As Dumb As We Wanna Be: U.S. H1-B Visa Policy and the "Brain Blocking" of Asian Technology Professionals

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As Dumb As We Wanna Be: U.S. H1-B Visa Policy and the “Brain Blocking” of Asian High-Tech Professionals

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Abstract

U.S. immigration policy created the H1-B visa program in 1990 for educated skilled foreign workers, and has manipulated the cap on several occasions. Limits were as high as 195,000 as recently as 2003, but was reduced to 65,000 by 2009. The result of the lowering of the H1-B visa cap placed a hardship both on domestic high-technology businesses, who could not get sufficient quantities of desired workers to fill employment slots, but to the country as well with reduced opportunities to recruit potential educated citizens and unintentionally produces a reduction of overall national brain gain effects that result from the agglomeration effects of the exchange of ideas in the marketplace (an effect that I refer to as “brain blocking”). Further, the brain gain that could have been accrued to the U.S. has been re-routed, either to immigration-friendly countries such as Canada or to the home country if the high-tech worker decided to stay there (an effect that I refer to as “brain diversion”). The reasons for the reduction of the H1-B visa cap appear to parallel other immigration restrictions that kept Chinese and other Asian workers out of the domestic workforce in earlier centuries, and are often racially motivated.

This paper looks at the historical restriction of Chinese and Asian workers, the similarities between the current reduction of H1-B visa caps, and the effects of brain blocking and brain diversion that result from current immigration policies.
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Introduction

American business interests face increasing difficulties as they attempt to compete against global technology-based industries. As the U.S. educational system produces fewer trained technology workers, many firms look to foreign countries such as China or other Asian countries that have an abundance of skilled technology professionals. The employment of foreign skilled professionals, however, has come under intense scrutiny from U.S. government officials and protectionist labor interests that argue hiring foreign skilled workers depresses similar domestic wage levels. However, some in technology business management counter-argue that many of the technological skills that they require are not readily found among domestic workers, and those restrictions on bringing foreign skilled technology workers causes them to lose out on the best global innovative minds, and then forces them to out-source technology work often to the professionals they intended to import to the U.S. Jobs therefore leave the U.S. with few of the economic benefits of foreign technology workers living in the country and reduced levels of domestic knowledge and innovation.

One way that the U.S. federal government controls the flow of international human capital has been through manipulation of H-1B visa levels that allow skilled foreign workers to enter the country for a limited period of time. H-1B visas are the primary mechanism for entry-level positions in the information technology sector, in disproportionate use compared to other industries.\(^1\) The legislative trend since 2002 has been to reduce and cap the number of H1-B visas granted to allow domestic firms to hire and import foreign technology professionals, primarily from India, China, and other

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Asian countries.

In this paper, I assert that through the reduction and placement of caps that limit the hiring of foreign technology professionals, the U.S., through its immigration policy, engages in “brain blocking” that reduces the potential of brain gain from foreign technology professionals, and ultimately results in a domestic brain drain effect that fails to maximize the potential of knowledge in the U.S., but through “brain diversion” will increase brain gain in other host countries that do not have similar policies that restrict the knowledge agglomeration effects that come with increased interaction with foreign technology professionals. Further, that this blocking of foreign intellectual capital is the effect of a continuation of historical racial biases against Asian workers.

**Geography, Globalization and the International Flow of Human Capital**

Why does labor move from one country to another, and what are historical reasons that workers from certain countries tend to seek out opportunities in other countries? How can foreign worker movement be regulated?

Geography, in its rawest form, is about the exercise of political power. This power-knowledge relationship is exhibited through political institutions that seize and discipline space. To maintain its political power, sovereign countries use political power through its legal institutions to regulate flows across its border. These flows may be in several different forms, such as flows of trade, finance, information, or human capital. Flows of human capital involve the movement of labor from one country to another through migration, often due to lack of pecuniary opportunity in a worker’s home

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3 *Id.* at 11.
country. Of course, migration between some countries is freer than others due to differing immigration policies among nations. Countries that have immigration and labor policies that deter cross-border movement for labor and immigration add friction to the movement process of human capital, usually resulting in added costs time due to bureaucracy.

The globalization process has evolved into an integrated system of arrangements between nations and multi-national business entities that move large volumes of manufactured goods, services and information over international borders. At its core, globalization is determined by the legal systems of various countries. The process is constrained by the capacity of many countries to eliminate protectionist trade barriers and bring their respective regulatory and investment protection national laws into harmony with those of its trading partners. One of the keys to facilitating the globalization process is the development of agreements within national legal systems that allows for friction-free movement of human capital.

However, unlike the trade of goods, American labor law remains a national rather than an international legal issue. Despite entering into many bi-lateral and multi-lateral agreements on labor, the U.S. treats immigration for labor purposes as it would a local labor case within its own borders. The transfer of technology workers between the U.S. and foreign countries has been constrained by the machinery of the Congressional legislative body rather than harmonization of labor laws among trading partners to aid in

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5 Id. at 275; see also Lawrence J.C. Ma, The Chinese Diaspora: Space, Place, Mobility, and Identity, 1 - 50 (Rowman & Littlefield Pubs. 2003).
6 The U.S. has been a member of the United Nations’ International Labor Organization (ILO) since 1934, and often signs labor agreements when it enters into trade treaties, such as the North American Agreement on Labor Cooperation (107 Stat. 2057, 32 I.L.M. 1502, entered into effect Jan. 1, 1994) as a part of the multi-lateral North American Free Trade Agreement (NAFTA).
the free flow of human capital.

The extended U.S. experience with globalization, however, does not appear to have reduced the level of racism against Chinese and other Asian technology professionals. The observable, physical traits of being Chinese or of Asian descent, in itself, allows Americans to ascribe a “foreignness” to temporary workers or immigrants that solidifies racial stereotypes other minorities do not have to contend.\footnote{Angelo Ancheta, \textit{Race, Rights, and the Asian American Experience}, (Rutgers U. Press 1998) at 12.}

U.S. immigration policy, primarily through the reduction of available H1-B visas since 2002, has sought to restrict the importation of educated foreign technology and knowledge workers. Similar to previous protectionist legislation that eliminated the competition of foreign workers in the domestic economy, the lowering of H1-B visas for U.S. high-tech employers effectively removed Chinese and other Asian knowledge workers from interaction inside the U.S. marketplace. Although not as racially blatant as prior laws that named specific ethnicities to be barred \textit{de jure}, the H1-B visa restrictions have the same effect \textit{de facto}.

\textbf{Overview of the H-1B Visa Program}

One action to regulate the movement of human capital into the U.S. has been the creation and manipulation of the non-immigrant H-1B visa designed to cover non-U.S. citizens working for domestic companies on U.S. territory. Historically, most of the H-1B visa quota has been filled by educated technology workers from East and South Asian
countries.\textsuperscript{8} Chinese H-1B visa workers comprise approximately 40,000 of the annual totals between 1993 and 2003, second in amount only to specialty workers from India.\textsuperscript{9}

Once relatively easy to obtain, various political pressures have reduced the allowable quota of non-citizens by two-thirds since 2003. Proponents of the higher H-1B visa levels argue that the increase in the non-citizen workers, which traditionally had been in technical and educational field, add to the wealth of knowledge for American companies, added to the economy inside the country, generated innovation in areas where American workers lacked expertise, and served as a conduit to allow educated foreigners to seek “green cards,” or permanent status for the right to work in the U.S., and eventually citizenship.\textsuperscript{10} However, detractors of higher H-1B visa levels offer an opposing claim that multi-national corporations create artificial economic pressures by hiring foreign technology to manufacture increased competition for jobs.

Domestic technology firms that desire to hire educated foreign professionals from abroad must follow a hiring protocol designed by the U.S. Citizenship and Immigration Services (USCIS) to procure a H1-B visa. The USCIS was formed in 2002 as part of the Department of Homeland Security (DHS) to expand upon the duties of the former U.S. Immigration and Naturalization Services department.\textsuperscript{11} In 2003, the USCIS obtained oversight of the H-1B visa program.

Congress enacted the H-1B visa program in 1990 as an amendment to the

\textsuperscript{8} Approximately 67\% of all H-1B visas are issued to nationals of India; a primary reason for this high percentage is that many of the largest requestors of H-1B visas are U.S. subsidiaries of India-based companies, such as InfoSys or Wipro.

\textsuperscript{9} USCIS, available at \url{http://www.uscis.gov/portal/site/uscis/menuitem.5af9bb95919f35e.html}, accessed 09/15/2008.

\textsuperscript{10} Susan Martin & B. Lindsay Lowell, \textit{Competing for Skills: U.S. Immigration Policy Since 1990}, 11 L. \& Bus. Rev. Am. 387, 390 (2005). The lower cap on H-1B visas have resulted in many skilled technology workers having to return to their home country and wait for the issuance of their “green card” to return to the U.S., which may take between six and ten years.

McCarran-Walter Act of 1952.\(^{12}\) The H-1B visa requires an applicant to hold the foreign equivalent of an U.S. bachelors degree or equivalent experience, and the applicant must work in a designated specialty skill area.\(^{13}\) The H-1B visa is temporary, and it allows the worker to be in status for a six-year term, although the visa may be extended or the worker can begin to apply for permanent residence within one year of expiration. Martin, Chen, and Madamba, however, argue that the imbalance of power between the employer and the H-1B visa program to “serve as a probationary try-out employment for illegal aliens, foreign students, and foreign visitors to determine if they will be sponsored for permanent status.”\(^{14}\) Under this view, the H-1B visa worker becomes a “probationary immigrant.”\(^{15}\)

A suitable U.S. firm must sponsor a prospective H-1B visa applicant. The designated firm must file a Labor Condition Application (LCA) that attests that the applicant will not be displacing a domestic and that there are no current labor disputes involved in the hiring of a foreign worker.\(^{16}\) The potential employer also must attest that the H-1B worker will be compensated in accordance to one of several salary options outlined by the U.S. Department of Labor.

Congress intended for various safeguards to be included into the H-1B visa process to keep the program from becoming a cheap source of human capital for an

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\(^{12}\) The McCarran-Walter Act of 1952 codified the prior Immigration and Nationality Act, and separated the categories of immigrant types by labor classification. Under the control of the Department of Labor, immigrant work types could then be restricted or expanded to keep non-citizens from taking jobs away from U.S. citizens or working below the prevailing wage.


employer. An employer of an H-1B visa holder must pay the higher value between the prevailing local wages for workers in that field or the prevailing wages as determined by a Department of Labor salary survey. Spouses of H-1B visa holders are also not allowed to work while in the U.S.

The controversy over the H-1B visa program begins with the regulatory mechanism that determines the number of foreign specialty skilled workers to be allowed into the country each year. The initial number of H-1B visas in 1990 was capped at 65,000, a figure that quickly was determined to be inadequate by the needs of business interests. The following year, the American Competitiveness and Workforce Improvement Act allowed the cap to be raised until it reached 195,000 specialty skilled workers per year from 2000 to 2003. However, in 2004, the USCIS returned its cap level to 65,000, citing the effects of an economic recession.

The reduction of the H-1B cap in 2004 resulted in many companies unable to bring in technology workers for that year. Many firms devised innovative strategies to aid in the acquisition of new H-1B visas, often filing for as many as possible on the first day of application acceptance. As a consequence, the USCIS filled its H-1B visa quota at earlier points each year following the introduction of the reduced cap. In 2007, the USCIS received more H-1B visa applications on the first day of its annual acceptance period than it was allowed to approve for an entire year. One unintended consequence of the early filling of H-1B visas on the first day of annual application was that it prevented talented foreign students that had recently graduated from U.S. institutions under the student visa program from obtaining jobs in the U.S. Thus, many had to return to their

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17 Id.
18 Foreign nationals that are permanent workers of an U.S.-based multi-national corporation at an overseas location may be brought into the U.S. under the L-1 visa program.
home countries to await the approval of future U.S. visa applications.

In December 2004, Congress passed the L-1 and H-1B Visa Reform Act in a partial attempt to raise the specialty worker cap.\(^{19}\) Under this amendment, an additional 20,000 foreign workers were admitted to work in the U.S., provided that the applicants had at least a master’s degree from an U.S. university. Although this legislation brought some relief to technology firms seeking foreign talent, this action was not without criticism. Technology firms that supported a raising of the cap argued that although this makes it easier to hire foreign nationals educated in the U.S., the reform has essentially narrowed the scope of additional employment. Many of the jobs that employers sought to fill did not require that level of education. Further, technology firms argued that an advanced technical degree from a foreign university had become the equivalent to that found in the U.S.\(^{20}\)

In 2006, a bipartisan attempt to raise the H-1B visa limit to 115,000 per year was promoted by Senators John McCain (R-AZ) and Edward Kennedy (D-MA) as part of an immigration reform bill. This bill did not pass. Many observers blame a protectionist political climate deriving from that year’s election year and a resultant pandering to large block of organized labor votes.\(^{21}\)

Large multi-national domestic businesses did not fail to acknowledge that H1-B visa reform was a topic that many politicians did not want to address going into the 2008

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\(^{19}\) The L-1 and H-1B Visa Reform Act was an amendment to the 2005 Omnibus Spending Bill.


election year. At a Silicon Valley Tech Policy Summit function in March 2008, Xerox CEO Anne Mulcahy reflected on the year’s immigration issue and the reluctance for politicians to get involved, by noting that “there’s a perception that global trade and big business is leading to losses in the economy, and politicians don’t want to get onto the wrong side of that argument.”

A History of Discriminatory Labor Actions Against Chinese Laborers

The legislative restriction of immigrant workers into the U.S. is not new. American legal history cites a long list of discriminatory legislation against Asians, and especially directed at ethnic Chinese, often under the guise of domestic union labor protections, that promoted both racial and nationalistic exceptionalism.

As a early basis of discrimination., the U.S. Constitution had a built-in racial hierarchy as national policy, allowing the three-fifths personhood for slave labor written into the text. Further, the Naturalization Law of 1790 restricted naturalized citizenship to white persons of European descent.

Other early expressions of these exclusionary principles, especially against Chinese, extended to some of the nation’s Founding Fathers. Benjamin Franklin, for one,

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24 U.S. Constitution, Art. 1, § 2, ¶3.
25 Originally enacted as the Naturalization Act of March 26, 1790, Stat. 103; the exclusion of non-white naturalized citizens was not officially taken off the law books until the passage of the Immigration and Nationality Act of 1952, but the enactment of the Fourteenth Amendment in 1868.
wrote that the English were the “principle Body of White People,” and that by refusing to admit “Tawneys” into the country, there would be more opportunity for the “Whites”.26

The initial wave of Chinese laborers hired by American business interests came through Hawaii in the early 1800s to fill the void of workers on sugar plantations. As the U.S. completed its continental westward expansion at the end of the Mexican-American War, hundreds of thousands of Chinese were recruited to work in California gold mines and aid in building railroads.27 The Chinese were ethnically, linguistically, and culturally distinct from other immigrant groups that had entered the U.S. at that time. Much of the Chinese population was de facto segregated into designated parts of cities commonly known as “Chinatowns”.28 Most Chinese could never acquire the requisite knowledge to pass the ever-changing citizenship test, necessary to achieve the status of becoming “white” and thus able to exercise the full bundle of rights available to the regular U.S. citizen.29

Voting rights for ethnic Chinese that had become U.S. citizens through the enactment of the Fourteenth Amendment in 1868 were routinely ignored, which also denied them the organizational political power to resist further restrictive legislation.30

As later noted by U.S. Supreme Court Justice Harlan Stone, in U.S. v. Carolene Products

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26 Benjamin Franklin, Observations: Concerning the Increase of Mankind, Peopling of Countries, Etc., in A. H. Smyth, ed., The Writings of Ben Franklin (MacMillan Books 1970) at 63, 72, 76, 78; “Tawneys” was the English term for Chinese in the mid- and late-1700s. Franklin’s choice for exclusion was also not limited to Chinese: “Why increase the Sons of Africa, by planting them in America, where we have so fair an opportunity, by excluding all Blacks and Tawneys, of increasing the lovely Whites?”
29 Chiu, supra, at 1061. Many courts determined that the placement of the word “white” in the naturalization laws excluded all non-Caucasians. This was eventually overturned by In re Ah Yup, 1 F. Cas. 223 (C.C.D. Cal. 1878).
30 Chiu, supra, at 1062, 1066.
Chinese communities had become a “discrete and insular community . . . against whom prejudice tended seriously to curtail the operation of political processes ordinarily to be relied upon to protect minorities.”

Congress enacted several national laws to restrict Chinese immigration in the late 1800s, often in the guise of reducing organized crime or upholding American morals. The culmination of American institutionalized racism resulted in the Congressional passage of the Chinese Exclusion Act of 1882 (hereafter, the “Act”). The Act became the first national legislation to specifically exclude a particular race or ethnic group from entering U.S. borders.

As a conciliation to the emerging power of labor unions, Congress implemented the Act to ban the importation of Chinese laborers for ten years. Chinese women, although not laborers, were also de jure banned under the Act. In the holding of In Re Ah Moy (better known as the Case of Chinese Wife), a California court ruled that Chinese women took the status of their husbands, relegating Chinese women married to laborers ineligible to immigrate to the U.S.

After the expiration of its initial ten-year term, the Act was successfully renewed several times, and indefinitely extended in 1902. The Supreme Court affirmed the constitutionality of these extensions in Fong Yue Ting v. United States, stating that under

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32 Examples of these laws were the Act of March 18, 1870, ch. 230, 1870 Cal. Stat. 330, that prohibited the importation of Chinese women for prostitution, and the Act of March 3, 1875, that prohibited Chinese women to be brought to the country for lewd and immoral purposes.
33 Chinese Exclusion Act, ch. 126, 22 Stat. 58 (1882); repealed 1943. A similar Exclusion Act was passed in Canada in 1923.
35 Trucios-Haynes, supra, at 971.
36 In Re Ah Moy, 21 F. 785 (C.C.D. Cal. 1884).
the maxims of international law, every sovereign nation had the inalienable right to include or exclude immigrants as it saw fit.\textsuperscript{38}

Children of Chinese parentage and born in the U.S. were subject to similar discrimination and denied citizenship and other rights given to children of other nationalities, as interpreted by the courts considering naturalization of immigrants during this time. However, the 1898 U.S. Supreme Court case of \textit{Wong Kim Ark} interpreted the recently-passed 14\textsuperscript{th} Amendment as guaranteeing birthright citizenship to those of Chinese descent that were born in the U.S.\textsuperscript{39} Prior to this decision, Chinese persons who had been born on U.S. soil were denied re-entry (and often detained by the U.S. government and subject to deportation) into the country under the Exclusion Acts.

Exclusionist legislation was not limited to Chinese laborers. In 1907, a similar law was passed by Congress to include Japanese laborers.\textsuperscript{40} However, Japan, a more powerful economic power than China at the time, was able to negotiate a separate “Gentlemen’s Agreement” for more wealthy Japanese citizens for entry into the U.S.\textsuperscript{41} The 1917 Immigration Act disallowed the importation of labor from any country in a “barred zone,” which included any Asian country not already covered by exclusionary legislation.\textsuperscript{42} Under the Tydings-McDuffie Act of 1934, citizens of the Philippines were allowed fifty immigrants into the U.S. per year, ostensibly as retribution for colonial U.S.

\textsuperscript{38} Fong Yue Ting v. United States, 149 U.S. 698.
\textsuperscript{39} United States v. Wong Kim Ark, 169 U.S. 649 (1898). Born in San Francisco to non-citizen Chinese laborers in 1873, Wong Kim Ark returned to China at age 17 and later successfully returned. After a second visit to China, he was refused readmittance due to the Chinese Exclusion Laws.
\textsuperscript{40} Sucheng Chan, \textit{Asian Americans: An Interpretive History} (Twayne Pub. 1991) at 28.
\textsuperscript{42} Chiu, \textit{supra}, at 1067; see also Immigration Act of 1917, ch. 29, 39 Stat. 874; repealed 1952. A small exception to the Immigration Act of 1917 was an allotment of 50 Philippine citizens per year were allowed to immigrate to the U.S.
acts within the country. \textsuperscript{43} Ethnographic maps were developed to aid in the placement of whether a potential immigrant was from a banned “Oriental” country.\textsuperscript{44}

Critical Race Theory scholars offer that racial discrimination is a continual social and legal problem that render the notion of a “color-blind” society lacking a perspective of reality. \textsuperscript{45} Parallels to the current reduction of H1-B visas, while not discriminatory to Chinese and Asian technology workers as being named specifically in particular, as the majority of H1-B visa applicants are Asian, there are \textit{de facto} limits as the majority of the workers attempting to gain access to the U.S. are from Asian countries.

**Politics of the Current H1-B Visa Scheme**

Political pressures from both business and labor interests fuel much of the discussion about H-1B visa quota levels. Congress introduced legislation to both increase and reduce the H-1B visa quota have been introduced in the recent years, and neither side has been successful.

Detractors of an expanded NIV visa quota argue that the H-1B visa is a government subsidy for U.S.-based companies to import cheap labor into the domestic market at levels below prevailing U.S. wages to increase corporate profits. Many activists against expanding the H-1B visa program claim that domestic corporations do not comply with the wage safeguards that keep employers from paying wages lower than the prevailing wage in an area.

\textsuperscript{43} Kramer, \textit{supra}, at 392.

\textsuperscript{44} The original term “Oriental” was used in the Exclusion Laws to designate which foreigners to keep out of the U.S. originally included citizens of the Philippines; at least one Filipino was able to circumvent this designation by successfully arguing that he was of Malay ethnicity.

Some analysts believe that some domestic firms that are subsidiaries of foreign companies are engaged in a practice termed “bodyshopping.” Bodyshopping may occur when a foreign company uses its reserve of potential foreign workers to under-bid a domestic company on a contract, then bring in foreign workers under the H-1B program to complete the contract paying substandard wages. Companies that “bodyshop” have also been accused of bringing in foreign workers even when there is no current work to be done, and paying the H-1B visa holders a subsistence wage (a status known as “benching”) until work can be found that will displace American workers. Analysts such as Goodsell argue that this accusation does not make any economic sense, as a domestic sponsoring firm must pay at least $16,000 in associated fees to the government to get the H-1B visa approved, and therefore “benching” a technology worker, let alone several of them at the same time, would be a very expensive proposition.

Opposing research, however, refutes claims that industry is not replacing domestic technology workers with lower-wage ones from abroad. In one study of H1-B visa holders, Miano reviewed the Labor Classification Standards for over 300,000 H-1B holders in the country in 2005, and stated that his results found that very few H-1B holders fulfilled the definition requirement of being “highly-skilled,” with 56% of the H-1B visa holders being classified at the lowest skill level of Level Programmer / Computer Operator. Miano further argued that his results showed that 90% of domestic employers understated the prevailing wages of domestic workers in the field using figures

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46 Goodsell, supra, at 168.
47 According to the USCIS, 7 of the top 10 sponsors of H-1B visas are U.S. subsidiaries of Indian-based firms.
48 Goodsell, supra, at 168.
that are not permitted under the Department of Labor H-1B standards, allowing the company to pay a lower pay rate to the H-1B visa holder, at an average of $16,000 less than the prevailing wage requirements stated by the Department of Labor Standards.50

Miano did find several instances where other apparent abuses occurring in the H-1B visa process that were not caught by the Department of Labor approval procedure. Among these abuses were applications for computer programmers made by enterprises not normally associated with technology work, often small minority enterprises such as stores and restaurants; some small businesses being granted many more visas than people they could employ; and, in some cases, extremely low wages being declared to be paid to Chinese technology professionals that have come to be known as “Techno-Coolies”.51 However, Miano’s findings only represented a small part of the total LCAs submitted during his period of study. It is also a point of issue that the Congressional Research Office, nor any non-partisan operation, has completed a study that has confirmed Miano’s findings that H-1B visa holders are brought in from foreign countries to compete for lower wages against American skilled professionals. Despite the quote by populist television political commentator Lou Dobbs that “it is well-documented that H-1B visa holders take American jobs,” there is little corroborating evidence that exists in the relevant academic literature.52

Several political commentators, including aforementioned Lou Dobbs, state that Chinese H-1B visa holders should be especially scrutinized because of China’s alleged attempts to spy on U.S. military installations to steal technology secrets.53 As an example

50 However, it is significant to note that this research was not submitted in a peer-reviewed journal.
51 Miano, supra, at 28; Goodsell. Supra, at 164.
52 Lou Dobbs Tonight transcript, aired April 3, 2007 on CNN.
of this unsubstantiated paranoia, Larry Wortzel of the Heritage Foundation wrote:

“There are some 700,000 visitors to the United States from China each year, including 135,000 students. It is impossible to know if these people are here to study and research or if they are here to steal our secrets. The sheer numbers defy complete vetting or counterintelligence coverage.”

Television commentators are not alone with motives that ethnic Chinese are trying to steal state technology secrets. Wen Ho Lee, a Taiwan-born naturalized citizen who worked at a nuclear research facility, suffered through five years of attempts by federal prosecutors to link him to a plot to pass national security secrets to the Chinese government. A special attempt was made to emphasize Lee’s ethnicity during his prosecution and in government releases to the media. Lee eventually was imprisoned for nine months on the much lesser charge of mishandling classified information, a much lesser charge than spying for a foreign government, after millions of dollars was spent by the government on his prosecution.

The Internet is also filled with anecdotal stories about displaced domestic workers losing their jobs to H-1B visa imported workers. However, the only national government comprehensive study on H-1B visas by the National Research Council (2001) found only that the effect is “difficult to estimate with any confidence.” A similar study by Lowell stated that if there was any repression of labor wages, it is minimal and does

54 Larry M. Wortzel, Sources and Methods of Foreign Nationals Engaged in Economic and Military Espionage, (Heritage Foundation 2005).
55 Gee (2003-2004), supra, at 136. Gee noted that similar breaches by non-Chinese persons working in similar positions of security did not receive the same level of scrutiny; see also Spencer K. Turnbull, Comment: Wen Ho Lee and the Consequences of Enduring Asian American Stereotypes, 7 Asian Pac. Am. L.J. 72, 75 (2001).
56 Gee (2003-2004), supra, at 137; Gee described, among other interrogations, that for the years of his prosecution Lee was subject to threats of jail and a death scenario similar to that of Julius and Ethel Rosenberg during the Communist “Red Scare” era, despite taking numerous polygraphs and allowing himself to be interrogated by FBI agents – around a thousand, according to Gee – without the benefit of counsel.
not appear in the collected data.\textsuperscript{58} 

There have been no successful legal challenges to domestic companies using H-1B visa holders to replace domestic workers to reduce labor costs in violation of Department of Labor regulations. In 2004, Guy Santiglia filed suit with the U.S. Department of Labor claiming that his employer, Sun Microsystems, Inc., was systematically laying off domestic computer technologists and programmers (including him) and replacing them with unqualified H-1B visa holders at lower wages.\textsuperscript{59} The Administrative Review Board of the Department of Labor found Sun Microsystems having only minor violations, and none in relation to employing H-1B visa holders.\textsuperscript{60} Sun Microsystems was not required to retain excess domestic employees from certain technology areas and retrain them to fill current openings instead of recruiting H-1B visa holders that had skills and experience in new fields of the company’s business.

Proponents of Expanded H-1B Visa Quotas

Many corporations are insistent that without expanded H-1B visa quotas, their firms cannot operate in a competitive fashion, and must take other measures to ensure a competitive advantage. Anne Mulcahy, the CEO of Xerox, stated at a Silicon Valley Tech Policy Summit gathering in March of 2008:

“You have to raise the quotas. It gets worse each year because our needs are greater. We have just been stuck on inaction in this country. It’s not pros or cons. It’s inaction, it’s the political polarization in this country that has made


\textsuperscript{59} Guy Santiglia v. Sun Microsystems, Inc., ARB Case No. 03-076, decided July 29, 2005.

\textsuperscript{60} Sun Microsystems was ordered to change its posting practices for job openings; it had posted openings in the required amount of places, but was found that one posting was in the wrong area. The judge ordered the company to post job openings in the correct area, but as the error was not consequential or intended to deceive, the company was not fined for this oversight.
for extraordinary problems. Having access to international talent is a big part of what has fueled our technology industry. The statistics about new companies that have started up by founders who came from outside the country . . . I mean, this is just dumb.”

Jonathan Schwartz, CEO of Sun Microsystems, added:

“We’re not dumb. You put a quota here, we’ll go hire there.”

As one example, Google employs approximately 6,000 technology workers worldwide, and 8% of these are hired under the H-1B visa program. Many of the NIV workers have been recruited directly from U.S. universities and are seeking permanent residency status.

In an age of multinational technology companies that have access to technology that allows the instant flow of communication across national borders, many potential domestic technology employers have sent work off-shore rather than hire unqualified or untrained local workers.

Many studies cite the benefits of the economic activity of H-1B workers on the U.S. economy. The National Foundation for American Policy (NFAP) issued a policy brief that outlined several of the benefits related to H-1B visas and domestic job creation. Among the study’s findings were:

1) That for every H-1B visa requested, U.S. technology companies had created 5 jobs;

2) For technology companies with less than 5,000 employees, for every H-1B

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62 Id.; Microsoft, the largest historical requester of H1-B visas, in partial response to the lack of sufficient H1-B visa availability, announced in 2007 that it would build a new software development center in Vancouver, Canada, 150 miles from its Washington headquarters. As of 2010, the Vancouver location employed almost 1,000 software developers, most of which were denied an H1-B visa into the U.S. Another large software developer, Oracle, has also opened a software development center in Vancouver. The majority of these high-tech software developers are from China and India.

visa requested, there was an increase of employment of 7.5 jobs;

3) As the hiring of H-1B visa workers and domestic workers are specific to the business opportunities of the firm, the addition of H-1B visa workers is complimentary to the hiring of domestic workers and does not displace them;

4) Even in periods of decline in technology hiring, domestic workers are still hired over H-1B visa workers by 7 to 1 in firms over 5,000 employees, and 5 to 1 in firms with less than 5,000 employees;

5) Overall employment of H-1B visa holders in firms declined in companies that had declining sales, refuting the argument that employers hire H-1B visa holders to save money;

and

6) 74% of firms responding to the NFAP survey thought that the inability to fill a technical position because of a lack of H-1B visas made their company uncompetitive against foreign competition. 

The NFAP study also refutes the figures of studies made by Hira that H-1B visa workers earn less than domestic workers, and instead earn 22% more than domestic workers with similar skills.

U.S. H1-B Visa Policy: “Brain Blocking” and “Brain Diversion”

A country that receives educated immigrants who add to its intellectual storehouse of knowledge is said to benefit from brain gain. Further studies show that the H-1B visa program adds to the “brain gain” of technology knowledge in the U.S.

64 National Foundation for American Policy, H1-B Visas and Job Creation (NFAP 2008), 1,3.
66 Goodsell, supra, at 152.
Mahroum that many skilled professionals seek to work in the “core” of their profession, wherever it is, and that region benefits from a greater than proportional benefit.\textsuperscript{68} Nations also benefit from brain gain when skilled workers locate to their country to work, especially when they did not have to pay for the education of that individual.\textsuperscript{69}

However, Mahroum’s study represents brain gain as the inflow of educated foreign technology workers in general. By placing a cap on H1-B visa for foreign technology workers, U.S. immigration policy, in effect, constructs a figurative ceiling on brain gain into the country. As H1-B visas are tightened by partisan legislative action and other anti-immigration acts, it engages in the restrictive action of “brain blocking” that turns away possibilities for additional knowledge gains for the country.\textsuperscript{70} A H1-B technology worker applicant that is turned away from the U.S. because of a lack of H1-B visas does not have the opportunity to share knowledge or participate in any of the agglomeration effects that drive knowledge clusters such as Silicon Valley.

Other recent actions, often under the guise of U.S. security reforms in the wake of the 9/11 disaster, have also added to the effect of brain block. Anecdotal evidence, at least, suggests that due to added paperwork, foreign universities that used to send the bulk of their students to U.S. universities, re-routed future students to other countries instead of remaining in the home country. This effect, through the action of a formal

\begin{footnotesize}
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\item \textsuperscript{69} Mahroum also noted that the U.S. in one of the few countries that does not have expedited citizenship for highly skilled workers. In the example of Denmark, a skilled technology worker can obtain citizenship after one year of residency.
\item \textsuperscript{70} I define the term “brain blocking” as any act, whether intentional or non-intentional, by either an institutional or non-institutional entity, that represses potential maximization of intellectual capital of an organization. The act of restricting the entry of educated foreigners, obviously, is an intentional act by a branch of a federal government that prevents the benefits of exchanging ideas with those persons, and reduces potential future effects such as innovation within that field of knowledge. Other non-institutional acts may also result in brain blocking, such as the targeting of immigrants for violence by a criminal element, that through fear or intimidating would result in the reduction of the inflow of foreign human capital.
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immigration policy that re-directs potential brain gain to another, more inviting country, may be referred to as “brain diversion”. Foreign attendees of U.S. academic conferences also faced heightened restrictions, or in some cases were denied temporary visas.

The reverse of brain gain, then, is brain drain, and can be considered to be an unintended effect from brain blocking. Many foreign countries that were developing a software industry, especially India, lost many of its best and brightest engineers and software developers to the U.S. in the 1990s. The Chinese software industry, however, exhibited fewer losses of human capital to the U.S., as the country developed its own indigenous Internet industry. Chinese workers that had entered the U.S. on the H-1B visa program often preferred to return to China, citing their preference for lower cost-of-living areas and a return to the traditional extended family. The brain circulation of workers that move back and forth between countries in a free flow of information only adds to the knowledge base of the country that person is at work. The U.S., under this theory, loses a substantial amount of knowledge capital through the loss of workers and U.S.-educated foreign students by refusing to address the brain blocking collateral damage from fewer H-1B visas as fewer Chinese technology professionals will have the opportunity to engage in brain circulation.

Brain blocking may also have unintended consequences for potential “brain donor” countries, as U.S. immigration policy restrictions will reduce potential knowledge

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71 I define the term of “brain diversion” as any act, whether intentional or unintentional, by either an institution or a non-institutional entity, that results in human capital not residing in its first choice of location.
73 Id.
74 Mahroum, *supra*, at 223.
gains that can be returned to a home country after the H1-B visa expires, or the technology worker chooses to return. Work experience under the H-1B visa program benefits the home country of a skilled technology worker once they return from the U.S. A survey by Commander, Chanda, and Winters found that between 30 and 40% of higher-level employees in Indian software companies had once worked in a developed country, and returned with greater skills than they had left.\(^{75}\)

H-1B visa workers that eventually become U.S. citizens often found technology companies on their own, and further contribute to the U.S. economy with additional gains in innovation and job creation. Saxenian found that 30% of Silicon Valley companies in the 1990s were headed by ethnic Indian or Chinese engineers. Her research also estimated that these companies added an estimated $20 billion yearly to the U.S. economy and accounted for 70,000 jobs.\(^{76}\)

Trends for Asian H-1B Technology Workers

It becomes apparent that detractors for the continuance and expansion of the H-1B visa quota cannot make an economic argument that domestic technology workers are collectively harmed by NIV technology workers that hold H-1B visas, nor can they provide proof other than anecdotal evidence that indicates that H-1B visa workers displace American workers. Protectionist labor practices, especially in high technology areas, have served to “asphyxiate the U.S. economy”.\(^{77}\) In the absence of


\(^{76}\) Saxenian, *supra*, at 238.

economic data that support economic protectionism, exclusionist principles appear to be based on the “otherness” of the foreign workers that are ethnically, linguistically and culturally distinct from the domestic worker.

However, profit is often one way for protectionists to see past racial and ethnic lines. As in the boom years of the Internet revolution, many of the same interests that did not protest the tripling of technology workers are now calling for reduced H-1B visas for Chinese technology workers based on domestic worker displacement and fears of technology theft. The effects from brain blocking and brain diversion of current U.S. immigration policy that results in the reduction of human and knowledge capital in the U.S may lead to the loss of one of its greatest assets: ideas. As put by business writer Peter Coy, “the most important resource will be a person’s mind because the scarcest commodity will be good ideas.”

Attracting talented foreign workers is no longer the sole domain of the United States. According to Richard Florida, in order to secure the future, the U.S. needs to secure the best and brightest from all over the world. The U.S. is not alone in the need to recruit what Florida terms the “creative class” and “creative professionals,” classes that will be needed to realize the necessity of innovation and creative deconstruction to progress in the future. In 2002, primarily due to an increase in the amount of paperwork that accompanied new security regulations in the U.S. after 9/11, the UK, Australia and Germany each had gains in foreign student enrollment while the U.S. encountered a decrease. Competition not only comes from between U.S. firms, but now may come from

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the home country of the technology worker. Countries such as India and Taiwan have
developed significant technology industries that attract educated local talent that
previously would have sought employment in the U.S.\textsuperscript{80}

The U.S. economy will also require additional graduates in engineering and
science fields. In 2007, over half the graduate degrees in engineering and the sciences
from U.S. universities were awarded to foreign students.\textsuperscript{81}

**Recommendations and Conclusion**

Countries that restrict educated immigrant workers will find it difficult to compete
in a global marketplace if there is an institutional policy in place that promotes brain
blocking. Not only does brain blocking reduce the potential maximization of knowledge
in the U.S. by restricting foreign high-tech workers through a restrictive H1-B visa
scheme, but brain blocking also serves to enrich immigrant-friendly countries and
immigrant home countries through brain diversion. The U.S., therefore, should seek to
modify (if not eliminate) policies that deter the importation of knowledge workers into
the country. Often this means developing a political will to deflect the desires of special
interest groups.

Jain notes that despite the protestation of Congress that the H-1B visa quota
reduction is to protect the national interests, it is a concession to the lobbying power of
labor special interests such as the AFL-CIO.\textsuperscript{82} Although it is often easier said than done,

\textsuperscript{81} Id. at 729.
\textsuperscript{82} Jain, *supra*, at 433; Lobbying for H-1B visas is not the sole domain of organized labor; Microsoft, Intel, Motorola, Sun Microsystems, and Texas Instruments also have formed a lobbying arm called American Business for Legal Immigration (ABLI).
some method to remove the political component from the foreign worker visa system is necessary to remove uncertainty to employers and workers. The whipsawing of quotas over the past few years has caused U.S. businesses to lose out on employing some of the best engineering and computer science students graduating from U.S. institutions. Most have had to return to their home countries as their student visa have expired and worker visas are not available, causing many to seek employment with competitors to U.S. firms, if not start competitors.

Jain further argues that the U.S. should look towards Canada as an example on how to attract and retain guest workers. Canada’s domestic population is in decline, and relies on immigration to remain competitive. The yearly national Immigration Plan is presented to the House of Commons without limits, but projections reflecting recent experiences in technology trends. Although Canada attracts nearly 150,000 skilled workers from around the world each year, it has not turned away any potential skilled worker and seeks to add more. Skilled workers are also given an expedited route to full citizenship.

Canada has been successful in the development of pilot projects that allow government officials to test various restraints on the flows of foreign workers. The goal of these pilot projects is to streamline the process to pair the needs of domestic technology industries with available foreign workers. The key component of the pilot projects is the absence of an arbitrary cap on the amount of technology workers, as caps do not reflect the needs of domestic firms or trends in the industry.

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83 Jain, supra, at 452.
85 Jain, supra, at 455.
Since the fall of the Soviet Union in the 1990s, over three billion people have entered the global knowledge-based market economy. As competition for skilled technology workers increases, the U.S. government has taken the opposite path and placed barriers for the ability of domestic firms to recruit and retain talent wherever it can be found. Through these brain blocking strategies, the U.S. emerges a poorer country in terms of its storehouse of knowledge, and increases that of other countries.

Skilled technology workers from China and Asia not only must overcome legal barriers to work in the U.S., in many instances they must contend with institutionalized racial prejudices that are historically found in domestic labor relations. Similar to the laws that limited the opportunities of Chinese workers in the late 1800s, restrictions on H-1B visas, ostensibly to protect national interests, retain the tinge of racism that accompanied the Chinese Exclusion Laws and similar laws that de jure restricted Asian immigration to the U.S.

Many studies have shown that the addition of intellectual capital through the H-1B visa program, if properly maintained to address the needs of domestic business and Asian technology workers, adds to the knowledge base of employing firms and the national economy. The H-1B program aids in reversing the potential brain drain as it retains recent foreign graduates of U.S. educational institutions. It aids domestic firms in that highly-educated foreign graduates are less likely to return to their home country and start new technology businesses that will compete with U.S. businesses, and creates forward and backward linkages with Asian technology professionals that do return to their home country and create a technology start-up. H-1B visa workers

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86 Traven, supra, at 729.
also spend money in the U.S. and pay taxes and do not displace similar American workers, but complement them.

In conclusion, it would benefit the American technology industry if H-1B visa quotas were eliminated, as in the Canadian model. A significant and feasible option would be to give green cards directly to Chinese and other Asian technology workers, bypassing the H1-B visa process altogether, and expediting the legal process to obtain work in technology firms.
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