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**To Return or Not to Return?**  
Politics Vs. Economics in China's Brain Drain

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## Introduction<sup>1</sup>

Beginning in the 1970s, China's leaders made a strategic decision to send Chinese scholars overseas for academic and scientific training. The goal was to compensate for the years lost through the Cultural Revolution by training a new generation (or retraining an older generation) of researchers and teachers and through these exchanges to catapult China into the top ranks of the global scientific community.

It was easy to find Chinese scholars interested in going abroad; the trick was to get them to return. In the early years of the "open policy in education," China's return rate was quite high. Sending primarily advanced or mature scholars, with established careers and families in China, universities and research labs gained extraordinary benefits from these educational exchanges (Lampton, 1986; Chen and Zweig, 1993). But as the 1980s wore on, the ranks of returnees dwindled. The military assault on Tiananmen Square on June 4th, 1989 transformed the "brain drain" into a veritable avalanche. Many Western governments, responding to howls of protest by mainland Chinese in their midst and their own citizens of Chinese extraction, allowed Chinese students and scholars to extend their stays. Over 50,000 Chinese students and scholars became permanent residents of the United States; over 10,000 secured working rights in Canada; and in Australia, over 20,000 Chinese students were accorded an opportunity to stay, although the longevity of that commitment is in some doubt.

As the political fallout of June 4th recedes and the post-Deng era approaches, are Chinese students and scholars planning to return, and if so, in what numbers? What motivates people to stay or return--politics, economics, personal development, or family factors? If economics, then more immediate changes, such as the current economic boom in China, could increase the return rate; if people's primary concerns are political instability and the lack of freedom, then economic

growth without political liberalization or stability will attract fewer returnees. Using bivariate and multivariate analysis, and based on interviews with 273 Chinese students, scholars, and professionals in the workplace conducted in 1993 in several American cities, this paper seeks to explain people's views about returning, focusing specifically on four key variables: economics, politics, family, and career opportunities. The study also assesses the role of background variables such as sex, visa type, age, and social background on the decision to return or not to return to China.

## **Explaining the Brain Drain**

### *Cross-national Surveys*

Cross-national studies have found a set of relatively consistent factors that "push" people out of their homeland and "pull" them into the developed world (Otieza, 1968). Most studies see the low level of economic and political development in the Third World "pushing" academics and other professionals out, while the resources and benefits of the developed world "pull" them in. Other factors include professional issues (mobility, logistical support), economic conditions (including housing and salaries), friends and family, and political stability and freedom. In any case it is often the "comparison of the potential migrant's situation in his country or origin with the situation of his peers in the country of destination that is critical to the decision of the potential migrant" (Rao, 1978). Individual factors are important as well. According to Glaser, "level of income is not the strongest determinant of a decision to return;" instead, social origin (or social class), and the ability to adjust to foreign social and work conditions affect the individual decision to stay abroad (Glaser, 1978). Also, political culture may be important. Less

personalized performance review systems, which decrease the importance of personal ties in determining promotion, makes the West more attractive to people from traditional states (El-Saati, 1979).

Some studies see the roots of the brain drain in the political economy of the global educational system. Third World scholars who employ Western methodologies gravitate to the developed world, where their skills and perspectives are recognized and valued (Hayhoe and Henze, 1984). Or the imbalance between the number of people trained in the developing country and the limited opportunities that exist in that country drive people out (Sanchez-Arnau and Calvo, 1987). On the other hand, recessions in the developed world that shrink job markets should decrease the penchant for migration and for staying overseas (Huang, 1988).

The experience of Taiwan which shares aspects of China's culture and society, had a low level of economic and political development, and experienced a very serious brain drain, could illuminate China's future development. From 1950 to 1980, 80,000 university graduates left Taiwan to study abroad (King, 1988), and only five of every 100 university graduates who went abroad during the 1960s for advanced studies returned to live in Taiwan. In 1967 alone, 2,109 professional Taiwanese migrated to the United States (Ruth, 1970). Moreover, once these students left, they left for good. An estimated 86 percent of Taiwanese science students changed their visa status from student to immigrant in 1967, compared to 46 percent from the rest of the developing world. Why? In a 1971 survey, scholars reported that better facilities, higher salaries, a more intellectual atmosphere, more political freedom, and more academic freedom were pulling them to the United States (Kao, 1971). By the 1980s, low salaries, a lack of political and

economic freedom, and a poor intellectual atmosphere were still pushing people to leave Taiwan (Chang, 1992).

But why people leave may be different from why they stay abroad. In the early stages of South Korean outmigration, economic factors were most important; but after Korea's economy strengthened, psychological and emotional factors kept people in the United States. Also, once people graduated, having children who had grown up in the United States and who might not be able to readjust to Korean society became an important reason for staying (Song, 1991).

#### *Findings of the Literature on the Chinese Brain Drain*

Numerous factors have been found to influence China's brain drain including politics, jobs, family, problems of readjustment, and economic issues. Orleans showed that the 1987 "anti-bourgeois liberalization" campaign and China's difficult work environment decreased the number of returnees (Orleans, 1988). In Chang and Deng's 1989 survey,<sup>2</sup> politics loomed large--72.6 percent of respondents were most concerned about China's political situation (Chang and Deng, 1992). Yet 71.3 percent were also concerned about their ability to readjust to China, while 61.3 percent were not optimistic about their future career in China. Other factors included pressure from family and friends to stay abroad, foreign values and growing individualism among Chinese students in the United States, and limited financial incentives to return (Chang & Deng, 1992).

Other studies reinforced these findings. America remains a popular symbol in China, and family and friends there pressure students to stay abroad and serve as a bridge for others to traverse (Ren, 1993). The Tiananmen events of June 4, 1989 certainly politicized the decision to return. Gu found that very strong anti-government political attitudes among students and scholars

combined with strong attitudes against returning (Gu, 1990). Similarly, Zhang found that while only 6.1 percent of her respondents reportedly had planned to seek U. S. residency before the June 4, 1989 crackdown in Tiananmen Square, 31 percent planned to do so after Tiananmen (Zhang, 1992). Also, while a majority (57.9 percent) said that before Tiananmen they definitely had planned to return upon graduation, a majority now planned to await political developments in China. Nevertheless, the age of the Chinese student and the amount of time spent reading the New York Times, and not the length of time spent overseas, was the best predictor of political attitudes (Zhao and Xie, 1992). Older scholars responded more to government propaganda and its political viewpoints than younger scholars and students. Yet, even in the wake of Tiananmen, economics--salary or income differentials--a better professional and academic environment, and personal factors, such as the ability to adjust to different cultures, the strength of family ties, marital status, and concerns about children's education, were bound to affect the decision to return.

### *Hypotheses About China's Brain Drain*

This study is based on several hypotheses, some of which are drawn from the above studies. First, the study hypothesizes that by 1993 the initial political reaction to Tiananmen had run its course, making economic factors, particularly better living conditions, incomes, and work facilities, more important. This view challenges the common perspective of American politicians, Taiwanese scholars, and mainland dissidents who argue that Chinese wanted to stay in America because of political repression. A second hypothesis is that the "political culture" of the Chinese work unit (danwei) with its restriction on mobility, rather than the regime's authoritarianism,

influenced people's decisions. A third hypothesis ascribes high salience to family factors, as experience suggests that Chinese students' attitudes about returning switched after their spouse joined them in the United States. These views should be strengthened by the arrival of children. Finally, a fourth hypothesis asserts that if economic conditions affected the decision to return, and if Chinese were "making it" in the United States, they were less likely to return.

### *Introducing Our Sample*

Hoping to generalize from this research, the study chose a stratified random sample based on various locations, different fields, and differing statuses in the United States (see Appendix). Face-to face interviews were carried out with 273 visiting scholars, current students, and people already in the work force in five different regions of the United States--52 in Albuquerque (19%), 79 in Boston (28.9%), 45 in Buffalo (16.6%), 72 in California (26.4%), and 25 in New York City (9.2%). The refusal rate averaged 25-30 percent. While from a scientific perspective, the study does not have a true random sample, the frankness of the responses and the variety of people interviewed makes one hopeful that the interviewees represent a cross-section of views of Chinese students and scholars in America.

Key characteristics of the sample are as follows. Men made up 70.3 percent (192), women 29.3 percent (80), and one person's sex was not recorded. Married people comprised 71.4 percent (195), 23.5 percent (59) were single and another 3.8 percent (10) were divorced. There were no marital data for nine people. Of the 195 married people, 162 (80 percent of married people or 59.3 percent of the entire sample) have brought their spouses to the United States, while 39 spouses (20 percent of married people or 14.3 percent of the entire sample)



remain in China. 136 people had children (49.8 percent of the sample), and 62.5 percent of them (85) have brought their children to the United States. Before leaving China, 48.4 percent (132) had an undergraduate degree, 44 percent (120) had a master's degree, 3.3 percent (9) had a Ph.D., and 4 percent (11) had other degrees or certificates. (We had no educational data for one person.) As for arrival date in the United States, 19.3 percent came before 1987, 31.7 percent came in 1987-89, and 47.9 percent came in 1990-93. The following lists and some of the figures introduce other characteristics about our sample.

1) Current Visa Status

F-1 (student): 147 (53.8 percent)<sup>3</sup>

J-1 (exchange or visiting scholar): 35 (13.2 percent)

J-1 Student Visa: 22 (8.2 percent)

H (temporary worker): 18 (6.6 percent)

B (tourist, visitor): 4 (1.5 percent)

G-4 (international employee): 1 (0.4 percent)

Permanent resident of U.S.: 28 (10.3 percent)

American citizen: 7 (2.6 percent)

Missing data: 10 (3.6 percent)

2) Parental Background Characteristics:<sup>4</sup>

High ranking cadres: 16 (5.9 percent)

Middle ranking cadres: 50 (18.3 percent)

Workers: 26 (9.5 percent)

Peasants: 21 (7.7 percent)

Intellectuals (job in a university): 141 (51.6 percent)

Business background: 5 (1.9 percent)

Other: 11 (4.1 percent)

Missing data: 3 (1.1 percent)

3) Cities of Origin in China (for 217 Valid Responses):

Beijing: 95 (43.8 percent)

Shanghai: 39 (18.0 percent)

Nanjing: 14 (6.0 percent)

Wuhan: 11 (5.0 percent)

Guangzhou: 7 (3.2 percent)

Other, coastal: 25 (11.5 percent)

Other, noncoastal: 27 (12.4 percent)

4) Specialization:

Natural sciences: 64 (23.4 percent)

Applied sciences (including engineering, medicine): 92 (33.7 percent)

Business or management: 16 (5.9 percent)

Applied social sciences (law, economics): 23 (8.4 percent)

Social sciences: 30 (11.0 percent)

Humanities and fine arts (including education, history): 32 (11.7 percent)

Other: 2 (0.7 percent)

### *Outline of the Dependent Variable*

What type of people are most likely to return or stay? Question 77 in the survey--"What is your current attitude about returning to China?"-- broke down responses into seven categories. (Table 1). However, responses to Question 77 do not indicate a decision about returning except for people in categories 1 and 7, who appear fully committed to a course of action. In the pre-test when people were asked if they "planned to return," 25 percent said "definitely;" but except for people in the current Category 1, few really want to return in the short run. Therefore, when we revised the questionnaire, the category of people who said they were returning was fine tuned by separating into different categories those who were only "probably" returning and those who were "definitely" returning; among those "definitely returning," those who had concrete plans to return and those who did not were separated; and among those who were "probably" returning, those who had kept up strong ties with China and those who had not were separated into different categories.

### **Background Characteristics and People's Views About Returning**

This section addresses the impact of several background characteristics--sex, age, class or family background, and city of origin--while the subsequent section examines the role of family, professional advancement, economics, and politics. For both sections I looked for strong bivariate relationships between a background variable and the decision to return. If relationships were not significant, I looked to see if the background variable had a strong impact for any of the seven response groups under Question 77. Finally, using variables that showed a significant bivariate relationship, I built a model of the factors that most strongly affected people's decision

about returning. Employing logistic regression analysis, I evaluated the impact of all key variables in the model, affording a more reliable and powerful explanation of what factors lead people to think of staying or returning. (For more on methodological issues, see Appendix.)

### *Sex*

The best predictor of whether people would return, other than their "intentions about returning when they left China" (Figure 2), was their sex. The situation for women in China remains difficult, even though their status in China is much higher than in most of East Asia. It was harder for women to get out of China in the 1980s than it was for men, with the percent of women among government-sponsored J-1 Visiting Scholars increasing from 14 percent in 1979 to 24 percent by 1985-- which was slightly lower than the proportion of women in Chinese institutions of higher education (Orleans, 1988). Among F-1 students, who were mostly self-paying and not controlled by institutional biases favoring males, the percent of women was much higher, fluctuating between 37 and 45 percent (Orleans, 1988).

Not surprisingly, women were less likely to want to return than men, with 25 percent of women picking categories 6 or 7, while only 14 percent of men did so. When responses to Question 77 were treated as interval level data, placing "unsure" in the middle, the mean score for men on Question 77 was closer to returning (3.41) than the mean response for women (3.98). The statistical relationship between sex and views on returning was significant at the .01 level. And in our logistic regression analysis, sex is a very significant factor for people with children (Tables 6 and 8).

Single women are more likely to stay than married ones. While 28.8 percent of married women picked categories 5-7 on Question 77, 41.7 percent of single women made this choice. This decision reflects single women's concerns about the social pressures China places on "spinsters," as well as the career limitations placed on women in general (single women, more than married women, are likely to be career oriented). Individual conversations with women supported this view. However, there was no statistical relationship between a woman's marital status and her views about returning.

Women are less prone to return for several reasons. Women are less confident about career opportunities in China. While 41 percent of men thought that their possibilities for future developments were "very good" to "good," 32.5 percent of women felt that way. Women mistrusted the government's 1992 new policy, guaranteeing freer travel, with 38.8 percent "uncertain" about these new policies, while only 29 percent of men felt that way. "Concerns about political stability" was the main reason chosen by 40 percent of women for remaining in the United States while only 27.4 percent of men voiced this concern first. Also, 10 percent of women never intended to return when they left China, as compared to 5.7 percent of the men. Finally in interviews in their homes, some informants' wives argued that Western conveniences--air conditioning, electric appliances, carpets, the ease with which one can return goods to stores, the level of politeness in shops, and the cleanliness of streets and people's homes--are more important to them than new opportunities in China to make money.

The "complicated nature of human relations," a code word for constraints imposed on women's behavior and careers by China's traditional political culture, also affected their decision. Women recognize that when human relations or links to interpersonal networks, rather than skills,

determine promotions, they lose out to men. Women are also more likely to be the target of sexual innuendos often used to limit promotions in China. Therefore, women prefer the West with its less personalized, performance review system (El-Saati, 1980). For men, on the other hand, the "complicated nature of human relations" works to their benefit; they dominate the networks that determine promotions.

### *Family background*

As in the studies of Glaser (1978) and El-Saati (1979), family background helps explain who is getting out, who is likely to stay, or who is thinking seriously about going home. Children of intellectuals (teachers or researchers in universities) composed a majority (51.6 percent) of our sample, the result of this social group's preferred access to transnational channels. Yet they are also less likely to return to China than the children of peasants and workers who appear to be more loyal to the state. While workers' children comprised 9.8 percent of our sample, they made up 18.2 percent of those who had plans to return (category 1 of Question 77) and 13.8 percent of those definitely going back but without current plans (category 2). Similarly, while peasants were 7.9 percent of our sample, they too comprised 18.2 percent of those with plans to return and 10.8 percent of those in category 2.<sup>5</sup>

### *Age*

As with Zhao and Xie (1992), this study also found that age was important. Over 68 percent of those "definitely returning" were born before 1954, although they comprised only 27.8 percent of our sample, while younger people were more likely to fall into the ambivalent category.

policy has no impact. The data show such a relationship. For people with children, the logistical regression analysis shows a significant relationship between whether people came before or after April 1990 and their views about returning (tables 6 and 8). Also, dramatic relationships exist for sub-categories on the margin. Among the sample, 39.3 percent came after April 1990 and 60.3 percent came before April 1990. Yet, almost 89 percent of people in category 6 (24/27) and 90 percent of people in category 7 (18/20), i.e. the people who are least likely to return, came before April 1990. On the other hand, people who came after April 1990 and who are not automatically eligible for permanent residency probably believed that they had little chance to stay. Thus while 27.3 percent of the sample leaned towards staying (total of categories 5-7), only 14.3 percent of those people came after April 1990.

Moreover, the visa people came under had only limited impact. Why? Most people who came on F-1 student visas (at whatever time) are still on that visa, because F-1 visas are easy to extend. Second, while J-1 visa holders must return to China for two years after their program ends, President Bush's Executive Order enabled people who arrived before April 1990 to change from the more restrictive J-1 to the more liberal F-1 visa which allows them to stay indefinitely. Significant numbers of Chinese availed themselves of this offer. In fact, only 51.5 percent of people in the sample who entered the United States on J-1 visas were still on that visa; for the other 48.5 percent, the visa they came on had no impact on whether or not they could stay. Similarly, 29 of 51 people who came on J-1 Student visas, which were used more freely after 1987 to force junior faculty in China to return, also changed their status. Finally, in the statistical model, "current visa status" has one of the highest parameter estimates of all variables and in each

case its probability Chi-square is extremely significant (tables 6-8). Clearly the U.S. government's visa policy had an enormous impact on peoples' decisions about staying.

### **Why People Do Not Go Back: Politics, Economics, Career, or the Family?**

This section addresses four broad factors: family, economics, politics, and personal development. While they are competing explanations, all affect people's decisions about returning. To assess which factors are more salient and why, we posed closed-ended questions about why people might return, why they might stay, what they liked and did not like about America, and asked people to rank their three most important choices. The responses are listed in tables 2 through 5 below.<sup>6</sup> Also, using logistic regression analysis, I evaluated the independent role of each factor, while taking into account the impact all variables in the model had on the decision to return.

#### *Family Factors*

Because Confucian societies value filial piety, we asked about parents' views and if those views affected the decision about returning. Of 257 respondents, 29.9 percent reported that their parents either "strongly wanted them to stay" (11.6 percent) or "wanted them to stay" (18.3 percent) in the United States. A plurality (45.1 percent) reported either that their parents "did not care" what they did or that they were "unsure" of their parents' views. A further 17.9 percent said that their parents wanted them to come home, and 7.0 percent reported that their parents "strongly" wanted them to come home. The findings that many parents wanted their children to stay overseas is not surprising. Many parents see having children overseas as a status symbol or



as a channel through which other family members can get out (Ren, 1993). Thus, over 14 percent of our entire sample (40 people) were bringing a family member to the United States. Also, the betrayal experienced by the generation of intellectuals who returned to China in the 1950s and who suffered during the anti-Rightist Campaign (1957) or the Cultural Revolution (1966-1976) leads some parents to push their grown children to stay overseas. Finally, economics may lead parents to press their children to stay overseas. Of 273 respondents, 212 reported helping their family back home, with 42.9 percent giving financial support, 7.3 percent sending back goods that were scarce in China, and two people (0.7 percent) helping them buy a house. Yet parents' attitudes had little influence. Of people who responded to this question, 81.9 percent reported that their parents' view had "only a little influence" (38.8 percent) or "no influence at all" (43.1 percent), while only 3.1 percent reported that their parents had "a great deal of influence" on their decision about returning.

Did attitudes about returning vary depending on whether the spouse is in or out of China? Of 195 married people in the sample, only 39 had not brought their spouse to the United States. While the relationship between being married and views of returning was not statistically significant, whether their spouse was with them in the United States was.<sup>7</sup> Moreover, while the mean score on returning to China for the entire sample was 3.585, the mean score for people with spouses in China was 2.615--closer to returning--while for those whose spouses are here was 3.831. Although morality demands that spouses in China be allowed to come to the United States, that decision has enormous consequences for China's brain drain. By making it easier for spouses to join their mates in the United States, both the U.S. and Chinese governments contributed to the brain drain.<sup>8</sup>

Friends and family pressured people not to return until they got permanent residence status. According to our informants, "you get a degree for yourself, but you get the green card for others"--relatives, parents, children, and friends who want a chance to go abroad. Thus, several respondents reported criticism from family and friends in China who could not understand why they did not get permanent U.S. residency.

Did attitudes about children's schooling affect views about returning? A remarkable number of those interviewed (59.3 percent) already have their children with them in the United States, a testament to the openness of both American and Chinese society.<sup>1</sup> However, because people have different views about their children's schooling, the bivariate relationship is weak ( $R^2 = .13$ ) albeit statistically significant, and the regression model shows no relationship as well. Why? While over 38 percent of our sample with children in the United States prefer that their children attend primary school in China, 74 percent want them to go to a U.S. college. Moreover, when asked why people might return, very few chose "better education for your children." Similarly, when asked what they liked most about America, only 3.3 percent chose "a better future for my children" on the first round. When all things are considered, political freedom and economic improvement were more important motivating factors than our respondents' children's education.

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<sup>1</sup>Many couples who rely on the wife's labor to support the family while the husband attends graduate school may not want to bring their child to the U.S. They leave the child with one of the grandparents.

*Personal Development*

This issue was approached in a variety of ways. First, were people upwardly mobile in China or frustrated in their careers? If the latter, then professional development might push them to stay in the United States. The majority of people (56.3 percent), however, were upwardly mobile, believing that they had "excellent" (17 percent) or "good" (39.3 percent) opportunities for promotion in their unit. Still, they were less sanguine about opportunities for developing their abilities in their home unit: 11.3 percent of respondents believed that they had "very good" opportunities to do this, 33.1 percent felt that they had "relatively good" opportunities, while 22.6 percent felt that they had "very little or no opportunities for personal development" in their former unit. As to why people might not return to China (table 3), almost one-third first chose career-related reasons.<sup>9</sup> For 10.6 percent of the people interviewed, "lack of career advancement" was the first reason for not returning to China and was the third most important reason overall. Also, when asked to choose positive things about America (table 4), "lots of job choices or opportunity" ranked second (19.5 percent), "good working conditions" ranked 3rd (13.5 percent) and "job mobility" ranked 4th (10.1 percent).

Yet personal development is a two-sided issue, leading some people to think about returning home as well. Given the sample's relatively high status in China before they left, "higher social status in China" (26.7 percent) was the most important reason why people might return to China (table 2), while "better career opportunities in China" was the second most popular reason. Thus, if these people faced difficulties finding good jobs in the United States, they could return to China.

Nevertheless, despite assertions that people do not return because China restricts personal development, the data suggest that this factor has little direct impact on China's brain drain. People who chose any of the five issues related to personal development as reasons for not returning (table 3) were no more likely to think about staying in the United States than people who did not choose this factor. Also, when this variable was recoded and included in the logistic regression model, it was not significant.<sup>10</sup> Perhaps answers to these questions were not good indicators of concerns about personal development; or given the mixed nature of responses to this issue, perhaps it is simply not an important factor affecting people's decisions.

### *Economic Variables*

A critical hypothesis underlying this study was that as the political impact of Tiananmen receded, economics, more than politics, would drive people's decisions about returning to China. If an enormous gap emerged between people's current or anticipated economic situation in the United States and their potential economic conditions in China, they would have strong reason to stay. But if people's U.S. living standard was not good, more might consider going back, especially if economic conditions in China improved. The data confirm some of these beliefs, and while economics is not necessarily the most important factor, it looms very large in people's calculations about staying in the United States.

In terms of housing and income, a mixed picture emerged: some lived rather well, others just scrapped by. But perceptions often were better than the real conditions. For example, only 7.7 percent owned their own housing, and only 21.6 percent lived in a two-bedroom apartment, leaving 66.3 percent of those interviewed living in a space smaller than a two-bedroom apartment.

Yet when they compared their U.S. housing to their housing in China, almost two-thirds of our sample believed that they had improved their housing: 39.2 percent saw their current housing as "much better," while another 26.0 percent thought their housing was a "little better."

As for total family household income, Chinese students and scholars in this sample are doing relatively well (figure 1). The mean household income in the sample was \$19,400. While total household income for 27.7 percent was under \$10,000, and another 31.1 percent earned \$10,000-20,000, almost half (47.2 percent) of the households in the sample made over \$20,000, with 31.2 percent of the sample earning pre-tax total household incomes of over \$25,000. One must recall that this group includes a significant number of single graduate students who are getting by on part-time jobs on and off campus, as well as families who are relying on the labor of one adult, while the other goes to school full-time. Thus despite being recent arrivals or immigrants to the United States, this group has strong economic incentives for staying in the United States.<sup>11</sup> Moreover, when asked to describe their "overall living standard," 52 percent thought that it was "good" (38.8 percent) or "excellent" (13.2 percent), and another 37.4 percent thought it was "average," leaving just over 10 percent who felt that it was "comparatively poor" or "very poor." Therefore, economic deprivation should not drive many of these people back to China.

The logistic regression confirmed the importance of economics, particularly the comparative conditions between China and the West. Yet the impact of economics varied whether or not people had children. For people with children, the comparison of their housing in the United States and in China was a very strong explanation for their decision to stay (table 6). Given China's poor and cramped housing and that over 29 percent of our sample live in a 2-

bedroom apartment or better, housing does motivate people with children to stay in the United States. Household income was also important (table 8). On the other hand, for people without children, housing is not important, but total pre-tax household income and the comparison of their "overall economic situation" now in the United States to that in China are (table 7).

Finally, economics is pulling some people back to China: China's expansive economy and the American recession extant in 1993 when the interviews were conducted, was leading people, mostly from high ranking families, to return to China. After getting their green cards, these people in particular planned to return to do business, either with their families or as expatriates, working for foreign companies. Thus, as the trauma of Tiananmen recedes, the desire for economic betterment has become an important factor affecting decisions about staying in America.

### *Political Reasons*

Immediately after June 4th, 1989, most studies cited political anger and hostility towards the Chinese government as the key factor for not returning. Even when given the chance to chose economic reasons, Chinese in a number of surveys consistently chose political factors. And while economics has now emerged as an important variable, politics--the desire for political freedom, fears of political instability, lack of trust in the government, and the political campaigns of the past 40 years--remains a highly salient factor affecting people's calculations about whether or not to return to China.

The primary political variables in the data set were responses to questions about the effect of June 4th on decisions about whether or not to stay in the United States and the level of trust in

the government's policies about letting returned scholars travel in and out of China freely. Also, people were offered the opportunity to choose political explanations for not returning (table 3). More respondents chose "lack of political stability" (30.3 percent)--a common finding in the Third World (Lakshmana, 1978)--than any other reason, and when combined with those who chose "lack of political freedom" (12.4 percent) and fear of arrest (1.2 percent), 43.9 percent expressed political concerns as their first choice for not returning.

I also built a composite political variable and tested it in the logistic regression model.<sup>12</sup> This variable proved significant for people with children ( $p > .0556$ ), and almost significant for the childless respondents ( $p > .1093$ ) (tables 6 and 7). Also, using responses to "why people might not want to return," and differentiating among those who chose "political stability" or "political freedom" versus any other choice, I found statistically significant relationships between concerns about political stability ( $p > .01$ ) and political freedom ( $p > .02$ ) and choices about returning for people without children. No relationship emerged for people with children. That married people with children were not strongly motivated to stay in the United States by concerns of political stability is surprising; however, for them, concerns such as housing are more important. Moreover, the composite political variable which tapped into family suffering during the Cultural Revolution, reactions to Tiananmen, and people's trust in the Chinese government was significant for people with children. They, too, include politics in their calculations; it simply did not influence their choices about why people might not return to China (table 3).

Strong doubts also emerged about the stability of the policy letting returned scholars go back and forth freely. In August 1992, to encourage more people to return, China's government introduced the "freedom to come and go" policy (*laiqu ziyou*). While 48 percent of people

"completely trust" (11.0 percent) or "somewhat trust" the government to keep its word (37.0 percent), 14.3 percent "completely mistrust" or "somewhat mistrust" the government, and another 31.9 percent are "uncertain" if the government will keep this promise. For the two latter groups, returning is a difficult decision.

*Politics or Economics: "A Gentleman does not Discuss Personal Interest."*

These findings show that concerns about political stability, a high valuation of the political freedom available in America, and mistrust of the government and political movements of the past, are all keeping people in the United States. Yet as these data emerged, Professor Chen, who did most of the interviews, expressed concerns that many people chose political rather than economic issues for reasons of "face," in line with the traditional Chinese concept that "a gentleman does not discuss personal interest" (zhunzi bu yan li). Justifying their refusal to return on political grounds allowed our interviewees to shift responsibility for their non-returning onto the regime, its policies, and lofty issues of morality, rather than reject their motherland for economic self-interest. According to Chen, some people who chose political reasons for staying during the formal interview said after the interview that for them, economics was really more important. Having completed over 220 interviews when he raised this issue, I devised the following strategy.

In Albuquerque, our final research site, Chen asked the 50 people he interviewed there the following additional question at the end of the interview: "Some people say that the main reason most people don't return is for political reasons; others say it is economic reasons. Which do you think it is?" If we found a considerable number of people saying during the interview that politics



would stop them from going back, but then they responded to the additional question by saying that others would not go back for economic reasons, we could argue that they too were motivated by economics but did not want to say so. The findings do not allow us to reject this hypothesis. Of the 50 people interviewed in Albuquerque, 35 (70 percent) responded to this additional question by saying that most people did not return for economic reasons, 7 (14 percent) felt that people did not return primarily for political reasons, and 8 (16 percent) suggested both economic and political reasons. Yet 16 of the 35 people who said others were not returning for economic reasons had chosen political instability or political freedom as one of their first two reasons for not returning. Thus while some people assert that others are staying in America for more selfish economic reasons, they may legitimize their own motives by labeling them political.

I also looked at the number of people who said they were not returning for political reasons (i.e. people who chose 1-3 on table 3), to see how they evaluated their economic conditions here versus their former situation in China and whether their perceptions were significantly different from the overall sample. If they said that their economic situation was much better here than in China, and if that score was significantly better than the overall sample's views, then their choice of politics as the reason for not returning would be suspect. Again Chen's concerns had some validity; people who chose "political freedom" felt more positively about their housing and income here as compared to China than our sample population as a whole.<sup>13</sup> Nevertheless, logistic regression analysis showed that people without children who chose political stability or political freedom were far less willing to return to China than the rest of the sample. And for people with children, the composite political variable demonstrated a significant relationship with their decision about returning (table 6).

Political factors are at work in the Chinese students' and scholars' decision making process. The majority of people who express their views in political language fear political instability in China, while for some, political freedom is key. However, one should not extrapolate from these findings that the majority of people dissent from the political system in China and therefore will not return short of significant political change. Should the economy continue to expand, and should China survive the post-Deng succession crisis without serious instability, more people may return, even if the regime remains relatively authoritarian. Improved job opportunities, an improved standard of living, and political stability may suffice to get more people to return.

### **Conclusion**

When China's leaders expanded educational exchanges to benefit from Western science, they did not anticipate the "brain drain" that has ensued. Deng Xiaoping reportedly argued that even if China lost five percent of its scholars to the West, the open policy on education would be a success. With little more than five percent returning and a constant "fever to go abroad" disrupting China's universities (Xiao, 1989), much soul searching has been going on in Beijing. Patriotism has not served as a strong glue keeping people attached to their homeland. Instead, the economic gap between East and West, China's history of political campaigns, fears about the post-Deng transition, gender discrimination, the ease of obtaining a U.S. green card, and the desires of talented people for an environment in which they can utilize their skills, have all come together to generate China's brain drain.

China's brain drain is similar to that which has occurred in other developing countries. Taiwan suffered very low return rates until the 1980s. Lakshmana (1978) cited four factors pulling people from developing to advanced countries: salary, logistical support, political stability, and opportunities for mobility. While few in this study chose logistical support as an important reason, Chinese students and scholars in the United States share many of the same concerns and hopes as intellectuals worldwide who have chosen to leave their homeland. Had the Tiananmen Incident not triggered an American government policy that greatly simplified the process of remaining in the United States, more Chinese might have returned. But the trend against returning had emerged strongly by 1987; Tiananmen solidified that trend and made it easier to stay.

A multitude of complex factors affect people's reasons for returning or staying. Gender and family ties, particularly the transition from being a single student to a married adult with children, greatly affects perceptions about returning and the reasons for not doing so. Having children weakens political concerns and raises the importance of housing and household income. And since China treats women differently than men, women's views about returning differ as well. In fact, more women than men never planned to go back in the first place.

As for politics versus economics, both issues are driving this brain drain. But because people are more concerned about political stability than abstract values such as political freedom, and because many care about economic factors, China could follow the Taiwan and Korean pattern. If economic and social conditions improve, if China's government becomes more proactive in recruiting Chinese scholars to return, and if the post-Deng era proves to be relatively stable, Chinese students and scholars will return to their homeland in larger numbers. But high

salaries, better housing, overall better living conditions, and easier job mobility will keep the vast majority of Chinese in the United States.

Yet Chinese politics contributes to the brain drain in a way that differs from most developing states. Leadership fears in Beijing about the brain drain and peripatetic efforts to control it simply feed the "fever to go abroad." Given the history of sudden policy shifts since 1949, Chinese stampede when opportunities first appear, terrified that if they hesitate, the chance to go overseas will vanish forever. Yet limited state investment in improving the domestic work environment for intellectuals, and a cultural and political climate that questions their loyalty, stops sojourners to America from returning to China. In this way, we are observing a "brain drain" with Chinese characteristics.

But low return rates are not a catastrophe for China, except to a leadership that sees any disloyalty as a direct challenge to its legitimacy. Many of the people China is losing are following the "migration, then education" pattern; they are not being trained in China and then leaving, but are being trained abroad at the expense of their host, the United States and its academic institutions. Therefore, the real costs, as compared to lost opportunity costs, to the Chinese state are not so high, while the foreign country paying for training these Chinese is reaping the benefits of that investment. Should more Chinese return in the long term, China will benefit from funds and human capital expended by U. S. academic institutions. Second, if many Chinese return now, they will not find appropriate or satisfying jobs in China. Dissatisfied with their conditions, they could become a further source of political and social instability.

Yet, despite low return rates, a significant cohort has not closed off the possibility of returning. If this sample is at all representative, there are about 10,000 students and scholars

who, both in the short and long run, believe that they will return to China, bringing the skills, technology, and capital that motivated the initial opening in 1978. Over time, as more and more Chinese take up important positions in the United States, and as China undergoes further reforms, this group of scholars will expand Sino-American transactions and promote economic and political development on the Chinese mainland.

## **Appendix A**

### **Methodological Issues in Choosing our Sample**

Most surveys of Chinese students have been carried out by sending questionnaires to all the Chinese students at a set of American universities. Who responds, who doesn't, and why become highly problematic and could taint the data.<sup>14</sup> We wanted a representative sample that would allow us to generalize across the entire population of Chinese students and scholars in the United States. But because we wanted to ask many detailed questions and interview people face-to-face with a research instrument of 105 questions, we, too, were concerned that we would get a high rejection rate.

Therefore, to achieve as random and representative a population as possible, we adopted the following strategy. First, we chose different types of people--scholars, students, and people already out in the work force. Here this study differs from most others who interviewed only students. Second, we surveyed different regions and communities in the United States, with varying densities of Chinese students and scholars, tapping into both more cosmopolitan and more isolated American communities.

To achieve randomness, we chose some of our informants randomly from lists of students supplied by Chinese student organizations at some university campuses. In particular, the State University in Buffalo and the University of New Mexico in Albuquerque, which have relatively large student populations and where we had contacts among the Chinese student groups, supplied us with excellent lists. However, concerns about privacy prevented other student organizations

and most International Centers from supplying us with lists. Therefore, in several cases we built our own lists from various graduate student rosters.<sup>15</sup> At Harvard, we used a graduate student phone directory. Unfortunately this strategy creates a bias towards those who have offices on campus and who are probably more stable and successful than students who have no office. Also, even after we built the lists, we could not always contact the people on it, given foreign students' propensities to move frequently.

Much of the literature on the brain drain suggests that people's field of study affects their views about returning.<sup>16</sup> Therefore, we classified all interviewees into six academic fields: natural sciences; applied natural sciences; business, foreign trade and management sciences; applied social sciences<sup>17</sup> (economics, law); social sciences; and humanities and the arts. The percentage in each academic field in our sample was determined by the percentage of Chinese students at that campus on our list enrolled in that field. For example, in Buffalo, the Chinese Students and Scholars Association gave us a list of 500 people. Based on this list, we calculated the percentage of Chinese students in each academic field which also determined the number of students to be interviewed from each field. If the percentages of students in some fields was too small, we increased the number of people from that field that were chosen. After we composed the list in alphabetical order in each field,<sup>18</sup> we then divided the number of students in the population by the number of people to be sampled for the field, which then determined the frequency with which we would chose a name from the list. Thus, for example, if there were 107 natural science students, and we needed to interview eight people, we divided 107 by 8 and chose every 13th person on the list.

We followed a similar strategy to choose our population of people in the workforce. In each city we compiled a list of people by asking friends, and friends of friends, to recommend people who might be interviewed. We always asked different types of Chinese, including those who may have been involved in politics, business, or educational research. We compiled a list of names in alphabetical order and chose from the list based on the total number of people we hoped to interview. For example, in New York, we built a list of 91 people. Since twenty-five people were to be interviewed, we chose every fourth name on the list ( $91/25=4$ ).

Because the number of Visiting Scholars is small and changes yearly, it was not easy to get a complete name list. Therefore, we did not choose the Visiting Scholars randomly but only ensured representation from different academic fields, different age and gender groups, and different lengths of time in America. Still, we hoped that those who were chosen would be representative of the total population of Visiting Scholars.

When making the appointments and doing the actual interviews, we had two concerns. Would people agree to be interviewed, and would they trust us enough to give frank answers? These concerns conflicted with our desire for randomness, in that people chosen completely at random might be less forthcoming. Therefore, although we selected people at random from lists to solve the problem of "responsiveness," we hired a student in each city to make the contacts and arrangements. Whenever possible, we chose people to make contacts for us who had lived in the locality for some time, had extensive contacts with Chinese students in the city, had some standing in the Chinese student community, understood survey methodology, and would strictly follow these research methods. They informed prospective informants about our project, including the content, purpose, and methods of the study, our desire to publish the final output, and the



background of the researchers. In many instances, our Chinese contacts actually knew the people we interviewed. As an inducement, and to show our appreciation for their cooperation, we offered each informant \$10.

Our rate of refusal varied in part based on the status of the person making the contacts for us. The higher this person's status in the local Chinese community, the lower our refusal rate. Thus in Albuquerque, the refusal rate was only about 10 percent.<sup>19</sup> On the other hand, the Buffalo refusal rate was over 30 percent because the facilitator had been there only three years, had not participated in many student activities, and therefore knew few of the people he contacted personally. In Boston, the refusal rate varied from school to school. Our contact person in Boston had graduated from Tufts and was getting his Ph.D. at Harvard, so the refusal rate at these schools was low. But when he approached students at Boston University the refusal rate increased to about one-third. In New York, the refusal rate may have been as high as 50-60 percent because the people we interviewed were often holding two jobs. Moreover, our contact knew very few of them.

While our rejection rate was comparatively low, we did wonder why almost one-third of the people refuse to talk with us. People justified their refusal to meet with us in four ways. First, people were busy and many students we approached in April suggested waiting until after exams. Unfortunately, we could not wait. Second, people concerned about possible political complications wanted to study the questionnaire first and then decide if they wanted to be interviewed. We simply moved onto the next name on the list. Third, some said that they did not want to discuss how their families had suffered during the 1950s or the Cultural Revolution.<sup>20</sup> Finally, some who claimed that they had been too deeply involved in the Tiananmen events (either

in China or the United States) were unwilling to contact strangers from China. No doubt some people did not believe that this was a scholarly study; they were worried that we were sent by either the Chinese or American governments. With the U.S. government deadline for granting permanent resident status pending, some people decided that it was wise to avoid any added complications. Nevertheless, except for New York, our refusal rate was much lower than most mailed surveys, which increases the reliability of the sample.

In the end, I believe that people who agreed to be interviewed generally revealed their actual situation and true thoughts. Many questions related to specific problems people faced in their work, their studies, and their lives both before they left China and since their arrival in the United States, making it unnecessary for them to distort their answers. Also, with so many people reporting that they had never planned to return, I feel that they answered truthfully on most questions. However, I do believe that those who said that they would "probably return but did not know when" are unlikely to return; so these people were treated as if they would not return and I moved their response on the scale of views about returning from the fourth position to the fifth position, on the other side of those who were uncertain. Also, people may have shied away from quickly admitting that their reason for staying was economic; but as outlined above, I used several strategies to adjust for that issue.

## **Appendix B: Application of Multivariate Logistical Regression Analysis**

Standard regression analysis assumes that the variables that are analyzed are interval level data, that is, that the data runs on a continuum (such as from low to high) and that the distances between each category or step in the variable are equal. Our key dependent variable, people's attitudes about returning, may not fit that bill. When I composed the question to tap people's views about returning, I anticipated doing standard regression analysis. Hence I structured Question 77 to reflect a clear progression from "definitely going back and have already made plans," through "unsure" as the mid-point, ending with "definitely not returning." To make it more linear, I moved the category--"probably will return but do not have strong ties to China"--from the 4th position in the progression to the 5th position, on the other side of those who were uncertain about returning, to make the data read more like interval data. Also, when we did the interviews, we had offered the choice of "uncertain" at the end, rather than in the middle of this progression; but when I did the analysis, I put it in the middle.

Nevertheless, our categories, while reflecting the properties of interval data, are in reality based on different categories of people's views about returning. Therefore, to ensure that the analyses statistical merit, I used logistical regression analysis. The advantage of logistical regression analysis is that it allows one to use a multivariate analysis methodology without having to assume that categorical data is actually interval level data. And while logistic regression analysis does not supply a correlation coefficient, which could provide a measure of association that can be used to compare the impact of different independent variables, the probability Chi-Square for each variable tells us whether or not the variables included in the regression model have a significant impact on the outcome variable, the decision to return to China or stay in the

United States, when all the variables in the model are included in the analysis. One can feel confident that any variable for which the probability of the Chi-Square is less than .05 does have a significant impact on the decision about returning or staying. We may also assume a relatively strong relationship exists between the independent and dependent variables even when the probability of the Chi-Square is less than 0.1. Also, the parameter estimate does supply a comparable score which reflects the relative impact of each of the variables.

### **Appendix C: Structuring and Analyzing our Dependent Variable**

When I wanted to see the strength of the bivariate relationship between one variable and people's attitudes about returning (table 1), I sometimes treated the latter variable as interval data running from 1 through 7. I did this particularly when I wanted to see the correlation coefficient or to compare means.. However, when I used a Chi-square test, I treated "attitudes about returning" as categorical data. Also, in our logistical regression analysis we structured the "attitudes about returning" in two ways. "Version 1" used the data in its natural form, as categorical data from 1 through 7. Version 2 collapsed the seven responses into three: category 1 ("definitely returning and have made plans to do so") and category 2 ("definitely going back but don't know when") become one category. Our second category included those who were less certain about going back--category 3 ("probably returning and have strong ties"), category 4, ("can't really say now") and category 5 ("probably will return but have not kept up ties"). Our last category combined category 6, ("not very likely to go back, but might if things changed in China greatly"), and category 7, ("definitely will not go back").

We grouped the responses into three larger categories for "statistical efficiency." With only 273 cases and 13 independent variables in the model we increased the quality of the analysis by collapsing our dependent variable from seven into three categories. Both versions of our dependent variable generated significant statistical relationships, although version 2, because it was more efficient, gave better readings. Therefore, I report the results of both versions, as they both reflect the responses we received; they just structure those responses in different ways.

**ENDNOTES**

1. The author owes an enormous debt to Professor Chen Changgui whose assistance with this paper was critical to its success. Chen advised on the survey and carried out most of the interviews, and collaborated with the author on the larger study from which this paper is drawn. Financial support for this study came from the Ford Foundation in Beijing, and its then director, Peter Harris, Ruth Hayhoe of the Ontario Institute of Studies in Education, and the Canadian International Development Agency. Stan Rosen helped with data collection, the questionnaire, and gave rich advice. Research and methodological assistance was provided by Professor Yue Xiaodong, Xu Yu, Li Guiting, Xiao Dong, Adam Segal, John Auerbach, Zachary Abuza, Zhang Lihui, Brent Fulton, Laura Hettleman, Shu Yuan, Durwood Marshall, who performed the multivariate analysis, and Kevin Kramer. Kyna Rubin, Leo Orleans, and Peter Suttmeier made helpful comments on the manuscript. In the end, I alone am responsible for the content of this paper. For a longer version of the study, which addresses policy prescriptives and the cost of China's brain drain see Zweig and Chen, 1995.
2. Chang and Deng sent out 1782 surveys and 568 were returned for a response rate of 32.5 percent.
3. The large number of F-1 visas results from the fact that under President Bush's Executive Order of April 1990, J-1 students and scholars were allowed to change to F-1 visa status.
4. These numbers are remarkably similar to the numbers Gu, 1990, found in his survey, suggesting that we are tapping into a representative sample of the general population.
5. Most of the people in category 1 and many in category 2 were Visiting Scholars, who, more

16. As it turned out, we found little relationship between a student's or scholar's field of study and their views about returning.

17. People in these fields might apply their skills to finding jobs in the American work place more easily than those in the purer social sciences. We had originally put education in the "applied" category, but based on suggestions by specialists in international education, we placed it in the humanities field.

18. In Chinese, placing the names in alphabetical order in no way affected the selection process, as there is nothing non-random about Chinese names.

19. In Albuquerque, the person making contacts for us said that only five people out of 52 refused to be interviewed. More had initially refused, but he persuaded them that their fears about future problems, and the political background of the interviewer, were unfounded.

20. Since so many people were intellectuals or children of intellectuals, most had horror stories about their lives during these two periods.

**Table 1: "What Is Your Current Attitude About Returning to China?"**

<i>Category</i>	<i>Description</i>	<i>Frequency</i>	<i>Percent</i>
1	Definitely returning and have made plans to do so	22	8.3
2	Definitely returning but don't know when	66	24.4
3	Probably returning and have strong ties with China	53	19.9
4	Can't really say now (ambivalent)	53	19.9
5	Probably will return but have not kept up ties	26	9.8
6	Not very likely to return but might if things in China changed greatly	27	10.2
7	Definitely will not go back	20	7.5
<b>Total</b>		267*	100

\* Missing data = 6



Table 2: Why a Person Might Return to China

Choices	Rank as 1st choice	Frequency	Percent	Rank as 2nd choice	Rank as 3rd choice	Combined rank*
1 Patriotism	3	44	17.3	5	4	4
2 Family ties in China	4	39	15.4	1	2	3
3 Higher social status in China	1	66	26.0	2	3	1
4 Want to be involved in Chinese reform	6	15	5.9	4	6	6
5 Better career opportunities in China	2	52	20.5	3	4	2
6 Positive effects of Deng's "Trip South"	7	6	2.4	8	6	9
7 Better education for children	8	4	1.6	6	5	8
8 Cultural comfort in China	5	22	8.7	4	1	5
9 Can make more money in China than U.S./Canada	7	6	2.4	7	7	7
<b>TOTAL</b>	n/a	254	100.0**	n/a	n/a	n/a

\* Determined according to the sum of 1st, 2nd and 3rd choices (1st choice given a value of 5, 2nd choice a value of 3, 3rd choice a value of 1).

\*\* The total was 254 because we had 19 cases of missing data. We calculated "valid percentages" for those 254 cases.

**Table 3: Why a Person Might Not Return to China**

Choices	Rank as 1st choice	Frequency	Percent	Rank as 2nd choice	Rank as 3rd choice	Combined rank*
1 Lack of political stability	1	76	30.3	5	7	1
2 Lack of political freedom	2	31	12.4	2	6	2
3 Fear of being arrested	11	3	1.2	15	11	15
4 Lack of opportunities to change jobs in China	6	15	6.0	6	4	6
5 Lack of opportunity for career advancement in China	3	29	11.6	3	2	3
6 Poor work environment in China	4	21	8.4	1	3	4
7 Lack of modern equipment for your research or work	7	14	5.6	9	3	7
8 Living standard in China too low	5	19	7.6	4	8	5
9 Family here does not want to return	12	2	0.8	12	12	14
10 Difficulty in getting out the first time	9	8	3.2	10	5	10
11 People look on people who have returned as if they have failed	10	6	2.4	13	10	13
12 Fear of not being able to get out a second time	9	8	3.2	7	10	9
13 Better opportunity here for children's future	8	9	3.6	8	9	8
14 Difficulty competing with children of similar age back in China	13	1	0.4	14	10	16
15 Lack of suitable jobs given your education and training	11	3	1.3	12	6	12
16 Lack of contact or exchanges with international scholars in their field	10	6	2.4	11	2	11
<b>TOTAL</b>	n/a	251	100**	n/a	n/a	n/a

\* Determined according to the sum of 1st, 2nd, and 3rd choices (1st choice given a value of 5, 2nd choice a value of 3, 3rd choice a value of 1).

\*\* We calculated "valid percentages" based on the 251 people who respond. We had 22 missing data.

**Table 4: Positive Things About America**

Choices	Rank as			Frequency	Percent	Rank as			Combined rank*
	1st choice	2nd choice	3rd choice			2nd choice	3rd choice		
1 Political freedom	1			103	38.6	5		3	1
2 Job mobility	4			27	10.1	4		5	5
3 Good personal relations among people	6			10	3.7	7		8	7
4 Good inter-personal relations on the job	9			3	1.1	8		7	9
5 Lots of job choices or opportunity	2			52	19.5	1		4	2
6 Good working conditions	3			36	13.5	3		2	3
7 Higher standard of living	5			21	7.9	2		1	4
8 A better future for my children	7			9	3.4	6		6	6
9 Other	8			6	2.2	9		9	8
<b>TOTAL</b>	n/a			267	100.0**	n/a		n/a	n/a

\* Determined according to the sum of 1st, 2nd and 3rd choices (1st choice given a value of 5, 2nd choice a value of 3, 3rd choice a value of 1).

\*\* We calculated the "valid percentages" based on 267 cases. We had 6 cases of missing data

Table 5: Problems in American Society

Choices	Rank as			Percent	Frequency	Rank as			Combined rank
	1st choice	2nd choice	3rd choice			1st choice	2nd choice	3rd choice	
1 Pressure and speed of life is too fast	1	4	4	31.1	83				1
2 Poor living conditions	7	7	8	1.1	3				8
3 Racism	4	3	2	9.7	26				4
4 Crime and personal insecurity	2	2	6	29.2	78				2
5 Poor inter-personal relations among people	6	6	3	4.1	11				6
6 Missing family or friends	5	5	5	6.7	18				5
7 Job insecurity	3	1	1	17.2	46				3
8 Other	8	8	9	0.7	2				7
<b>TOTAL</b>	n/a	n/a	n/a	100.0**	267				n/a

\* Determined according to the sum of 1st, 2nd and 3rd choices (1st choice given a value of 5, 2nd choice a value of 3, 3rd choice a value of 1).

\*\* We calculated the "valid percentages" based on 267 cases. We had 6 cases of missing data.

**Table 6: Key Factors Explaining Attitudes about Returning: with Children, Version 2**

<i>Variable</i>	<i>Parameter Estimate</i>	<i>Standard Errors of the Estimate</i>	<i>Probability Chi-Square</i>	<i>Standardized Estimate</i>
N2 Sex	1.3051	0.5785	0.0241**	0.329188
N10 How long they worked before they left China	-0.0583	0.0497	0.2407	-0.237538
N20 What their original intentions were about staying/leaving before coming to U.S.	-1.2821	0.3151	0.0001**	-0.699179
N26 Current visa status	-1.2647	0.4923	0.0102**	-0.475395
N67 How they evaluate their housing in the U.S.	-0.568	0.4156	0.1713	-0.264422
N68 How they compare U.S. housing to housing in China	1.0295	0.3184	0.0012**	0.769709
N69 Household income	-0.0491	0.1208	0.6847	-0.071369
N73 How they compare overall economic situation now to that in China	0.1852	0.3109	0.5515	0.102882
N98 Trust of new policies regarding free travel back to U.S. after returning to China	-0.6754	0.3021	0.0253**	-0.386327
N102 Degree of contact with home unit	0.1963	0.2342	0.4019	0.131826
N104 Unit's opinion about their return to China	-0.1087	0.2001	0.5867	-0.071381
Other Arrival before or after April 1990	-1.3445	0.7059	0.0568*	-0.366649
Other Combined political variable	0.1928	0.1095	0.0783*	0.267561

Criterion: -2 LOG L

Chi-square for covariates: 101.480 with 13 DF (p=0.0001)

Score: 65.979 with 13 DF (p=.0001)

\* Indicates a Significant Relationship

\*\* Indicates a Highly Significant Relationship

Table 7: Key Factors Explaining Attitudes About Returning: No Children, Version 2

Variable	Parameter Estimate	Standard Errors of the Estimate	Probability Chi-Square	Standardized Estimate
N2 Sex	0.8236	0.5709	0.1491	0.215566
N10 How long they worked before they left China	0.1348	0.063	0.0322**	0.399826
N20 What their original intentions were about staying/leaving before coming to U.S.	-0.5619	0.3487	0.1071	-0.270171
N26 Current visa status	1.8844	0.7688	0.0142**	0.410988
N67 How they evaluate their housing in the U.S.	0.2506	0.3905	0.5211	0.124521
N68 How they compare U.S. housing to housing in China	-0.3584	0.3549	0.3125	-0.213499
N69 Household income	-0.3676	0.1358	0.0068**	-0.499966
N73 How they compare overall economic situation now to that in China	0.6713	0.3314	0.0428**	0.35407
N98 Trust of new policies regarding free travel back to U.S. after returning to China	-0.6099	0.3604	0.0906*	-0.257547
N102 Degree of contact with home unit	0.0491	0.2492	0.8439	0.031118
N104 Unit's opinion about their return to China	0.1884	0.1893	0.3198	0.141482
Other Arrival before or after April 1990	-0.4735	0.7484	0.527	-0.115853
Other Combined political variable	-0.1895	0.1184	0.1093	-0.254662

Criterion: -2 LOG L

Chi-square for covariates: 30.650 with 13 DF (p=0.0038)

Score: 24.738 with 13 DF (p=.0250)

\* Indicates a Significant Relationship

\*\* Indicates a Highly Significant Relationship

**Table 8: Key Factors Explaining Attitudes about Returning: with Children, Version 1**

<i>Variable</i>	<i>Parameter Estimate</i>	<i>Standard Errors of the Estimate</i>	<i>Probability Chi-Square</i>	<i>Standardized Estimate</i>
N2 Sex	-0.8734	0.4221	0.0385**	-0.220292
N10 How long they worked before they left China	-0.0351	0.0285	0.2194	-0.142511
N20 What their original intentions were about staying/leaving before coming to U.S.	-0.3349	0.2161	0.1211	-0.182625
N26 Current visa status	0.9342	0.3729	0.0122**	0.351168
N67 How they evaluate their housing in the U.S.	0.4239	0.2911	0.1454	0.197331
N68 How they compare U.S. housing to housing in China	-0.1781	0.2006	0.3747	-0.133146
N69 Household income	-0.1796	0.0875	0.0401**	-0.261368
N73 How they compare overall economic situation now to that in China	0.2846	0.2219	0.1997	0.158107
N98 Trust of new policies regarding free travel back to U.S. after returning to China	-0.2006	0.2184	0.3586	-0.114715
N102 Degree of contact with home unit	0.2931	0.1725	0.0894*	0.196807
N104 Unit's opinion about their return to China	0.1294	0.1542	0.4013	0.084953
Other Arrival before or after April 1990	-1.1074	0.5077	0.0292**	-0.301975
Other Combined political variable	0.0501	0.0833	0.5478	0.069455

Criterion: -2 LOG L

Chi-square for covariates: 28.689 with 13 DF (p=0.0072)

Score: 24.463 with 13 DF (p=.0072)

\* Indicates a Significant Relationship

\*\* Indicates a Highly Significant Relationship

**Figure 1: Household Income Levels**

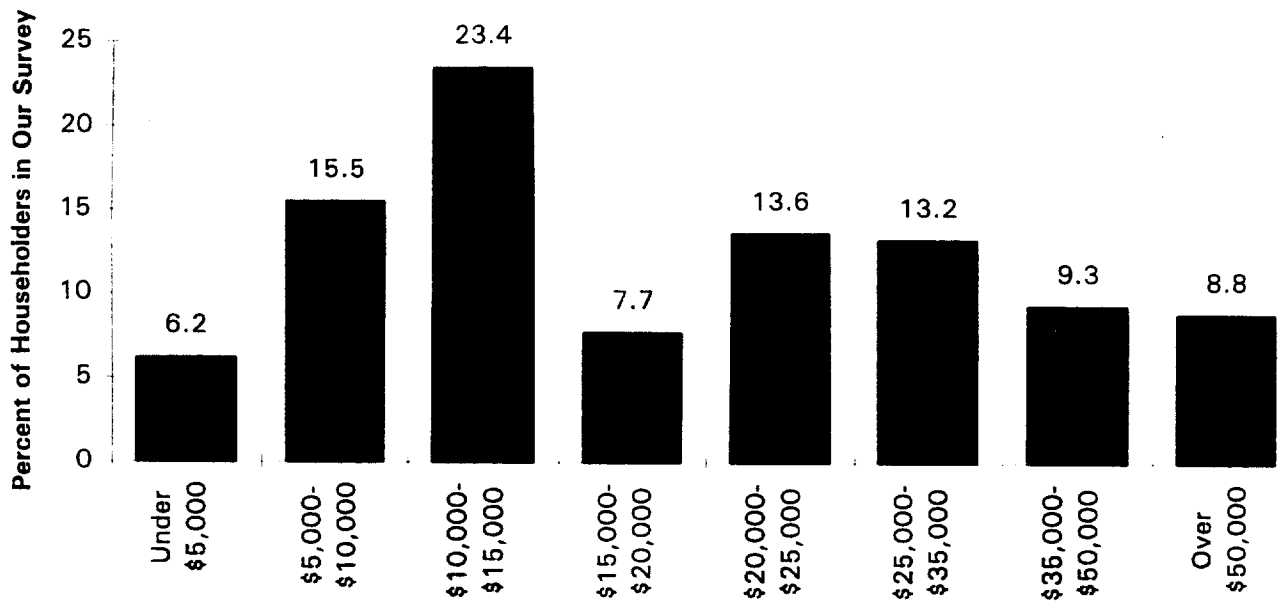
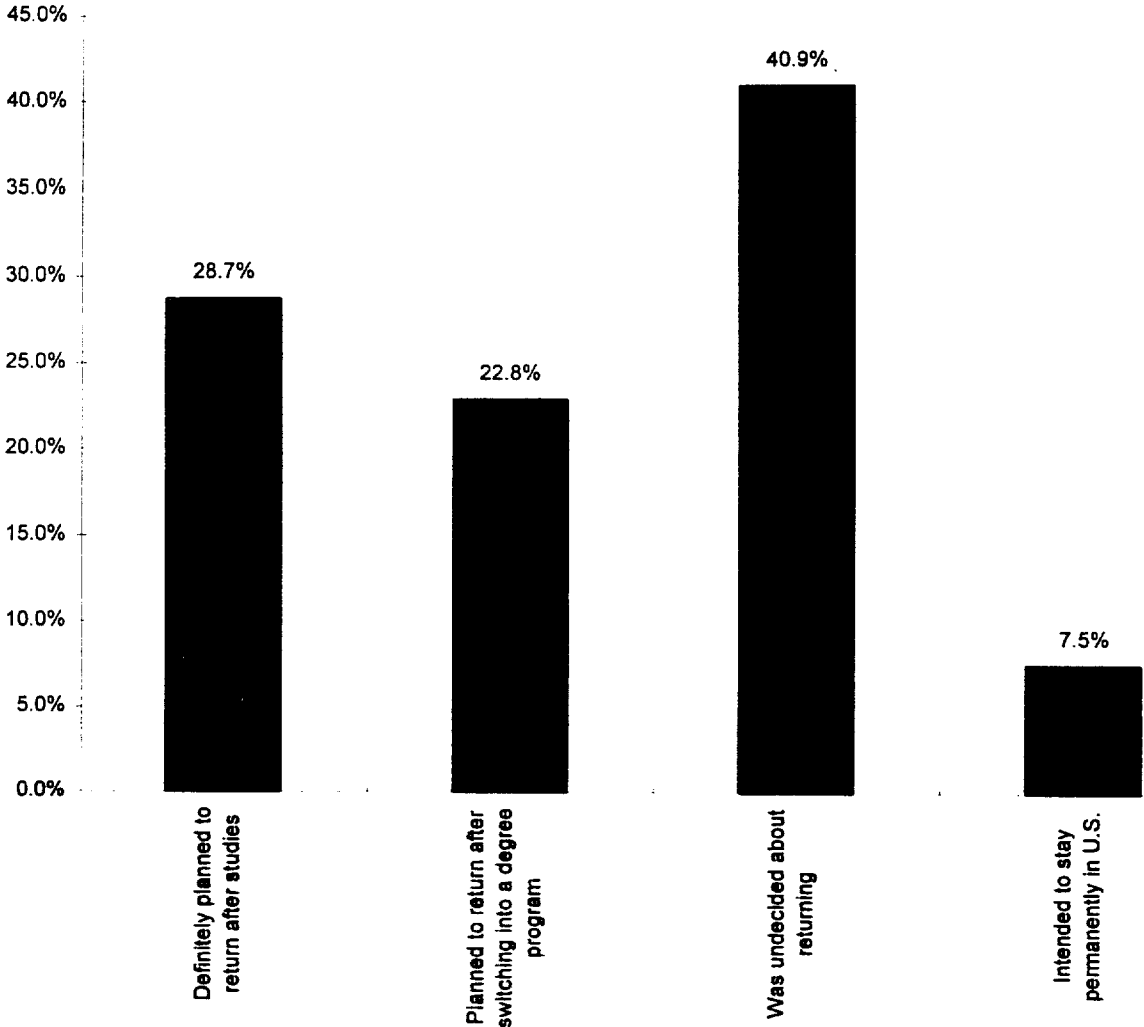




Figure 2. Intention About Staying in the U.S. Before Leaving China



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