminary evidence, along with some practical considerations, to warrant selection of the AAP for the research instrument. The AAP takes less time to administer and score than the AAI which takes from 4 to 10 hours to administer, transcribe, and code. The AAP takes only 2 to 4 hours per transcript and measures the same attachment representation as the AAI.

In addition to the assessment of attachment representation above, both groups of research participants completed questionnaires on socioeconomic background, including age, gender, education, income, religion, and ethnicity. Immigrants also provided information on length of time in the US, marital status and reason for immigration.

PARTICIPANTS

Lower socioeconomic status is correlated with dismissive and unresolved attachment status in some studies (van IJzendoorn, & Bakermans-Kranenburg, 1996) but not in others (Barnett, Kidwell, & Leung, 1998). We invited participation from a middle-class adult immigrant group. We favored a sample population with characteristics that other studies had found to be associated with a lower rather than a higher rate of unresolved attachment, so that any possible finding of a high proportion of unresolved attachment among immigrant participants in our study might be more meaningful. Furthermore, since ethnic and racial minority status also correlates with socioeconomic status, we selected a group which differed as little as possible from the Caucasian middle class in the US except that they were immigrants.

We selected the Dutch and Belgian immigrant group which makes up 1.2% of the Californian population (Modarres & Aleman, 2003). Participants were then recruited via Dutch and Belgian organizations in the San Francisco Bay area, and with the assistance of the Netherlands Consulate in San Mateo,

California. A letter inviting people to participate in the research, accompanied by an introductory letter from the various organizations, was mailed out by these organizations and the consulate. They explained that the research was entirely voluntary. A total of 400 letters were sent out. When participants responded, they were screened to ensure they were first generation immigrants, who had come here as young adults or adults. They were given a confidential participant number, and an initial research participant introduction letter which explained the research steps in further detail to ensure informed consent. Confidentiality and anonymity were guaranteed. A total of 75 immigrants agreed to participate in the project.

Participants for a comparison sample consisting of adult Californian individuals who had been born and raised in the San Francisco Bay area and who were still living there, were recruited by emailing over 1,400 invitations to a convenience sample of people in San Francisco Bay area corporations, city government offices, and church groups. When potential participants responded, they were screened to ensure that they were born and raised in California, were still residing within driving proximity to family of origin, that their parents were not immigrants, but that otherwise they were similar to the immigrant group in socioeconomic profile. They were given a participant introduction letter explaining the research, and informed consent forms to sign. Thirty Californians fitted the criteria established for the comparison sample, perhaps confirming the common perception that most California residents have migrated from other localities.

Responses among the Dutch and Belgian immigrant group were more forthcoming than among Californians born and raised in the area. This may have been related to the strong support shown for the research by the Dutch Consulate and by the leaders of the Dutch and Belgian social organizations in the Bay area. Many of this group of participants said they were happy we were researching how their stories compared to those of nonimmigrants, as they felt rather “onzichtbaar” or invisible as immigrants, considered themselves pretty unremarkable and focused on “aanpassen” or fitting into society. Perhaps the concept of attachments and telling the story of differences between immigrants and nonimmigrants was just not as appealing to nonimmigrants.

PROCEDURES

Subjects in both groups were given the AAP at either a private psychotherapy office, or the participant’s home or office. We felt that in order to broaden the participant group, it was important to include those participants who objected to coming to the researcher’s office. The AAP interview was conducted by the same researcher in all instances. All subjects were told this was a study about immigrants and the stories they tell, including those about their relationships to

significant others. In order to ensure confidentiality each participant was asked to put a participant number (issued at the time of initial agreement to participate) on the audiotape used to record individual responses to the AAP test items. Participants were also provided with explanations of the research both verbally and in writing.

There was a total of 105 AAP transcripts, of which 75 were immigrants' transcripts and 30 were native Californians' transcripts. Of the 75 immigrant AAP transcripts, 5 tapes were eliminated from the research due to bad audio quality or other problems like not being able to decipher a word that the coder found essential in order to be able to determine attachment status. We had 70 immigrant (m 29, f 41) and 30 native (m 12, f 18) transcripts. After the AAP responses were taped, they were transcribed by the interviewer and then decoded by an experienced, highly reliable coder, who was one of the developers of the AAP. The coder was uninformed as to the participant's gender, age, or immigrant status, saw only a participant number and the text of the transcript and was also "blind" to possible hypotheses on the researchers' part. The AAP administrator was trained in administration protocol for the AAP, but at that point was still untrained in coding transcripts for attachment status, thus avoiding the possibility of influencing the assessment outcome by being knowledgeable about anything in the subject's manner of answering the questions that might affect AAP coding. There were 70 immigrant AAP results and 30 native Californian AAP results.

RESULTS

SOCIODEMOGRAPHIC COMPARISON

The sociodemographic profiles of those born and raised in the San Francisco Bay area, and of the immigrant group are described and compared in Tables 2 through 6. Although the immigrant sample (40% between 61 and 75 years) was significantly older than the native group (47% between the ages of 46 to 60), chi-square testing showed that age was not significantly related to attachment status (see notes to Table 2). The immigrant group had significantly higher education levels compared to the native group ($n=90$, $X^2=12.80$, $p<0.0123$, see Table 3). The majority of the immigrants had education of a Master's degree (high school plus six years), and the native group a Bachelor's degree (high school plus four years). However, education was not found to have a significant relationship with attachment status (see notes to Table 3). The majority of both groups had incomes between \$50,000 and \$100,000 per year, but nearly 30% of the immigrants earned more than \$100,000, whereas 10% of the nonimmigrants earned more than \$100,000. On the whole, income levels for the immigrant group were higher than for the native group but not at a significant level (see Table 4).

TABLE 2
AGE VS. IMMIGRANT STATUS

Age group	Immigrants <i>n</i> 60 ^a		Natives <i>n</i> 30	
20-35	7	12%	8	27%
36-45	13	22%	6	20%
46-60	9	15%	14	47%
61-75	24	40%	1	3%
76-91	7	12%	1	3%

^a of the 70 immigrant participants, 10 did not answer this item question.

Note: Although there was significant difference between immigrants and natives, $X^2 = 21.82$, $p < 0.0002$ ^{bcd} we found no significance of age to attachment status in 1-way ANOVA, $f = 0.74$, $p = < 0.5307$.

^b Age group vs. attachment F, Ds, E, U: $X^2 = 18.69$, $p = < 0.0964$ ($n = 90$)

^c Age group vs. attachment Secure/Insecure $X^2 = 4.49$, $p = < 0.3436$ ($n = 90$)

^d Age group vs. attachment Resolved/Unresolved: $X^2 = 6.86$, $p = < 0.1436$ ($n = 90$)

TABLE 3
EDUCATION VS. IMMIGRANT STATUS

Education	Immigrants <i>n</i> 60 ^a		Natives <i>n</i> 30	
Hs	1	2%	3	10%
Hs + 2	14	23%	3	10%
Hs + 4	17	28%	15	50%
Hs + 6	18	30%	9	30%
PhD/M.D.	11	18%	0	0%

Note: $X^2 = 12.80$, $p < 0.0123$ ^{cde}

^a of 70 participants, 61 returned the questionnaire but one did not answer the education question

^c Education vs. attachment (F, Ds, E, U) $X^2 = 11.80$, $p = < 0.4621$ ($n = 90$)

^d Education vs. attachment secure/insecure $X^2 = 3.82$, $p = < 0.4308$ ($n = 90$)

^e Education vs. attachment resolved/unresolved $X^2 = 8.86$, $p = < 0.0648$ ($n = 90$)

TABLE 4
INCOME VS. IMMIGRANT STATUS

Income	Immigrants <i>n</i> 57 ^a		Natives <i>n</i> 30	
\$0-25k/yr	4	7%	5	17%
25-50k/yr	16	28%	6	20%
50-100k/yr	18	32%	16	53%
100-150k/yr	14	25%	2	7%
>150k/yr	5	9%	1	3%

Note: $X^2 = 8.92$, $p < 0.0631$

^a 70 immigrant AAP were coded, 61 of those returned the questionnaire, and of those 61 persons 4 did not answer the income question.

The majority of both immigrant and native groups reported themselves to be Christian (74% and 90%, respectively). The immigrant group felt less affiliated with a religious orientation. One-fifth of the immigrant group, but only three percent of the nonimmigrant group, reported no religion (see Table 5).

TABLE 5
RELIGION VS. IMMIGRANT STATUS

Religion	Immigrants <i>n</i> 62 ^a		Natives <i>n</i> 30	
Christian	45	74%	27	90%
Jewish	2	3%	2	7%
Moslem	1	2%	0	0%
Buddhist	1	2%	1	3%
Other/none	13	21%	1	3%

Note: $X^2 = 5.91$, $p < 0.1160$

^a of the 70 immigrant subjects, 62 returned questionnaires with SES questions answered.

The immigrant group was 98% Caucasian, and 2% Asian (mostly of Indonesian descent) with significantly less diverse ethnicity than the non immigrant group ($n=89$, $X^2=15.38$, $p= <0.0040$, see Table 6), of whom 73% were Caucasian, 3% Asian, 3% Native American Indian, 17% African American and 7% Latino. Ethnicity was not found to have a significant relationship with attachment status (see notes to Table 6).

TABLE 6
ETHNICITY VS. IMMIGRANT STATUS

Ethnicity	Immigrants <i>n</i> 59 ^a		Natives <i>n</i> 30	
Caucasian	58	98%	22	73%
Asian	1	2%	1	3%
Latino	0		2	7%
Afr. Am.	0		5	17%
Nat. Am.	0		1	3%

Note: $X^2 = 15.38$, $p < 0.0040$ ^{bcd}

^a of the 70 immigrant subjects, 59 answered the ethnicity question

^b ethnicity vs. attachment F,Ds,E,U $X^2=9.62$, $p=<0.6494$ ($n=89$)

^a ethnicity vs. attachment secure(F)/insecure (Ds,E,U): $X^2 = 1.31$, $p=<0.8953$ ($n=89$)

^d ethnicity vs. attachment resolved (F,Ds,U)/unresolved (U) $X^2 = 1.14$, $p=<0.8878$ ($n=89$)

The immigrant group had been in the US for an average of 30 years, with a range from 2 to 62 years. Nine of the 70 participants did not respond to the question on length of stay or to the question on reason for immigration. Of the

61 persons who provided reason for immigration, 22 came for work, 13 for love, 10 for tourism, 6 for education and 10 for necessity. There was a substantial emigration from The Netherlands and Belgium after World War II. For a number of years, starting in 1950, the Dutch government's financial incentives boosted emigration to Canada and the US (vanderMey, 1983). Baggage, including furniture, was shipped free, and personal travel paid for, but the emigrants had to stay abroad for at least two years or repay the cost of the passage. The program ended around 1963 (personal discussion with participants). There has been another wave of immigration during the last 20 years related to the Silicon Valley near San Francisco becoming a center of the high-tech boom (personal discussions with participants). Of those who responded that they emigrated from necessity, two reported escaping the Nazi regime but others declined to discuss. Many of the earlier immigrants came by boat and were provided with little information, whereas the more recent immigrants had a lot of preparation.

ATTACHMENT STATUS FINDINGS

Overall, the distribution of the four attachment classifications in the immigrant group ($n=70$) was 14% secure, 36% dismissive, 6% preoccupied and 44% unresolved, and in the native group ($n=30$) it was 23% secure, 50% dismissive, 10% preoccupied and 17% unresolved (see Table 7). Thus, the immigrant group had a lower percentage of securely attached individuals (14% vs. 23%), a lower percentage of preoccupied individuals (6% compared to 10%) and a lower percentage of people with dismissive attachment (37% vs. 50%), but were much higher in unresolved attachment (43% vs. 17%).

TABLE 7
ATTACHMENT F, Ds, E, U vs. IMMIGRANT STATUS

Attachment status	Immigrants $n=70$		Natives $n=30$	
F	10	14%	7	23%
Ds	26	37%	15	50%
E	4	6%	3	10%
U	30	43%	5	17%

Note: $X^2 = 6.52$, $p < 0.0887$

When the two attachment classifications of secure vs. insecure (which comprises dismissive, preoccupied, and unresolved) were compared against immigrant versus native status (see Table 8), there was no significant relationship ($n=100$, $X^2=0.66$, $p < 0.4160$). Immigrants were more insecure, but not significantly so. We also examined the two groups on the three categories of insecure attachment; dismissive, preoccupied and unresolved.

TABLE 8
ATTACHMENT SEC/INSEC VS. IMMIGRANT STATUS

Attachment status	Immigrants <i>n</i> 70		Natives <i>n</i> 30	
Secure (F)	10	14.3%	7	23.3%
Insecure (Ds,E,U)	60	85.7%	23	76.7%

Note: $X^2 = 0.66$, $p < 0.4160$

TABLE 9
ATTACHMENT DISMISSIVE AND NONDISMISSIVE VS. IMMIGRANT STATUS

Attachment status	Immigrants <i>n</i> 70		Natives <i>n</i> 30	
Dismissive (Ds)	26	37%	15	50%
Nondismissive (F,E,U)	44	63%	15	50%

Note: $X^2 = 0.95$, $p < 0.3290$ (Corrected for continuity)

TABLE 10
PREOCCUPIED ATTACHMENT AND IMMIGRANT STATUS

Attachment status	Immigrants <i>n</i> 70		Natives <i>n</i> 30	
Preoccupied (E)	4	5.7%	3	10%
Not preoccupied (F,Ds,U)	66	94.3%	15	90%

Note: $X^2 = 0.12$, $p < 0.07323$ (Corrected for continuity)

We examined whether or not the differences in dismissive attachment between the immigrant group and the native Californians shown in Table 7 were significant. Dismissive attachment status was more frequently found among native Californians (50%) than among immigrants (37%), but this was not a significant difference ($X^2=0.95$, $p= <0.3290$, see Table 9). And although the immigrant group also had a lower percentage of people with preoccupied attachment, we found no significant difference between immigrants and non-immigrants with respect to preoccupied attachment status ($X^2=0.12$, $p= <0.7323$, see Table 10)

Hypothesis 1 We tested for differences in unresolved attachment between immigrants and nonimmigrants by dividing AAP results into the two categories of resolved (including the secure, dismissive, and preoccupied) and unresolved attachment status. When we compared immigrant against nonimmigrant status using a chi-square we found a significant relationship between unresolved attachment status and being an immigrant (see Table 11) ($n= 100$, $X^2=5.81$, $p=< 0.0160$). These results support the first hypothesis that the immigrant group has more unresolved attachment than the nonimmigrant group does.

TABLE 11
ATTACHMENT RESOLVED/UNRESOLVED VS. IMMIGRANT STATUS

Attachment status	Immigrants <i>n</i> 70		Natives <i>n</i> 30	
Resolved (F,Ds,E)	39	55.7%	25	83.3%
Unresolved (U)	31	44.3%	5	16.7%

Note: $X^2 = 5.81$, $p < 0.0160$ (Corrected for continuity)

TABLE 12
ATTACHMENT BY REASON FOR IMMIGRATION (N 61)¹

Att	Work	Love	Tourism	Educ	Necc	Tot
Secure	4 (3.6)	1 (2.1)	3 (1.6)	0 (1.0)	2 (1.6)	10
Ds	7 (8.3)	6 (4.9)	4 (3.8)	3 (2.3)	3 (3.8)	23
E	3 (1.1)	0 (0.6)	0 (0.5)	0 (0.3)	0 (0.5)	3
U	8 (9.0)	6 (5.3)	3 (4.1)	3 (2.5)	5 (4.1)	25
Tot	22	13	10	6	10	61

Note: $X^2 = 9.83$, $p = 0.6313$

1: 9 of the 70 did not answer.

Hypothesis 2 that having an attachment figure would be related to attachment status was not confirmed. Being married or not was found unrelated to attachment status. Of the 70 participants, 55 answered whether they were married (39), or single (16). Of the 16 who were single, only three said they were divorced or widowed. Of those three, one was unresolved, one secure and one dismissive. Using a chi-square, we found no relation between being married or not and any of the four attachment statuses ($X^2 = 1.27$, $p = 0.7369$) or to being organized or not with respect to attachment ($X^2 = 0.24$, $p = 0.6263$, corrected for continuity).

Hypothesis 3 that length of stay in the US would be related to attachment status was not supported. Length of time in the U.S. (average 30.5 years for resolved individuals and 30.4 years for unresolved) was unrelated to attachment organization using a *t*-test (t (59) 0.01, $p = 0.9946$, two tailed).

Hypothesis 4 that attachment status was related to reason for immigration was not supported ($X^2 = 9.83$, $p = 0.6313$, n 61, see Table 12). Secure individuals reported coming for tourism and work more often than expected, and did not report coming for education. Dismissive individuals, however, reported emigrating for work less often than expected and for love, tourism, and education more often than expected. The three preoccupied individuals all came for work. Among the unresolved group, necessity was reported as the reason for emigration more often than expected, with both tourism and love given as the reason less frequently than expected.

DISCUSSION

To our knowledge this is the first study to examine attachment status of immigrants, although other studies have been done relating to acculturation (Berry, 2001) attitudes to attachment style (Handojo, 2000; van Oudenhoven, 2005) using Bartholomew's self-report measure of attachment (Bartholomew & Horowitz, 1991; Bartholomew & Perlman, 1994). This is the first study using the AAP to compare adult immigrant attachment status with that of adults who are currently living near their family of origin in the area where they were born. The main finding was that the immigrant group has a significantly higher proportion of individuals with unresolved attachment status, unrelated to years in the US, or to being with an attachment figure or to reason for immigration. This supports previous assertions that immigration can be traumatic (Arredondo-Dowd, 1981; Levenbach & Lewak, 1995; Marlin, 1992, 1994; Mendlovic et al., 2001), and that ongoing loss and separation may relate to unresolved attachment status even for adults (Bowlby, 1969/1982; Hesse & van IJzendoorn, 1998; Main, 1996; Sable, 1995; van IJzendoorn et al., 1997). While it is unclear from this study whether or not unresolved attachment is related to abuse, loss, separation or isolation, it appears to be related to immigrant status with this sample.

This study's findings showed no relationship between attachment status and stated reason for immigration. The hypothesis was based on the findings of Hazan and Shaver (1990) that work is a more important motivator for those with dismissive attachment and that personal relations dominate for those with preoccupied attachment. Others have shown, however, that immigrants may not be clear about the reason for immigration. Schmiedeck (1975) showed that it was an accumulation of smaller decisions and circumstances that led eventually to becoming an immigrant.

The high proportion of dismissive attachment in the sample in this study has been found in other samples using the AAP which consisted not of immigrants and native Californians, but of University of California college students. There was a nearly identical percentage of dismissive attachment status in the college student sample (47%) (personal communication with Carol George, December 2, 2003) as there was in this study's nonimmigrant sample (50%). This finding might be related to characteristics of a self-selected population for our study. Because participants volunteered for this study there is the possibility that individuals who show an interest in taking part in research about relationships comparing immigrants' and nonimmigrants' stories, might interpret such participation as an opportunity to demonstrate competence. This might be especially attractive to those with dismissive attachment and thus a greater interest in idealized attachment relationships might become evident.

The United States is a country in which immigration and migration have become the norms on which the culture is based. For many decades now immigrants have made up between 8% and 13% of the population (Simon, 1995) and our study was done with an immigrant group comprising only 1.2% of the California population (Modarres & Aleman, 2003). There is a clear need to compare other immigrant groups in the context of attachment status.

Also of interest may be further studies including pre- and postseparation attachment status with nonimmigrant individuals, such as college students, who move away from their family support system within the United States. It is unclear if the current findings will be replicated with individuals who work abroad for long periods of time in the service of government or international corporations. Further study is indicated of how long-term separation from attachment figures and familiar surroundings may be related to the attachment status of adults.

This study is limited by lack of data on the premigration attachment status of the immigrant group. Possibly some were unresolved with respect to attachment before emigration. After all, although the average length of stay in the US was 30 years – indicating arrivals in the 1970s – the range of stay varied from 1 to 62 years. Thus, the earlier arrivals began during World War II, a traumatic time for some. The data for this study were collected from March through to September 2003, when the Iraq/US war had just begun. For some individuals participating in the study who left war-torn Europe during and after World War II it is possible that the horror of that time was coming to life again at the time of AAP administration. As well, continued separation and isolation from the environment and family of origin for this study's immigrant sample may constitute an attachment-related risk evidencing itself in the high proportion of participants with unresolved status.

The results of this study point to the usefulness of further attachment research with other immigrant groups, as well as with pre- and postimmigration populations. Clearly, other avenues of research that explore the variables affecting the interaction between immigration and attachment status for adults and children would be useful.

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