



**Trends in Changing Jobs by Professional
Personnel in High Mobility Regions
-The case of Silicon Valley, U.S.-**

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ITEC Working Paper Series

11-02

July 2011

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Institute for Technology, Enterprise and Competitiveness, Doshisha University
Working Paper 11-02

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Abstract:

This report is the research result of the international comparison about the influence of social mobility and social factors about professional's job change, job attitude and job preference executed at Silicon Valley in US. Especially in this research, career path of each researchers and engineers is chosen to analyze the relation between their thoughts and behaviors and social mobility where they belong. Though many attentions have been pay to their entrepreneurship and economical success, the research about their social environment (unemployment benefits, law system about employment, norm, standards of behaviors, social stratification, industrial structure, local society, family and so on) are not enough yet. This research was executed with enabling to investigate the relation between social mobility and job comparing with the 15 years research of Japanese professional as the low mobility society. This report is a summary of interviews and questionnaire survey at Silicon Valley from 2007 to 2010. This report will be the base data for the future papers.

Keywords: Professionals, Social Mobility, work attitude

Acknowledgment:

This study cannot be done without many help by professors, interviewees and friends. Prof. W. Richard Scott at Stanford Univ. Prof. Robert Call and Prof. Clair Brown both at UC Berkley suggested about methodology, contents and survey. Prof. Masahiko Aoki and Prof. and Chair Gi-Wook Shin at Stanford Univ. Asia Pacific Research Institute gave me the opportunity and position to execute this research. Prof. Rafiq. Dossani and research fellow Robert Everhart at Stanford Univ. and Prof. Bernard.P. Wong at San Francisco City Univ. also advised me about the survey and introduced key persons.

I can never forget Mrs. Monica McHenney and her family for their complete help to design this survey. Many other people at Silicon Valley, Doshisha Univ. Alumni network, friends and interviewees was the key to this research.

I would like to thank to all who made this study success.

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Introduction

The purpose of this study is to internationally compare social mobility among professional personnel, regarding job change activities, viewpoint of employment and intention, and the influence of social factors in the background. This study especially focuses on the career path of researchers and technicians within various professional jobs, and analyzes the relationship of the aforesaid social mobility and their consciousness and actions. The area surveyed in this article was the Silicon Valley on the west coast of the U.S. (hereinafter called Silicon Valley), which has been a model for Japan policy as a high mobility society. Although attention is often given to Silicon Valley as an economically successful model, such as its entrepreneurial spirit, research on its social environment surrounding the researchers and technicians (unemployment insurance, employment-related legal system, normative consciousness, shared behavioral criteria, social stratification, industry structure, region, family, etc.), has still not been sufficiently considered. Therefore, in this study, comparison of this high mobility society with Japan as a low mobility society is carried out through the career path of the professional jobs, and the difference of the social mobility and the relationship to the occupation are considered.

Japan has a poor accumulation of research on professional personnel, and professional jobs are often targeted for comparison, as a superior position in the social stratification theory and gender studies, etc. Moreover, in research regarding professional jobs, there is much discussion on whether the definition of occupations requiring newly emerging professional knowledge should be included in professional jobs, and there are many studies on how sub-professional jobs should be approved as professional jobs. Currently, occupations providing services which use professional knowledge has continued to increase in the ever sophisticated information society. In such an environment, research on the role, activities, and intention of professional personnel in society is important, and such gained knowledge will benefit not just the professional occupational society, but also can be applied to non-professional jobs, as an important indicator in the consideration of the relationship between society and people.

The phenomenon discovered from professional personnel which have been thought to have an independent attitude towards organizations and society, may have appeared in the form of emphasizing persons in occupational minor positions, weakness towards occupational superior positions, or toughness to be occupational minor positions.

Furthermore, this study surveys Japan as a low mobility society in the first phase, and then Silicon Valley as high mobility society in the second phase, and a mid-mobility society in the third phase. This article shows the study in the second phase, and summarizes the trend to change jobs, viewpoint of employment, and intentions of professional personnel in a high mobility region (this article summarizes part of the 2008-2009 research report funded by a scientific and technological research subsidy [Foundational Study C]).

1. Framework of the Survey Research

1.1 Survey of Professional Personnel seen in Previous Research

The shortage of post-doctoral jobs in recent years has been recognized as social problem and is considered to be caused by political measures carried out with insufficient analysis of social mobility and the labor environment in Japan and U.S, and research on the career paths of highly educated people have not been kept pace. In Japan, researchers and technicians often enter the domestic labor market. Regarding the trend to change jobs by professional, fulltime male in the research survey on social stratification and social mobility carried out in 2005, less than one time was predominant, reflecting a low mobility (Fujimoto 2003, 2008).

On the other hand, in the discussion on professional jobs in the West, since the person has professional knowledge which is not dependent on the organization, he can adapt to a professional group and has a lower commitment to the affiliated organization. He is determined to be a cosmopolitan, willing to exercise organization mobility to develop his/her own ability (Gouldner 1957, 1958). Regarding changing jobs by professional personnel, Makiko Yamada wrote about the mobile state in which American researchers go back and forth not only in the academic sector, but also between several other sectors such as governmental agencies and industries (Yamada 1985). Moreover, A. Saxenian compared the mobility according to the entrepreneurial spirit of researchers and technicians, and differences in the social environment surrounding them, with regards to the success of high-tech businesses in Boston and Silicon Valley (Saxenian 1995). Furthermore, R. Florida concluded that innovation must come from free and

creative professional personnel who are not tied down by rules, and analyzed the openness and high mobility society in Silicon Valley area, using effective indicators (Florida 2002). In the discussion of professional personnel in Europe and U.S, the image that professional personnel independently move between organizations is common, but Masayo Fujimoto showed that the possibility of mobility of the scientific and technological researchers and technicians in Japan is set within the academic field of fundamental science and applied science, and they cannot flexibly change job even though they are professional personnel (Fujimoto 2005). This simply describes the image of the professional personnel in a low mobility society, who cannot be called high mobility businessmen.

In addition, as one of the few mobility studies on professional personnel, a survey on career advancement, promotion, satisfaction of the company workplace, research institute, university researchers and technicians in Japan, U.S, France, and Germany was carried out in 1980's and the late 1990's (Ishida edition 2002; Productivity senior technician problem research committee 1990a, 1990b, 1990c). And in recent years, a study indicated the brain drain of researchers and technicians (Murakami 2010). However, no studies have considered from the viewpoint of occupational independence and social mobility, and comparison and consideration of the professional personnel in the domestic labor market and international labor market is desired.

1.2 Viewpoint of this Research

This survey study was designed based previous survey data carried out in since 1997, which has been a comparative analysis of professional jobs of research/development and non-professional jobs of office work / manufacturing according to employee survey data of the companies, and research information of more than 10 major businesses and research institute of independent administrative agencies. These surveys showed that most Japanese researchers and technicians almost never change jobs, although they have intention that "if my ability is not used in this organization, I will move to the other organization that will exercise my ability" (Fujimoto 2005). Moreover, half of the researchers and technicians work in the manufacturing industry, but the working conditions of highly educated persons in this industry are lower than other industries. Also, regarding the wage structure and labor market, working conditions of highly educated people in the scientific technical industry is not considered to be good (Fujimoto 2007). As a result, in a low mobility society, there are professional personnel who are dissatisfied with the social structure but moving is difficult.

The framework of this study is carried out from the viewpoint of 1) consideration of

the characteristics of the professional personnel in low mobility society, 2) understanding from materials on the social environment surrounding the professional personnel in the high mobility region, 3) a qualitative survey, 4) a quantitative survey, 5) consideration of job change activities and the viewpoint of employment of professional personnel in a high mobility society, 6) comparison research of the difference in mobility. Among those, this article summarizes the survey of 5) consideration of job change activities and the viewpoint of employment of professional personnel in a high mobility society.

1.3 Outline of the Survey

The following is an outline of the survey in this study.

- (1) Qualitative survey
2007-2009 Resource analysis, interview survey
 - (2) Quantitative Survey
2010 Questionnaire survey
- Survey method: On-line survey (using Google Docs)
Survey targeted participants: Professional personnel
Number of respondents: 133 persons effective respondents 129 persons
Male 76 persons Female 50 persons
Survey Period: May 2010-January 2011

2. Qualitative survey outline

Since the main purpose of this article focuses on the quantitative survey in Chapter 3, the qualitative survey is only described in the summary. For further details of the qualitative survey, please refer to my article (Fujimoto 2011).

2.1 Outline of Silicon Valley

According Japanese Consulate General in San Francisco, Silicon Valley is a region "approximately 1,500 square miles, consisting of the entire Santa Clara County with San Jose at its center, San Mateo and Alameda counties, and part of Santa Cruz County," with a population of approximately 2.9 million (Approximately all of Tokyo + half of Kanagawa prefecture, or 1% of entire State of California). Total employment is approximately 1,323,000 persons, the racial consist rate of the citizens are; Caucasian 40%, Asian 29%, Hispanic 25%, African American and others 2.6%, 36% of overall are

the immigrants. Composition ratio by age is 26% under 20 years old, 36% 20-44 years old, 26% 45-64 years old, and 12% 65 years or older. The society mainly consists of young generations. Educational level is very high, approximately 89% are high school graduates, and approximately 43% are university graduates (Japanese Consulate General in San Francisco 2011).

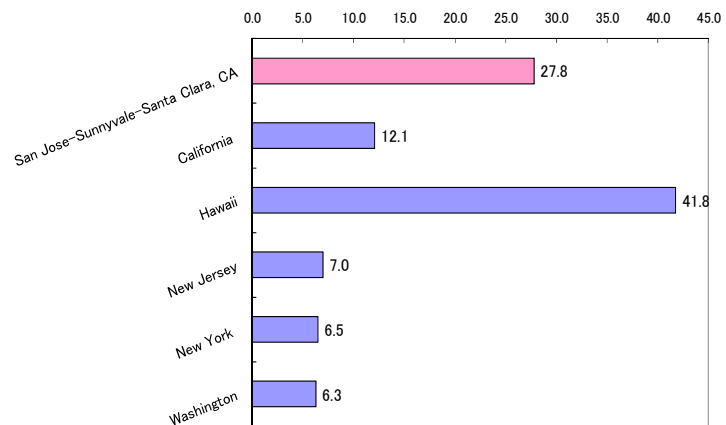


Fig.1 Asian's percentage top 5 and Silicon Valley occupied in the population(%)
 Source: Bureau of Census "State and Metropolitan Area Data Book: 2006"

Table 1 shows the top 5 states in the U.S. with the highest population of Asians and Silicon Valley (the top bar). The percentage of Asians is high at approximately 28%, second to Hawaii. This shows how high the percentage of Asians is in this region of the U.S. (Hispanics are approximately 25%). The percentage of parents whose children attend elementary school in the Cupertino District of Silicon Valley and who completed grad school is said to be more than 75%, with a high percentage of Indian and Chinese. Many students attending Palo Alto city public high schools surrounding Stanford University are children of high level professional personnel who work in the area or are related personnel of Stanford University. Students from 13 countries attend ESL (English as a Second Language) classes (as of 2007), and most are from Asia.

Average wage earnings in the region was 75,390 dollars in 2009, while the average in Japan was 4,705,700 yen. This shows the extremely high wage level (Ministry of Health, Labour and Welfare: Basic Survey on Wage Structure 2009). 77% of employees in Silicon Valley are employed by businesses with 500 employees or less, and employment by small and medium businesses retains the largest percentage of the labor market. Establishment of venture businesses has been an important factor in the creation of employment. Moreover, there is much venture capital (investors invest in a venture business and make a profit as the business grows), for promising venture businesses. Venture capital investment in the U.S. in 2010 was approximately 17.7 billion dollars, and approximately 40%, or 7 billion dollars, was invested in venture businesses in Silicon Valley, indicating a large number of new businesses being established in Silicon Valley. Even now, Silicon Valley economics is led by the IT field, such as software, semiconductor, information communication, but recently, the life science field, such as biotechnology and medical devices, is also active (Japanese Consulate General in San

Francisco 2011).

Adding field work information, many immigrants have come to the region, with the young immigrant success such as Google and Yahoo in sight. Racism and age discrimination is not readily observed. In particular many people who are active in the IT field are Indian, and the upper class ethnic network where business managers and highly educated people gather is very strong. This is caused by the employment system of the region, and not only the ethnic network, but also the network of friends and acquaintance, such as the network with parents of children or workmates, is very important when a person is fired, so maintaining a relationship of trust regardless of race works very well in the search for new work. Public safety in the region is very good, roads are well kept, there is much greenery, and the climate is good. Many people would like to continue living in the region.

2.2 Employment System and Human Consciousness in Silicon Valley

1) Viewpoint of Employment in the Region

In this region, graduates of Stanford University and MIT compete for excellence, and researchers / technicians from countries around the world are attracted to the excitement. High level professional personnel gather to utilize their technologies just like a gold rush. Even now, this is a mecca of researchers and technicians, including XEROX's Palo Alto Research Center (PARC), HP, Apple, Google, and Yahoo. The get-rich-quick myth of venture businesses bought by major companies is still very powerful, and has been strengthened by reality. The shared attitude towards research and development in the region can be called a "feverish", and the big attraction is the direct, personal economic reward gained through the success of the company. Moreover, there are many incentives in autonomous employment, such as the possibility of realizing an idea with social impact, the social reward where the high level is recognized by one's coworkers, and the gaining of trust which is useful in future networks. High level researchers and technicians are well recognized by those around them, and they receive inquiries from various companies. As midlevel researchers and technicians work with high level researchers and technicians, they enjoy learning new work which will lead to a higher level. The roles of each level of researchers and technicians is defined, and feeling of unity and trust in the personality of the other person and the technology level are created as everyone devotedly works together until the project is accomplished (get listed).

2) Consideration for appealing work, and research and development in a high mobility

region

Under the conditions where jobs are changed frequently, managers worry about the exit of the developed human resources, but also learn a management method which assumes that the employee will leave after a few years. In a high mobility region, even if the manager has a good relationship with their subordinates, headhunters constantly contact the workers and invite them to move to another company. The president of a Japanese company also worries about the mobility of the local employees, but talked about some long time company researchers and technicians who refused good paying jobs offered by headhunters. This president says that constantly thinking of projects with encourage growth in a subordinate and providing appealing work is an important role of a leader. Moreover, another Japanese company explained that, instead of treating mid level researchers and technicians as cogs in a wheel, it is important to allow them to experience management as their own career path is appealing work. Although welfare programs are an attraction of an organization, whether level advancement and the experience of living in one's career path can be provided or not leads to organization cohesiveness.

When a famous laboratory, referred to as the holy land of engineers, was asked through a mediator to carry out the questionnaire survey described later, the company declined, saying that the survey contents may influence its researchers and technicians to reconsider their own career path, and if they moved to another company, it would cause difficulties for management. This reconfirmed the seriousness of this issue, as even this research center, anyone's dream company, also worries about talented people leaving the company.

Moreover, in this region, when an employee moves to another company, the superior of the previous company often writes a letter of reference for the subordinate to the new company. If the employee did poor work at the previous employment, a good reference is not given. And, from the company's side, if the company has provided a good working environment, the former employee who moves to another company may introduce a friend to his/her former company. In this way, there is a working environment of "trust", where good relationships in this small region are maintained. Here, a liberal network is formed even after leaving a job in many cases, and on the other hand, it is difficult to hold on to a person in an organization.

3) Working hours and life rhythm

As cases of engineers changing jobs in Silicon Valley, an Indian (40's male), American (40's male), Japanese (30's male) (all Doctors of Engineering) at Company S,

an American company, according to the survey carried out in 2009, are considered. The Indian researcher worked at this company for 8 years, after working at various other companies, the American and Japanese researchers worked at 10 years and longer at this company. These researchers did not frequently change jobs, such as once in 1-2 years, and said they planned to stay at the said company, due to the employment form and interest in the work. In between the company and the engineers, employment rules such as fixed time labor, number of attend days won't restrict the employees, employees who attend and work everyday and who attend several days in a week (because they can work at home), freedom of their daily life is high, and comfortable. The employees could work at home all night, and go play golf during the week. Since the work description is high, ensuring such a level of engineers is difficult for the company, and so autonomous employment forms are needed. However, the company may not employ the person for a lifetime, and if the person cannot fulfill his role as expected by the company, he/she must decide on another career path, and find a new job destination.

A manager¹ said "Capable engineers receive invitations from outside companies, are enticed by interesting jobs, and are attracted to jobs which can improve their own ability. If long working hours are demanded, no one tries very hard. It is important to provide a free environment so that they can perform interesting work and develop new ideas in order to retain excellent engineers. Many high level professional immigrants are motivated by these factors. However, they will not choose a workplace which will result in a reduction in the priority core time of family life (time sharing meals with family and parental obligations regarding children's school, etc.). If the company demands such a reduction, it is difficult to ensure excellent human resources.

4) Relationship between family and work

The high divorce rate in the U.S. is well known, but if a married person does not fulfill his/her obligations as a family man or woman, he/she cannot complain when his/her spouse asks for a divorce. So while making time for dinner with family, he/she works on the computer and sends business files over the Internet, sometimes in the middle of the night. Work in the region is very fast-paced, so trying to achieve a new idea as soon as possible is usually more valuable than developing it slowly over a long time span. So strategically, persons with the best concentration are single engineers who don't mind working late past normal working hours. Within this, married persons adopt a system that responds to both the importance of family as well as work. A manager² spoke about a married person's action pattern as follows. "In America, if a husband works without caring for his family, he will end up divorced. If we keep them

up to dinner time, they will change jobs. For that reason, everyone goes home at 5pm. However, after spend three hours in the evening with their children, they go back to the PC, and send the work file by email around 10pm, 12am. As long as they are connected to the network, they can work at home, and their home and dedication for the work are compatible." However, they will not be regarded as a senior technician unless they have considerable technical capability, so many technicians want a position in management rather than to work for a long time as a technician.

5) Difficulties in high mobility regions

In high mobility regions, some persons are hired by a major company for a long time, but others are short-term workers who leave the company after few years. There is voluntary leaving and leaving by reason of the company (expiration of a working visa, etc.). For example, a company often eliminates a department in order to restructure operations, and employees of the aforesaid department are all laid off. Furthermore, venture businesses sometimes fail due to the end of financial assistance before listing, and it is not uncommon for workers to suddenly become unemployed. Therefore, "preparation" that continuation of employment and the organization may be lost at any time, is shared between people, and to prepare for the risk, establishing the techniques and career path which works even if the organization was changed, is valued.

Moreover, a manager's salary is higher than an engineer's, so engineers tend to want a managerial post as a career path midway. Many young people think that determining what is highly valued in the market, and then producing it is more important, and developing it on one's own is not so special. A managerial post is hard work due to much email processing, but the salary is higher than engineers. Information processing is important and is not double the work of an engineer, so it is manageable by role division (Commonly in Japan, attributes such as years of employment influence the gap in salary rather than job category, so incentives are different than those for professional personnel in this region).

High level professional immigrants are permitted to stay in U.S under a H-1B visa, but must return to their home country after a specified number of years has passed. For this reason, changing to a green card is required, and in addition to possessing special technology, the person's relationship with the manager is an important point. If the person repeatedly changes companies, it is hard to build a relationship of trust with the manager. On the other hand, persons in this region who never changes his/her job are easily stereotyped as a low level person whom no one invites. If a person does high level work, he/she is invited by outside companies. In some cases, the company

will even go through the procedures to obtain a green card. Moreover, there are cases of poor relationships with a former employer resulting in leaving the company, and it is difficult to gain trust even from coworkers.

6) E-mail, Intranet as "Proof"

Difficulties in high mobility regions are also shown in work communications in the region. In the case of Japan, when corresponding by e-mail, especially for CC mail, there is the meaning of "shared information," (in fact, many managers delete CC mail without reading them due to receiving so much). But in this region, e-mail in business strongly means "proof" of confirmation or contract when a discrepancy in communication between two parties arises. In the case of Mr. N³, a senior engineer at the research and develop department of an IT company, CC mail is very important as "proof" that he reported information to his superiors, in order to avoid being held "responsible" when something goes wrong, such mail frees him from responsibility. In the past, in the paper document generation, it was customary to deliver a carbon copy to the superior in America. American society which has since computerized this custom, and Japanese society which has never had such a custom to start with, obviously have different meanings of CC mail. In this region with many immigrants, people have different ideas of "common practice", and just thinking that this is "common sense" and "the other person will also understand this or will think this way" does not work. The Intranet record such as an e-mail or messenger has the important meaning of proof of agreement with a person, because even if conversation was held face to face, inconsistencies may occur later if the information is not recorded, and if a promise was broken, it may result in the loss of a contract or and good evaluation.

7) "Proof" for the manager

The role of e-mail and Intranet from the employer's position is described here, including talk with managers in the region. All interviewed managers said that California labor law is stricter for managers than other states. Raising managing efficiency is very difficult, and within that, the burden of labor cost also affects managing efficiency. Therefore companies try to keep hiring as many capable employees as possible, and fire employees with poor ability. However, a strict system is imposed on employers in Silicon Valley according to the California labor law, and discrimination of minorities, discrimination due to sex, and power harassment should not be a factor when firing an individual employee. In the event an employee complaint is taken to court, even if malice is not intended by the manager, much work is involved

in proving innocence. Consequently, when an employee with poor ability is fired, and he/she hires an attorney in order to seek compensation from the company, it is important for the managing personnel to be able to counter the lawsuit, such as by records, proof of poor ability, and clarification of evaluation criteria.⁴

Along with firing technicians with poor ability, retaining capable technicians is also an important issue for managers, but at an IT company managed by an Indian, single engineers voluntarily work until midnight as the deadline approaches, even giving up their holidays, without a word. However, married engineers must care for their family life, so they work hard during fixed hours, and try to ensure family time after work instead of working late and being highly evaluated like single employees. They rarely stay late at night, or come to work in the office on holidays. Management to motivate each up and coming young engineer as well as senior engineers is needed. Moreover, as these single high level professional personnel continue come and gain more experience, their achievements become very high, and both technology and income increases. The manager said it used to be difficult to retain good human resources because once their technologies has improved and have gained importance in the company, they are sought after by outside companies. But now, a relationship of trust with the employees has been built and the company is in a good condition.

Still, the system makes it easy for employees to leave for personal reasons, and headhunters also recommend leaving on good terms, so the leaving rate is very high. Under such conditions, companies must constantly acquire excellent human resources, and increase the appeal to stay in the company. Although there is labor law which is unfair for the managers, changing from visa to green card has been effective method for the companies to keep the excellent human resources, because cooperation of the affiliated company is needed in order to be released from the legal regulation of a visa and obtain a green card. Communication with employees in such high mobility region is not only just business communication, but also an important action to provide job satisfaction and build a relationship of trust. The meaning of e-mail as a record is strong, but sometimes detailed discussions and complicated explanations are needed in business. In such cases, talking face to face by visiting the person' desk if time allows, making a phone call if there is no time, or leaving a memo to "call me later" on the answering machine, instead of leaving the matter with an e-mail is appropriate. As mentioned in Media Richness Theory, face-to face meetings are selected for the complicated talk in Silicon Valley as well (Draft and Lengel 1986; Markus 1994). Moreover, small talk is carried out whenever people meet in the break room and in the morning, etcl, so their face to face contact is not reduced even with an increase in

electronic communication for business.

2.3 Summary of Qualitative Survey

The relationship between the employment system and human consciousness of Silicon Valley, an area where many highly educated immigrants gather and with high mobility, is motivated by interesting work, and everyone seems to be aiming for the second Google or Twitter. Leaders are required to provide appealing work, and simply a high salary is not enough to make a worker stay with the organization. With this in mind, managers in high mobility regions considered creating work within the organization which is appealing to professional personnel with an independent attitude and have had the courage to manage such. Changing jobs is not so rare in the region, but the relationship of trust for both employers and employees is very important in the small area, and the reputation of both will influence future employment, so the people feel the need for a "potential network" that always connects somewhere, and functions as an order of the region.

In the high mobility regions, employees can act freely but also are exposed to difficulties. If an H1-B visa is not renewed, or a green card which needs the endorsement of the company is not granted, the highly educated immigrant must return to his/her home country. As a result, people are nervous about their relationship with the company, and are forced to "prepare" for passive mobility due to sudden layoff or company bankruptcy. Moreover, America is called as litigious society, where both of the employee and employer must record their own claim. Problems in business and information communication are related to the promises and reputation of the business, so such records are important as "proof." CC mail does not carry a superficial meaning as it does in Japan, and can be construed as proof deserving of layoff or proof of communication with the superior, and protects the employer and employee. As described above, in a mobility society, both of the employee and the employer are identified as being in a tense work relationship in balance with a higher freedom.

3. Quantitative survey

3.1 Questionnaire design

The 2010 survey on professional personnel in a high mobility region (in Silicon Valley) used as reference for the following items based mainly on information gained from the fieldwork of the 2007 to 2009 of professional personnel survey and career mobility survey. 1) The organization commitment survey (Fujimoto 1997) which was

continuously carried out since the survey on a home electrical appliance major company in Japan in 1997. 2) The occupational commitment survey (Fujimoto 2001) which was continuously carried out since the survey on professional personnel in 2000. 3) The career mobility survey carried out by the Research Committee of Social Stratification and Social Mobility 2005. 4) The residents survey by the U.S. Department of Commerce, 2007. The questionnaire of this survey consists of items based on these (Fujimoto 2011). The main items are as follows.

1) Main parameters

① Characteristics

Gender, generation, educational history, national origins, state (for U.S. citizens), with or without an H-1B visa or green card (for immigrants), with or without re-education after graduation, what country lived in as a high school student (cultural influence of socialization)

② Information regarding work

Related industrial field, occupation, occupational position, position of employment, income, job tenure, with or without internal promotion, with or without salary increase and promotion due to changing job.

③ Action, consciousness

Frequency of changing job, organization commitment, occupational commitment, work motivation, occupation viewpoint, consciousness toward the work environment, use of the human network

2) Industrial classification / occupational classification in U.S.

The industrial classification and occupational classification used in this questionnaire comply with those used by U.S. Census Bureau (North American Industry Classification System, NAICS 2007, U.S. Standard Occupational Classification, SOC) (Fujimoto 2011).

3.2 On-line survey implementation procedures

In order to carry out this survey, obtaining the resident registration and immigrant's data for a random sampling of the region, at a small scale survey and research fund, was difficult. Moreover, cooperation with the organizational survey at the company was sometimes difficult to gain due to the sensitive nature of the questions of the survey contents, such as educational history, income, work motivation, and intention to change job.⁶. Therefore, it was difficult to request the survey by postal mail, and directly to a

company.⁷ Consequently, after consulting with professors in the region, the questionnaire was uploaded and placed on the Internet, and the survey was carried out using an URL address and e-mail, or actual name social networking.⁸

Survey results showed that respondents to on-line surveys tend to be highly educated persons (Couper 2008: Ishida et al 2009). However, since the electronic network literacy of the survey targets is very high and frequency of use is especially high in this region, this survey is assumed to avoid the weak points of on-line surveys targeting highly educated persons. Moreover, this questionnaire survey follows targeted persons from the three year field work survey and the pre-survey, and items which could be carried out by interview were included in the question items. In this way, the data could be handled as intermediate positioning of the qualitative and quantitative surveys. Unless the trust from the respondents has been gained, it is difficult to have the cooperation for a survey carried out by a foreign researcher. Fortunately, Professor Richard Scott, an expert in organization and institutional theory at Stanford University and sociologist, wrote a letter of recommendation, which could be inserted at the top of the questionnaire.

For the on-line survey, according to discussions with a local engineer, creating a database to handle the information input on-line by Excel was planned, but it was determined that the same purpose could be achieved using a Google Docs spreadsheet, so the policy was change to take advantage of this.

3.3 Simple account results

An overview of the simple account results of the main items regarding the data is shown below. Table 1 shows one characteristic of the data, namely a 6.4 male to female ratio. This is a higher ratio of female professional personnel respondents than that of the professional personnel survey in Japan. Age groups could be divided equally between the 20-30's generations and the 40's and older generations. Regarding national origin configuration, approximately 70% of the respondents were immigrants from Asia and Pacific, 22% from North America regions, and the remaining from other areas. Most of the respondents were from Asia-Pacific areas. In particular, 37% of the respondents were Japanese, which is higher than the actual racial configuration ratio. However, as discussed later, no significant difference between national origin and each item was observed, and this configuration ratio did not seem to influence results. The educational history was very high, approximately 87% of the respondents were university graduates or higher, with more grad school graduates than university graduates, showing the characteristics of the region.

Since the half the respondents occupied the young generation and the other half (40's and older group), income groups were also equally divided between under \$100,000 and over \$100,000. As previously described, the region has higher than average income, and the price of commodities is high, reflecting the higher income of the respondents. Regarding industrial fields, 27% of the respondents worked in the information industry, approximately 30% in advanced science technology. These are the most active industries in the region. Regarding occupations, approximately 38% of the respondents worked in administrative, business, or financial jobs, and approximately 42% in technician jobs, approximately 9%, in medical, life, social science, and 7% in educational jobs. This data reflects the characteristics of job occupations of the region. Moreover, regarding trends in changing jobs, approximately 9% of the respondents never changed jobs, approximately 20% changed jobs one time, and approximately 71% changed jobs twice or more. Since 9% of the respondents never changed jobs in the data where half comprise the young generation, one characteristic of the region is that the frequency of changing jobs is more influential than age. Based on this data, comparison of characteristics of persons who changed jobs, number of months at one company, with or without mobility between industry and occupation, and difference of viewpoint of employment of persons who have a higher frequency of changing jobs and persons who have lower frequency, is shown below.

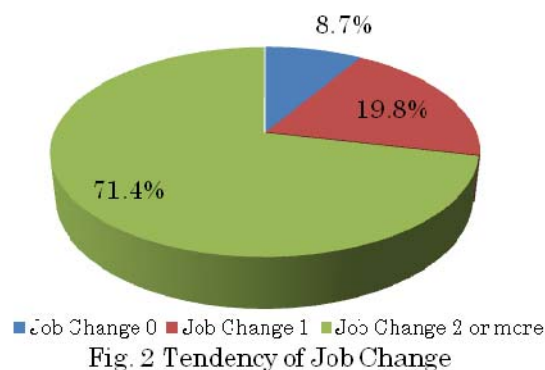
Table 1 Summary of Data

Sex	N	%
Male	76	60.3
Female	50	39.7
Generation		
20's	26	20.5
30's	37	29.1
40's	42	33.1
50's	18	14.2
Over60	4	3.1
Heritage		
North America	27	22
Asia-Pacific	85	69.1
South America	6	4.9
Europe	5	4.1
Japanese Ratio		
Japanese	48	36.9
Non Japanese	82	63.1
Education		
Under Bachelor	16	12.6
Bachelor	52	40.9
Master	47	37.0
Doctor	12	9.4

Income		
Less than \$50,000	25	21.6
\$50,000~ less than \$100,000	31	26.7
\$100,000~ less than \$200,000	55	47.4
Over \$200,000	5	4.3
Current Job(Industry)		
Manufacturing	10	8
Information	34	27.2
Finance and Insurance	12	9.6
Professional, Scientific, and Technical Services	38	30.4
Educational Services	11	8.8
Health Care and Social Assistance	6	4.8
Other Services	14	11.2
Current Job(Occupation)		
Management, Business, and Financial	47	37.6
Engineering and Science	52	41.6
Healthcare, Life, Physical, Social Science	10	8.0
Education	9	7.2
Job Change		
Job Change 0	11	8.7
Job Change 1	25	19.8
Job Change 2 or more	90	71.4

3.4 Who are mobilized?

Characteristics of persons with high mobility. As shown in Fig.2, many people in the region changed jobs twice and more. Table 2 shows job changing tendency by characteristics. When job changing tendency is



compared by gender, generation, origin area (including Japanese ratio), educational history, income, affiliated industry, and current occupation, no major difference was observed between categories,¹⁰ but the following tendencies were observed.

Table 2 Summary of Job Change Data

	N	Job Change 0	Job Change 1	Job Change 2 or more
Sex				
Male	75	6.7%	20.0%	73.3%
Female	48	12.5%	18.8%	68.8%
Generation				
20's	26	15.4%	23.1%	61.5%
30's	37	10.8%	24.3%	64.9%
40's	40	7.5%	17.5%	75.0%
50's	17	0.0%	11.8%	88.2%
Over60	4	0.0%	0.0%	100.0%
Helitage				
North America	26	3.8%	7.7%	88.5%
Asia-Pacific	83	8.4%	24.1%	67.5%
South America	6	16.7%	16.7%	66.7%
Europe	5	20.0%	0.0%	80.0%
Japanese Ratio				
Japanese	47	8.5%	25.5%	66.0%
Non Japanese	79	8.9%	16.5%	74.7%
Education				
Under Bachelor	15	6.7%	20.0%	73.3%
Bachelor	52	11.5%	25.0%	63.5%
Master	45	4.4%	11.1%	84.4%
Doctor	12	16.7%	25.0%	58.3%
Income				
Less than \$50,000	25	12.0%	28.0%	60.0%
\$50,000~ less than \$100,000	30	13.3%	13.3%	73.3%
\$100,000~ less than \$200,000	53	7.5%	18.9%	73.6%
Over \$200,000	5	0.0%	20.0%	80.0%
Current Job(Industry)				
Manufacturing	10	0.0%	20.0%	80.0%
Information	34	5.9%	17.6%	76.5%
Finance and Insurance	11	0.0%	36.4%	63.6%
Professional, Scientific, and Technical Services	36	16.7%	16.7%	66.7%
Educational Services	11	9.1%	18.2%	72.7%
Health Care and Social Assistance	6	0.0%	33.3%	66.7%
Other Services	14	7.1%	14.3%	78.6%
Current Job(Occupation)				
Management,Business, and Financial	44	9.1%	15.9%	75.0%
Engineering and Science	52	5.8%	25.0%	69.2%
Healthcare,Life, Physical,Social Science	10	10.0%	20.0%	70.0%
Education	9	22.2%	11.1%	66.7%
Others	7	0.0%	14.3%	85.7%

By gender, more women changed jobs twice or more, than men. However, since approximately 70% of both male and female respondents changed jobs twice or more, high mobility for both men and women could be seen in this region. By generation, persons who changed jobs twice or more were the most common in every generation, a

clearly different tendency than Japan where the job changing frequency of 0-2 times was affected by age. However, for those who changed jobs more than twice or more, the number of persons who changed jobs increased with age, indicating a certain level of influence by age. However, many persons in both their 20's and 30's also experienced frequent job changing, showing the high mobility of the region. By origin, persons who changed jobs twice or more tended to be from North America and Europe, while those from Asia-Pacific and South America tended to change less. Furthermore, while many from Asia-Pacific changed jobs once, those from South America tended not to change jobs at all. However, no significant difference was observed between areas, and overall, many persons changed jobs twice or more. To determine the influence of many Japanese respondents, Japanese respondents were compared with non-Japanese respondents. Slightly fewer Japanese changed jobs twice or more, and many people changed only once. However, no significant difference in these was observed, and is not considered to be a major influencing factor.

By educational history, graduates completing a master's course had the highest rate of job changing at twice or more, and graduates completing grad school and then a doctoral course had the lowest rate of job changing. Graduates completing grad school and later a doctoral course tended to work for a longer time in one place due to their expertise. However, since the overall tendency of most persons to change jobs twice or more was observed, this difference is not considered to be large. Even by income, many persons changed jobs twice or more in all income groups, with a similar tendency.

Persons with lower income and who never changed jobs are considered to be influenced by age.

As shown in Table 4 and will be described later, a significant gap is observed in the 20's group and the income of \$50,000 or less group. By industry, job changing rate of manufacturing industries, such as IT and semiconductors, is high, but even for other industries, persons who changed jobs twice or more was 60% or more, and a significant difference was not observed.¹¹ By occupation, people in the educational field and medical field had a slightly higher rate of persons who did not change jobs, but there was no significant difference between the rate of the people who changed jobs twice or more.

From above described information, the action pattern of persons in high mobility regions could be observed, and there is a lower influence in job changing tendency due to personal characteristics, and a similar influence can be observed by the labor market of whole region, and regional characteristics. In the low mobility region of Japan, difference in personal characteristics greatly influences action pattern, so this discovery

in the difference of characteristics is considered to be highly significant.

3.5 Period of mobility

How long a person stays with a company after changing jobs in the high mobility region is considered below. As shown in Table 3, the period of tenure of the previous job and the job before that (current occupation was excluded since it is directly influenced by age). By gender, men worked approximately 59 months at the previous job, and women worked approximately 37 months, Men worked for approximately 62 months at the job before that, and women approximately 25 months. In tenure of the previous job, men tended to spend approximately two years more than women ($p,.05$), and in the job before that, men tended to spend approximately three years more than women ($p,.01$)¹². While conditions of the career path of women in the region differs from those in Japan, there are many cases where work is discontinued in order to raise children, and men have a higher tendency to continue work, the same as in Japan (Fujimoto 2011). By generation, the younger group has a shorter period of continuous employment at the previous job, and those 40 and older have a longer period. The job before the previous job had the same tendency, but the tendency from 20's to 40's is similar, showing that as one ages, he/she finds a place in which to work longer (becoming a manager in some cases). Consequently, all age groups do not frequently change jobs, but there is a working pattern that is repeated as one changes workplace after about three years when in the young and mid-age period, and eventually change to a long term, continuous employment. By education history for the previous job, there is a longer tenure period as education history increases, and for the job before that, there is a shorter tenure period as education history increases. As there are many high level professional personnel in the science field in the region, this is thought to occur because changing jobs after 40 years old is difficult, or a position to exercise one's own expertise under good condition is achieved at relatively early time.

	The continuous working months(previous job)			The continuous working months(second previous job)		
	N	Mean	SD	N	Mean	SD
Male	62	58.8	64.9	31	62.2	54.3
Female	38	36.4	32.4	19	24.6	16.4
20's	17	21.7	15.7	3	33.0	26.1
30's	27	37.7	32.2	9	37.7	18.3
40's	36	55.2	47.5	23	34.6	32.4
50's	17	90.7	96.9	12	75.6	50.3

Over 60	4	29.8	22.0	3	109.3	134.0
Under Bachelor	13	24.5	22.5	6	81.7	100.6
Bachelor	39	54.4	68.0	15	52.3	34.4
Master	40	47.0	36.4	23	42.6	42.3
Doctor	9	77.9	86.3	6	38.5	21.8
Less than \$50,000	17	29.8	36.6	4	35.8	10.7
\$50,000~ less than \$100,000	23	51.3	58.6	12	34.8	20.7
\$100,000~ less than \$200,000	46	58.6	64.7	28	52.3	57.6
Over \$200,000	5	40.6	29.9	2	53.0	38.2
North America	23	54.2	75.3	11	71.6	70.4
Asia-Pacific	69	49.6	49.8	36	44.4	40.6
South America	3	73.0	77.7	0	.	.
Europe	4	30.3	11.7	4	36.0	31.6
Japanese	39	55.3	59.5	20	48.4	40.9
Non Japanese	63	46.7	53.0	31	50.4	53.3
Manufacturing	9	68.6	68.5	6	87.7	48.4
Information	29	37.0	31.6	17	45.5	39.5
Finance and Insurance	9	30.6	27.5	4	24.0	22.7
Professional, Scientific, and Technical Services	27	55.1	56.0	12	33.8	20.7
Educational Services	5	68.8	55.5	2	76.5	87.0
Health Care and Social Assistance	7	65.0	63.9	4	29.8	16.9
Other Services	12	56.2	96.9	4	34.5	20.6
Management, Business, and Financial	38	53.7	66.0	18	51.3	45.8
Engineering and Science	46	45.7	47.4	23	53.5	58.9
Healthcare, Life, Physical, Social Science	4	73.0	63.2	1	15.0	.
Education	8	58.1	64.0	5	37.0	24.3
Others	1	3.0	.	3	47.3	8.4

By income, there is not a large difference in the tenure period with the previous job, except for the \$50,000 or less group, but in the job before that, the higher income, the longer the tenure period. Income is largely affected by age, but persons working in a venture business which rapidly grows in a short period can become an upper-income earner even in the young group. However, as shown in Table 4, there is significant difference in the correlation between income and age, so income and tenure period are also assumed to be influenced by the action of the young group. By origin, persons from Europe and Asia-Pacific have a tendency of a slightly shorter tenure period in the previous job. By industry fields, tenure in manufacture, education, and medical jobs was 60 months and more in the previous job, and a tendency of longer employment was

observed, but financial jobs and IT jobs were short at approximately 31 and 37 months respectively. Even in jobs before that, manufacturing and educational were long, and financial was very short,¹³ and IT and science and technology jobs were about in the middle. These matters clearly identified a pattern where the turnover span of persons working in financial industries is short, manufacturing, educational, and medical jobs is longer, and IT industry is in the middle.

3.6 Relationship of income and generation

The income of persons with mobility and generation is shown below. As shown in Table 4, more persons in their 20's tended to earn \$50,000 or less than persons from other generations ($p < .01$). However, since no significant difference was observed in each group from 30 years and older and an income of \$50,000 and more, it shows that salary is not paid on the basis of seniority in the region. Approximately 36% of 30's, approximately 25% of 40's, and approximately 19% of 50's were concentrated in the \$50,000 and less than \$100,000 group, and approximately 49% of 30's, approximately 61% of 40's, approximately 63% of 50's, and all of 60's were concentrated in the \$100,000 and less than \$200,000 group. Although some age effect was observed, the fact that high income earners exist in even in the younger generation could be confirmed.

Table 4 Relation of Generation and Income						
		Less than \$50,000	\$50,000~ less than \$100,000	\$100,000~ less than \$200,000	Over \$200,000	Total
20's	N	17	6	3	0	26
	%	65.4%	23.1%	11.5%	0.0%	100.0%
	Adjusted Residual	6.1	-0.4	-4.2	-1.2	
30's	N	4	12	16	1	33
	%	12.1%	36.4%	48.5%	3.0%	100.0%
	Adjusted Residual	-1.6	1.6	0.1	-0.4	
40's	N	2	9	22	3	36
	%	5.6%	25.0%	61.1%	8.3%	100.0%
	Adjusted Residual	-2.8	-0.2	1.9	1.4	
50's	N	2	3	10	1	16
	%	12.5%	18.8%	62.5%	6.3%	100.0%
	Adjusted Residual	-1.0	-0.7	1.3	0.4	
Over60	N	0	0	4	0	4
	%	0.0%	0.0%	100.0%	0.0%	100.0%

	Adjusted Residual	-1.1	-1.2	2.1	-0.4	
Total	N	25	30	55	5	115
	%	21.7%	26.1%	47.8%	4.3%	100.0%

3.7 How do people change jobs?

Trends in people with mobility between industry and occupation are shown below. As shown in Table 5, persons with the same industrial field for their current job, previous job, and the job before that, was approximately 67%, and persons with the same industrial field in the previous job and the job before that, but a different current industrial field was approximately 20%. Regarding mobility between occupations, persons who did not change in the current, previous, and the job before the previous job was approximately 76%, and for persons who had same occupation at the previous job and the job before that, and persons who had the same occupation at the current job and the job before the previous job were both at approximately 10%. Compared to the mobility between industry, mobility between occupation is low, showing that most persons change jobs focusing on one occupational expertise.

	Industry		Occupation	
	N	%	N	%
All Same	31	67.4	37	75.5
Current EQ Previous NE Second Previous	3	6.5	2	4.1
Current NE Previous EQ Second Previous	9	19.6	5	10.2
Current EQ Second Previous NE Previous	3	6.5	5	10.2

3.8 Consciousness of persons with mobility

The actions of the people with mobility have been considered up to now, but their consciousness is considered in this paragraph. Since professional personnel were targeted in this survey, occupational commitment was predicted to be very high, and commitment to an affiliated organization to be low. On the other hand, there are still people who commit to an organization for a long time even in Silicon Valley, depending on age and industrial field, but this is not sure and needs to be confirmed. Moreover, in the interview, many people said that, not pursuing only an economic rationality and opportunity leading to one's own growth, but also workplace atmosphere and satisfaction as team are important. From this, analysis was carried out regarding on the workplace and affiliated organization using 1) the Professional Commitment Scale (described later) with regard to the degree of attachment and focus on work, 2) satisfaction with regard to workplace atmosphere, 3) satisfaction with regards to the

team and coworkers, and 4) the Organization Commitment Scale (described later).

3.8.1 Professional Commitment

Items regarding commitment to work by professional personnel are described below. Average value and standard deviation of the item group are shown in Table 6.1. A very high overall value is shown, indicating high commitment to one's occupation.

In the factor analyses of the item group, 8 items were taken from Chi survey items (Chi, 1996), which were prepared in consideration of the Aranya Professional

	N	Mean	SD
I'm generally satisfied with my current occupation.	125	4.03	1.12
I am happy to devote extra time to professional development in order to become more competent in my field.	125	4.39	0.87
I can say to my friends that I am proud of my current occupation.	125	4.22	1.05
My current occupation is rewarding in itself.	125	4.13	1.02
My current occupation stimulates me very much.	125	3.84	1.25
I'm happy that I decided to go into my current occupation.	125	4.30	0.94
I want to continue in my current occupation for the rest of my life.	125	2.97	1.44
It's more important to continue in my present occupation than to the stay employed in my current organization.	125	3.49	1.15

Commitment Scale (Aranya, 1981). The respondent group of this item showed a degree of commitment to their occupation ("1: Don't think so – 5: Think so"). In the item group used in analysis, the following 8 items were used (1) I'm generally satisfied with my current occupation. (2) I am happy to devote extra time to professional development in order to become more competent in my field. (3) I can say to my friends that I am proud of my current occupation. (4) My current occupation is rewarding in itself. (5) My current occupation stimulates me very much. (6) I'm happy that I decided to go into my current occupation. (7) I want to continue in my current occupation for the rest of my life. (8) It's more important to continue in my present occupation than to the stay employed in my current organization. The results of factor analysis (promax rotation) is shown in Table 6.2 and Table 6.3.

Table 6.2 Factor Analysis of Professional Commitment

	P-affective	P-continuous	Communalities
I'm generally satisfied with my current occupation.	0.72	0.03	0.54
I am happy to devote extra time to professional development in order to become more competent in my field.	0.59	-0.03	0.34
I can say to my friends that I am proud of my current occupation.	0.89	-0.09	0.71
My current occupation is rewarding in itself.	0.91	-0.08	0.74
My current occupation stimulates me very much.	0.86	0.02	0.75
I'm happy that I decided to go into my current occupation.	0.59	0.26	0.60
I want to continue in my current occupation for the rest of my life.	0.08	0.81	0.74
It's more important to continue in my present occupation than to the stay employed in my current organization.	-0.12	0.64	0.33

Factor Extraction Method Principal :Axis Factoring Rotation Method: Promax with Kaiser Normalization

Table 6.3 Factor Correlation Matrix of Professional Commitment

	P-affective	P-continuous
P-affective	1.00	0.59
P-continuous	0.59	1.00

As a result of factor analysis, 2 factors with a 1.0 and higher eigenvalue were extracted. The contribution rate of professional commitment by these factors is 56.04%. From factors with higher loading, a factor of professional affective commitment (abbreviated as P-affective) of 48.54%, and a factor of professional continuous commitment (abbreviated as P-continuous) of 7.50% could be determined. Items with greater loading for each factor were the factor of P-affective (1)-(6), and factor of P-continuous (7)-(8). Loading is shown in Table 6.2. The factor score of these two factors is calculated using the comparison analysis carried out in 3.7.5. By measuring occupational commitment, the attitude towards the occupation can be considered, and the degree of internalization of the value consciousness of the occupation can be seen.

The primary factor "P-affective" is determined as an indicator of internalization of the occupation value, to show spontaneously motivated pride for one's occupation, such as "satisfied with my occupation," "focus on the work," "proud of my occupation," "personal growth," "stimulation towards curiosity," "satisfaction towards occupation selection." The secondary factor "P-continuous" is determined as an indicator to show that the person hopes to continue in the occupation as a career path, such as "intention to continue in the occupation" and "value the occupation continuance."

3.8.2 Satisfaction towards the work environment and co-workers

Items regarding satisfaction towards the work environment and co-workers are described below. Average value and standard deviation of the item group are shown in Table 7.1. Overall average value is high, and there is a tendency of satisfaction. Moreover, high diversification of the work place is shown.

The following items were used in the factor analysis of the item group. The respondent group of this item shows how good the environment is and the degree of satisfaction ("1: Don't think so – 5: Think so"). The five items used in analysis are; (1) I trust my co-workers to be helpful and open minded in our working relationship. (2) If I were faced with a problem, my co-workers would support me. (3) This is a good environment in which to continue my work. (4) Many people are leaving this company. (5) If there is a chance, I want to work for a different company. Results of the factor analysis (promax rotation) are shown in Table 7.2 and Table 7.3 (answers for (3) and (5) were in the reverse order, this was corrected).

Table 7.1 Attitude of Work

	N	Mean	SD
It is easy getting accustomed to new work environments.	128	3.42	1.21
Even if my co-workers change frequently, we can easily build a relationship of mutual trust in the workplace.	128	3.73	1.04
I work in a multicultural environment with people from more than five different ethnic groups.	128	4.13	1.32
I frequently get offers to move to a different company from outside agencies or from the company itself.	128	2.98	1.38
I work so as to be highly valued by other professionals.	127	3.83	1.15

Table 7.2 factor of co-worker, work environment

	co-worker	work environment
I trust my co-workers to be helpful and open minded in our working relationship.	0.98	0.00
If I were faced with a problem, my co-workers would support me.	0.86	-0.03
This is a good environment in which to continue my work.	0.24	0.51
Many people are leaving this company.	-0.12	0.77
If there is a chance, I want to work for a different company.	0.00	0.66
Factor Extraction Method Principal :Axis Factoring Rotation Method: Promax with Kaiser Normalization		

Table 7.3 Factor Correlation Matrix of work environment

	co-worker	Work environment
Co-worker	1	0.325
Work environment	0.325	1

As a result of factor analysis, 2 factors with 1.0 and higher eigenvalue were extracted. The contribution rate of satisfaction towards the work environment by these factors is 61.13%. Factor of co-workers at 41.68% and factor of work environment at 19.45% were determined to be factors with higher loading. Factor of co-workers (1)-(2), factor of work environment (3)-(5), were items with higher loading for each factor, as shown in Table 7.2. In comparison with 3.7.5, commitment to the organization was considered by calculating the factor score of these factors. The primary factor, "Factor of co-workers", shows the trust relationship with co-workers. The second factor, "Factor of work environment", shows satisfaction toward the work environment and acknowledgement of tendency of leaving by surrounding persons.

3.8.3 Organizational commitment

Items regarding commitment to the affiliated organization by the professional personnel are described in this paragraph. Average value and standard deviation of the item group is shown in Table 8.1. Regarding professional personnel, they have a high commitment to an organization overall, characteristically marking high scores on the item “to do one’s best to help the company grow.” Furthermore, a high tendency for loyalty to an organization, which is thought to be found in many Japanese, was observed in the professional personnel in the region.

Table 8.1 Organizational Commitment			
	N	Mean	SD
If there was no chance to advance or improve my skills, I would try to work for a different company.(reverse)	127	1.66	0.96
If my company could not assign me to work that would be interesting , I would try to move to another company. (reverse)	127	2.13	1.18
I will do my best to help this company grow.	127	4.56	0.81
It is important to be loyal to my company.	127	3.69	1.20
If I quit or lose my current job, I would be worried about finding another job.	127	3.09	1.53
One of the reasons that I stay with this company is that I would suffer considerable financial loss by leaving.	127	3.19	1.41

For factor analysis of the item group, 6 items prepared in consideration of reliability with Mowdy, Meyer, et al., Sekimoto, et al., and the Tao Organizational Commitment Scale (Mowdy 1979; Meyer & Allen 1987; Sekimoto / Hanada 1985; Tao 1997) . The respondent group for this item showed a degree of commitment to an organization ("1:

Don't think so – 5: Think so"). The following 6 items were used in the factor analysis of the item group (1) If I quit or lose my current job, I would be worried about finding another job. (2) If my company could not assign me to work that would be interesting, I would try to move to another company. (3) I will do my best to help this company grow. (4) It is important to be loyal to my company. (5) If there was no chance to advance or improve my skills, I would try to work for a different company. (6) One of the reasons that I stay with this company is that I would suffer considerable financial loss by leaving. Result of factor analysis (promax rotation) are shown in Table 8.2 and Table 8.3 (answers in (2) and (5) were in the reverse order, this was corrected).

Table 8.2 Factor Analysis of Organizational Commitment

	O- calculative	O- affective	O- continuous	communalities
If there was no chance to advance or improve my skills, I would try to work for a different company.(reverse)	0.54	-0.07	0.13	0.32
If my company could not assign me to work that would be interesting , I would try to move to another company. (reverse)	0.93	0.03	-0.09	0.87
I will do my best to help this company grow.	-0.18	0.65	0.01	0.47
It is important to be loyal to my company.	0.11	0.71	-0.01	0.51
If I quit or lose my current job, I would be worried about finding another job.	0.11	0.09	0.64	0.43
One of the reasons that I stay with this company is that I would suffer considerable financial loss by leaving.	-0.07	-0.09	0.53	0.28

Factor Extraction Method Principal :Axis Factoring Rotation Method: Promax with Kaiser Normalization

Table 8.3 Factor Correlation Matrix of Organizational Commitment

	O-calculative	O-affective	O-continuous
O-calculative	1.00	-0.07	0.03
O-affective	-0.07	1.00	0.00
O-continuous	0.03	0.00	1.00

As a result of factor analysis, 3 factors with 1.0 and higher eigenvalue were extracted. The contribution rate of Organizational commitment by these factors was 48.12%. From the factors with higher loading, factor of organizational calculative commitment (abbreviated as O-calculative) at 21.06%, factor of organizational affective commitment (abbreviated as O-affective) at 15.29%, and factor of organizational continuous commitment (abbreviated as O-continuous) at 11.77% were determined. Factor of O-calculative (2)-(5), factor of O-affective (3)-(4), and factor of O-continuous

(1) and (6), were items with greater loading for each factor, as shown in Table 8.2. In comparison with 3.7.5, commitment to the organization was considered by calculating the factor score of these factors.

The primary factor, "O-Calculative", shows the commitment when the organization responds to the person's own interests, such as "personal growth" and "interesting job." Involvement is cosmopolitan thinking, if there is no personal merit, there is no reason to deal with the organization. The second factor, "O-affective", shows emotional commitment, such as "focus on the organization" and "loyalty." The third factor, "O-continuous", is "intention to continue to affiliate with the organization," indicates whether the person thinks staying with the organization is important or not.

3.8.4 Correlation with consciousness

Each factor score of occupational commitment and of organizational commitment, and their correlation with consciousness towards the work environment and relationship with coworkers is shown in Table 9. No items showed correlation between P-affective and O-Calculative, and the correlation between attachment to the occupation, desire to focus and continuation of the occupation, attachment and continuation with the organization, and work environment were all low. However, P-continuous had a high positive correlation with O-Affective, O-Continuous, Co-worker, and Work environment. Moreover, there was also a high positive correlation between O-Affective and O-Continuous, Co-worker, and Work environment, showing a correlation of attachment with the organization, continuation, co-workers, and the work environment. Moreover, Work environment had a positive correlation with O-Continuous and Co-workers. In the Japan survey, a positive correlation was observed in the attachment with the organization, continuation, co-workers, and the work environment. Although intention for occupation continuation is not a different factor like Silicon Valley at times, no correlation was observed in intention for occupation continuation, commitment to the organization, co-workers, work satisfaction, indicating the same characteristics as Silicon Valley. Another major characteristic was that Japanese professional personnel have a lower organization commitment when their occupational commitment is high, and professional personnel in Silicon Valley have a higher tendency of attachment to the organization when occupational commitment is high. Moreover, while people who have good relationship with co-workers have higher attachment to the organization, this does not correlate with intention for continuation with the organization.

No significant difference was observed between persons with a high job changing frequency and those with a low job changing frequency. In other words, mobility

between organizations, and attachment to the occupation, organization, and co-workers can be identified as different, and characteristics of a region which is different from Japan, could be discovered.

Table 9 Correlation of attitude

		P- Affective	P- Continuous	O- Calculative	O- Affective	O- Continuous	Co- worker
P- Affective	1						
	Sig.						
	N	127					
P- Continuous	R	-0.08	1				
	Sig.	0.37					
	N	127	127				
O- Calculative	R	0.00	0.00	1			
	Sig.	0.99	0.97				
	N	127	127	127			
O-Affective	R	-0.12	.52**	-0.23	1		
	Sig.	0.18	0.00	0.01			
	N	124	124	124	125		
O- Continuous	R	-0.04	.35**	-0.10	.67**	1	
	Sig.	0.63	0.00	0.26	0.00		
	N	124	124	124	125	125	
Co-worker	R	-0.07	.23**	-0.18	.43**	0.15	1
	Sig.	0.41	0.01	0.05	0	0.10	
	N	125	125	125	123	123	126
Work Environment	R	0.00	.44**	-0.13	.58**	.35**	.39**
	Sig.	0.98	0.00	0.16	0.00	0.00	0.00
	N	125	125	125	123	123	126

**A significant correlation coefficient is determined as +/- 1% of the standard.
 **A significant correlation coefficient is determined as +/- 5% of the standard.

3.9 Viewpoint of employment by characteristics

3.9.1 Comparison by changing jobs experience

First, the personal characteristics and commitment to an organization or occupation were compared as follows. The comparison was carried out to determine if a difference in changing jobs experience affected consciousness in Silicon Valley with high mobility, and showed that practical commitment to an organization by persons who never changed jobs was very high ($p < .05$), as shown in Fig. 3. There is no significant difference, but continuation intention of persons who never changed jobs was the lowest, and fear of leaving the current affiliated organization was low. In the cases of professional personnel in Japan as well, many persons do not experience changing jobs. Low attachment to an organization and continuation intention can be seen as characteristics (Fujimoto 2005), but this is especially notable for researchers and technicians who work at major companies and few persons actually change jobs. For

these reasons, a low organization commitment is not considered to be an indicator of the degree of possibility of changing jobs in Japan. In the other hand, since persons in the region who never changed jobs have a high possibility of changing jobs in relation to organization commitment, this can be an indicator to predict the actions of those with higher practical commitment.

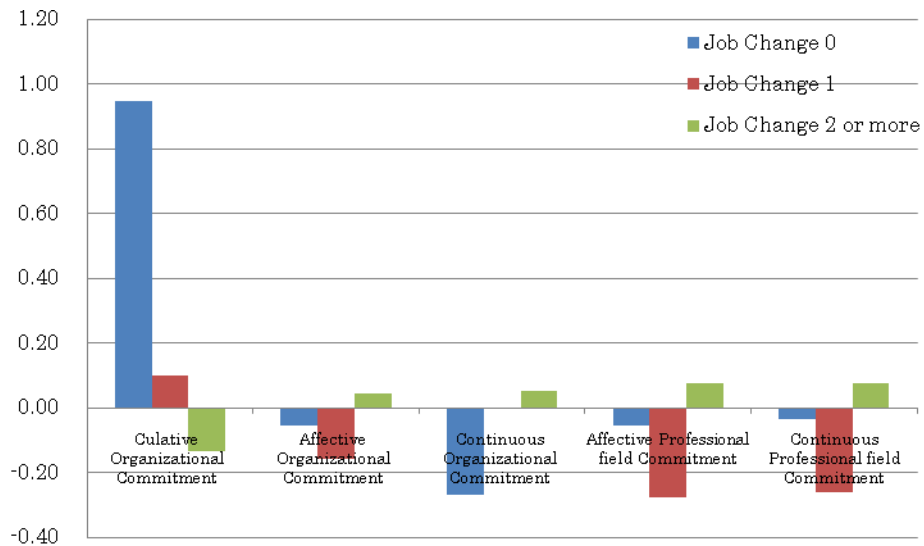


Fig. 3 Relation of Job Change and Commitment

3.9.2 Gender comparison

Fig. 4 shows comparison of organization commitment and occupation commitment by gender. Women are somewhat practically committed to an organization, have low attachment, and a tendency to want to continue with the current organization, but there is no significant difference in the consciousness of these. Moreover, women have a higher attachment to an occupation and continuation intention, but there is no significant difference.

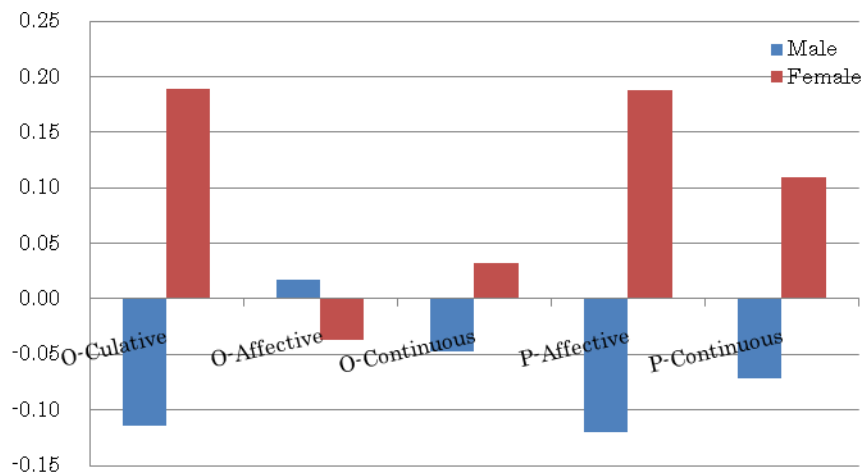


Fig. 4 Relation of Sex and Work Attitude

3.9.3 Comparison by generation

Fig. 5 shows the comparison of organization commitment and occupation commitment by generation. There is a difference of consciousness for each generation, but it is not significant. When compared with the previous job change, there is no

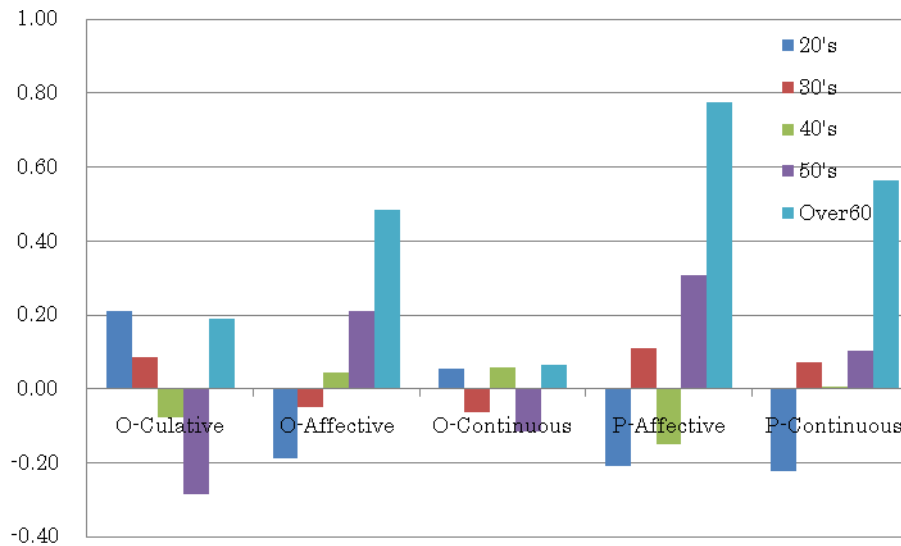


Fig. 5 generation and Work Attitude

pattern regardless of generation. In the region, the continuation intention towards the organization was not influenced by generation, and organization commitment by the young group was low. Japan had a different tendency where organization commitment by middle-high age group increased.

3.9.4 Comparison by education history

Fig. 6 shows the comparison of organization commitment and occupation commitment by educational history. There was no significant difference, but practical commitment to an organization by grad school graduates had a tendency to be low, while attachment was high. Also attachment and continuation intention of grad school graduates was higher, and shows that as expertise increases, commitment to the occupation also increases.

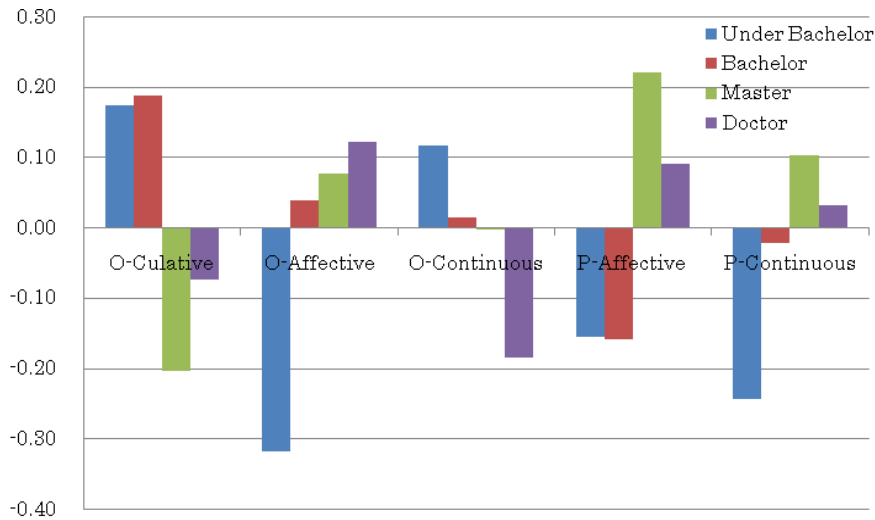


Fig. 6 Education and Work Attitude

3.9.5 Comparison by origin

Fig. 7 shows the comparison of commitment to the organization and commitment to the occupation by origin. No significant difference was observed between origins, whether American or immigrant. Regarding tendencies, persons from South America had a high practical commitment to an organization, but their attachment was also high and organization dependency was low. This shows that practical commitment to an organization does not necessarily diminish other factors. Persons from Europe had low practical commitment to an organization, and a high continuation intention, but attachment was not necessarily high. Furthermore, attachment to an occupation and continuation intention were the highest. There were no major characteristics of persons from Asia-Pacific or North America.

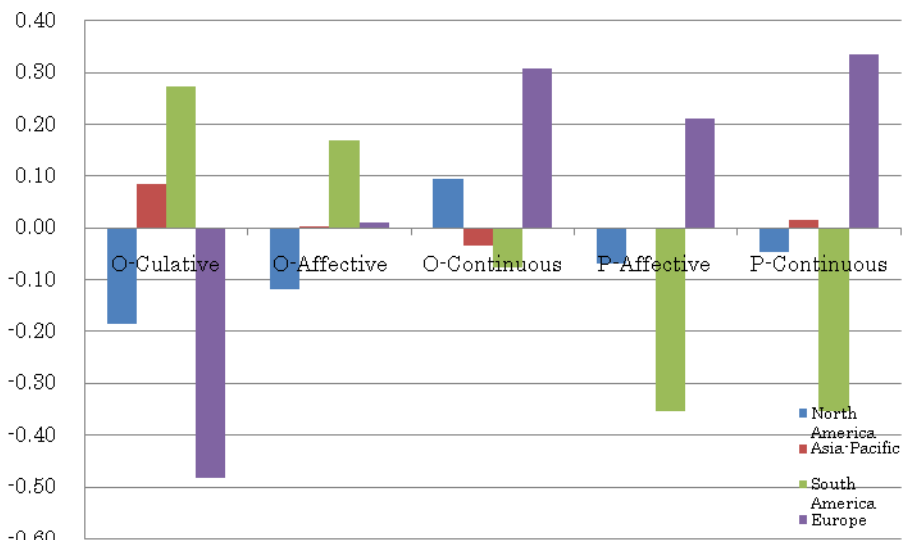


Fig. 7 Relation of Heritage and Commitment

3.10 Summary of the quantitative survey

The results of the quantitative survey have been considered up to now. A summary is provided below. It could be confirmed that many professional personnel in Silicon Valley have changed jobs twice or more, regardless of generation, and mobility is very high. In the confirmation of which characteristics of persons had a higher mobility, no significant difference in job changing tendency by origin was observed, indicating to a certain degree that the influence of the labor market was stronger than origin. By education history, job changing by grad school graduates was outstanding, and graduates completing grad school and later a doctoral course did not change jobs frequently. Mission matching of graduates completing grad school and later a doctoral course with the mission of the organization may be limited due to the high level of expertise. By income, the job changing frequency of high income earners indicated instability of employment, invitation from other outside companies to change jobs, and that many persons established their own business. By industry, changing jobs was frequent in the IT industry, but no significant difference was observed, and overall, many respondents changed jobs. By occupation, job changing frequency of persons in the educational and medical fields was slightly lower than other occupations, but neither had a significant difference, and overall, many persons changed jobs twice or more.

When the tenure period in one place was compared, it could be confirmed that men worked in one place longer than women. Regarding generation, all generations do not frequently change jobs, but there was a working pattern where the younger group had a shorter working period and repeated job changes, and this changed to long term employment along with age. By income, the \$50,000 and less group had slightly fewer job changes, but other than this tendency, there were no major differences. Regarding a correlation between generation and income, a characteristic correlation was observed in 20's and \$50,000 and less, but other than this, no major difference in tendencies was observed. Therefore, this is assumed to also influence job changing tendency.

Regarding moving between industries and occupations, many persons continue in the same industry or occupation. Especially for occupations, many people change jobs within the same occupation. In Japan, many people change occupations within the same organization in the domestic labor market, but in the region, it is said that continuation in the same occupation is proof of expertise.

Regarding consciousness towards employment, the degree of occupation commitment and organization commitment are not necessarily in conflict, people who have attachment to an occupation have attachment to the affiliated organization, and all persons do not view the organization practically. There was a high correlation between

co-workers and workplace environment, and focusing on the work was closely linked with the organization and the surrounding people. No significant difference was observed in the overall relationship between work attitude and personal characteristics, but slight differences were confirmed within each personal characteristic. Practical commitment to an organization was seen to be higher in person who never changed jobs, but other than this, no major difference was observed. In addition, attachment intention and continuation with an organization and an occupation was observed in men and highly educated persons. Although no significant difference was observed by origin, tendency of commitment to an occupation by persons from South America was slightly lower, while persons from Europe were slightly higher.

Overall, in a homogeneous society with a uniform origin and less experience in changing jobs such as Japan, a difference in action and consciousness was observed by gender, generation, and education history. However, it was very interesting that in the region, there was no major difference in consciousness and action, even though a wide range of persons were gathered together.

4 Summary

The results of a qualitative survey and a quantitative survey carried out on the social environment, actions, and consciousness surrounding the professional personnel in the high mobility region is summarized. From these surveys it could be understood that under Silicon Valley's employment system, a person does not depend on the organization and act independently, and prepares himself/herself for voluntary or passive job changing. As a self-preservation method, he/she has various networks, such as acquaintances, friends, and ethnic, and builds valuable relationships. Job changing tendency in the region was confirmed- many persons change jobs twice or more, regardless of gender, generation, income, education history, industry field, or occupation. Moreover, regarding consciousness towards employment in the region, persons with a higher occupation commitment tended to have high attachment to an organization, although professional personnel are said to have lower attachment to the affiliated organization. However, it was interesting to discover that the correlation between attachment to an organization and tendency to change jobs was low.

In the next thesis, a comparison edition using the items in common with data from Japan will be summarized, and a survey on a mid-mobility society in comparison with a high mobility society will be initiated.

Note

- ¹ Interview of 2007 IT related company, manager, 50's, male, PDM
- ² Interview of 2007 Bio-related company manager, 40's, male
- ³ Interview of 2008 50's male, Doctorate in Engineering
- ⁴ Interview of 2007 IT service company, vice president, 40's, female; president of bio-related company, 40's; company president; bio-related R&D company, vice president 40's male; M&A consultant company president, 50's male; employment agency, management, 30's female; IT-related R&D company president, 40's male.
- ⁵ Interview of 2007 Vice president, Ms. C.S., Japanese female, 40's.
- ⁶ Also described in the qualitative survey, the same response was received from one well-known laboratory as well as other front running laboratories.
- ⁷ Regarding sampling, according to advice from Prof. Saxenian, obtaining a list of immigrant residents is extremely difficult unless one has an extremely large budget from the government, and is not suited for a survey by individuals.
- ⁸ Advice regarding the survey was provided by Profs. W.R. Scott of Stanford University, Profs. R. Cole and C. Brown of U.C. Berkeley, B. P. Wong of the University of San Francisco. I would like to convey my appreciation for their assistance.
- ⁹ Persons without a Google ID cannot respond, but as the birthplace of Google, the number of users is overwhelmingly greater than those in Japan. There were no email complaints from users who did not have a Google ID and could not respond to this survey.
- ¹⁰ A sampling which could estimate the parent group could not be carried out, but a chi-square test was carried out as reference. No significant difference was observed.
- ¹¹ While there were not many respondents at this time from bio-related or public works facilities, information obtained in this questionnaire showed that changing jobs by these respondents was not as high as for IT and semiconductor manufacturing companies.
- ¹² A sampling which could estimate the parent group could not be carried out, but a T-test was carried out as reference.
- ¹³ One extreme outer value was eliminated.

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Appendix

Questionnaire and Totalization

Survey of Job Changes Among Professionals in Silicon Valley

We are grateful for your cooperation in the “Survey of job changes among professionals in Silicon Valley”. We appreciate if you will take some of your valuable time to fill out this questionnaire. In the questionnaire, we would like to ask mainly about your opinions concerning your work in Silicon Valley. Data obtained from this questionnaire will provide us with valuable information for our study comparing work practices in Silicon Valley and Japan. We are looking for subjects who have independently secured employment in the United States through their own networks. Employees who have been assigned to their U.S. job by their existing employer in the home country do not meet the requirements of the study. We ask for your understanding and cooperation with this survey. The data collected will be employed for academic purposes only, and all responses will be treated as confidential. No persons or companies will be identified. This should take about 15 minutes.

Person carrying out survey: FUJIMOTO, Masayo, Associate Professor, Ph.D

Doshisha University, Kyoto, Japan. (I was a visiting scholar at Stanford University in 2007.) If you have any questions, please contact me:

[masayo.fujimotoxxxxxx@gmail.com]

A recommendation: W. R. Scott, Professor Emeritus of Sociology, Stanford University.

I hope you will be willing to cooperate in this study, which is designed to provide information comparing U.S. and Japanese professions.

Before beginning:

When there are no specific directions, please choose one of the choices. You do not need to answer the items which you do not want to answer.

Q1. Current work place Do you agree with the following statements about your work place?

Scale Types 1: Disagree 2: Somewhat disagree 3: No opinion either way

4: Somewhat agree 5: Agree

(1) If I quit or lose my current job, I would be worried about finding another job.

Mean 3.11 SD 1.53 N 128

(2) If my company could not assign me to work that would be interesting, I would try to move to another company.

Mean 3.88 SD 1.17 N 128

(3) I will do my best to help this company grow.

Mean 4.55 SD 0.81 N 128

(4) It is important to be loyal to my company.

Mean 3.70 SD 1.19 N 128

(5) If I left this company, I would worry about other's reactions to my decision.

Mean 2.34 SD 1.23 N 128

(6) If I left this company, my family and relatives would be disappointed.

Mean 2.18 SD 1.17 N 128

(7) If there was no chance to advance or improve my skills, I would try to work for a different company.

Mean 4.32 SD 0.98 N 128

(8) One of the reasons that I stay with this company is that I would suffer considerable financial loss by leaving.

Mean 3.19 SD 1.41 N 127

(9) My company and our business make social contributions.

Mean 4.04 SD 1.05 N 127

(10) I have high expectations for the future of this company.

Mean 3.94 SD 1.14 N 128

Q2. Current occupation Do you agree with the following statements about your occupation?

Scale Types 1: Disagree 2: Somewhat disagree 3: No opinion either way

4: Somewhat agree 5: Agree

(1) I'm generally satisfied with my current occupation.

Mean 4.04 SD 1.13 N 129

(2) I am happy to devote extra time to professional development in order to become more competent in my field.

Mean 4.40 SD 0.86 N 129

(3) I can say to my friends that I am proud of my current occupation.

Mean 4.24 SD 1.04 N 129

(4) My current occupation is rewarding in itself.

Mean 4.14 SD 1.02 N 129

(5) My current occupation stimulates me very much.

Mean 3.86 SD 1.24 N 129

(6) I don't feel dedicated to my current occupation.

Mean 2.19 SD 1.23 N 129

(7) I'm happy that I decided to go into my current occupation.

Mean 4.31 SD 0.94 N 127

(8) I want to continue in my current occupation for the rest of my life.

Mean 2.96 SD 1.43 N 129

(9) It's more important to continue in my present occupation than to the stay employed in my current organization.

Mean 3.46 SD 1.16 N 127

Q3. Current working environment Do you agree with the following statements about your working environment?

Scale Types 1: Disagree 2: Somewhat disagree 3: No opinion either way
4: Somewhat agree 5: Agree

(1) This is a good environment in which to continue my work.

Mean 3.92 SD 1.09 N 128

(2) I want to retire from this company when the time comes.

Mean 3.03 SD 1.43 N 127

(3) This is the only place where I can do what I want to do.

Mean 1.76 SD 1.10 N 127

(4) Many people are leaving this company.

Mean 2.4 SD 1.38 N 127

(5) If there is a chance, I want to work for a different company.

Mean 3.67 SD 1.33 N 126

(6) I trust my co-workers to be helpful and open minded in our working relationship.

Mean 4.02 SD 1.11 N 127

(7) If I were faced with a problem, my co-workers would support me.

Mean 4.06 SD 1.08 N 127

Q4. Attitude towards job Do you agree with the following statements about your job?

Scale Types 1: Disagree 2: Somewhat disagree 3: No opinion either way
4: Somewhat agree 5: Agree

(1) It is easy getting accustomed to new work environments.

Mean 3.42 SD 1.21 N 128

(2) Even if my co-workers change frequently, we can easily build a relationship of mutual trust in the workplace.

Mean 3.73 SD 1.04 N 128

(3) New ideas come mostly from young employees.

Mean 2.35 SD 1.05 N 128

(4) New ideas come mostly from experienced employees.

Mean 2.85 SD 1.13 N 128

(5) I work in a multicultural environment with people from more than five different ethnic groups.

Mean 4.13 SD 1.32 N 128

(6) I frequently get offers to move to a different company from outside agencies or from the company itself.

Mean 2.98 SD 1.38 N 128

(7) I work so as to be highly valued by other professionals.

Mean 3.83 SD 1.15 N 127

(8) I am satisfied with my work life.

Mean 3.71 SD 1.11 N 127

(9) I am satisfied with my private life.

Mean 4.01 SD 1.14 N 127

Q5. Social networks

Q5-1 Do you agree with the following statements about social networks?

Scale Types 1: Does not apply 2: Does not usually apply 3: Often applies 4: Applies 9: Agree

(1) There are strong business networks for people from various ethnic groups in the Bay Area.

Mean 3.50 SD .78 N 114

(2) I belong to an ethnic network that could help me find a new job.

Mean 2.13 SD 1.16 N 117

(3) I have previous co-workers who could help me find a new job.

Mean 3.21 SD 1.04 N 121

(4) I have friends outside of work who could help me find a new job.(except ethnic network)

Mean 3.29 SD 0.97 N 118

Q5-2 Please input zip code of your home address.

Table Zip code of home					
Zip Code	Frequency	Zip Code	Frequency	Zip Code	Frequency
93131	1	94303	4	95112	4
94002	1	94306	14	95117	1
94024	1	94401	1	95118	1
94040	4	94402	1	95122	1
94061	1	94404	2	95123	3
94070	1	94536	3	95124	2
94080	1	94538	1	95125	2
94086	2	94539	4	95126	3
94087	7	94555	1	95127	1
94089	2	94606	1	95128	1
94103	1	94618	1	95129	5
94107	3	95003	1	95130	1
94114	2	95008	3	95131	1
94116	1	95014	7	95133	1
94118	2	95032	2	95134	4
94124	1	95035	2	95136	1
94131	1	95037	2	95138	1
94132	1	95050	1	95139	1
94134	1	95051	2	96743	1
94158	2	95060	1		
94301	3	95070	2	Total	129

Q5-3 Who introduced this questionnaire to you? (n=128)

1	Supervisor and/or advisor	15.1%
2	Current co-workers	11.1%
3	Previous co-workers	1.6%
4	Ethnic network	5.6%
5	Alumni network	8.7%
6	Professional network	19.8%
7	Local community network such as P.T.A.	1.6%
8	Friends (Except above)	31.7%
9	Family	0.8%
10	Local Media	4.09%

Q6. Career path

Please tell us about your job activities. Please provide information for your last three jobs, if applicable.

How many times have you changed paid jobs? (n=126)

Times	Frequency	%
0	11	8.7
1	25	19.8
2	19	15.1
3	25	19.8
4	15	11.9
5	7	5.6
6	8	6.3
7	3	2.4
8	5	4.0
9	2	1.6
10	3	2.4
11	1	.8
14	1	.8
15	1	.8

Q6-1 Please answer some questions about your current paid job.

(1) Which one of the following general classifications best applies to your job? (n=129)

1	Company President, Company Executive	4.7%
2	Regular Full-time Employee	72.9%
3	Temporary Employee, Part-time Employee	7.8%
4	Employee Dispatched by a Temporary Employment Agency	0.0%
5	Contract Employee, Employee on a Short-term Contract	7.8%
6	Self-employed, Freelance Independent Worker	3.9%
7	Employee or Partner in Family Business	0.0%
8	Home Worker (engaged in piecework at home)	0.0%
9	No occupation	0.0%
10	Students	3.1%

(2) What kind of business do you work for? (Industry) (125)

1	Manufacturing	8.0%
2	Trade(Wholesale or Retail)	1.6%
3	Information	27.2%
4	Finance and Insurance	9.6%
5	Professional, Scientific, and Technical Services	30.4%

6	Management of Companies and Enterprises	0.8%
7	Administrative and Support and Waste Management and Remediation Services	2.4%
8	Educational Services	8.8%
9	Health Care and Social Assistance	4.8%
10	Other Services (except Public Administration)	5.6%
11	Public Administration	0.8%

(3) What kind of work do you do at this work place? (Occupation) (n=125)

1	Management, business, and financial occupations	24.0%
2	Business and Financial Operations Occupations	13.6%
3	Computer and Mathematical Occupations	33.6%
4	Architecture and Engineering Occupations	8.0%
5	Life, Physical, and Social Science Occupations	5.6%
6	Legal Occupations	1.6%
7	Education, Training, and Library Occupations	8.0%
8	Healthcare Practitioners and Technical Occupations	1.6%
9	Others	4.0%

(4) Approximately how many people does the entire company employ? (n=124)

1	1	2.4%
2	2 - 4	5.6%
3	5 - 9	5.6%
4	10 - 29	9.7%
5	30 - 99	8.9%
6	100 - 299	4.8%
7	300 - 499	5.6%
8	500 - 999	8.9%
9	1000 or more	46.0%
10	Government or Other Public Office	2.4%
11	Not Applicable (Home Worker)	0.0%

(5) Do you hold a managerial position at your current company? (n=122)

1	No Managerial Title	58.4%
2	Supervisor, Foreman, Group Leader	15.6%
3	Subsection Chief or an Equivalent	4.1%
4	Section Chief or an Equivalent Position	2.5%

5	Department Head or an Equivalent Position	6.4%
6	President, Director, Executive Officer, Board of Directors	13.1%

(6) How did you find your job at your current company? Please choose all that apply from the following list. (n=124)

1	Introduction by my family or relatives	5.6%
2	Introduction by co-workers from the previous workplace	16.9%
3	Introduction by my friends or acquaintances	27.4%
4	Introduction by alumni at my school	2.4%
5	Career center or teacher at my school (including school recommendation)	4.0%
6	Introduction by public employment agency	2.4%
7	Introduction by private placement organization	4.8%
8	Applied directly by looking at job placement ads or magazines	16.1%
9	Took over family business (entered the family business)	0.0%
10	Started my own business	8.1%
11	Solicited by this employer	5.6%
12	Through social networks among technology professionals	2.4%
13	M&A	0.8%
14	Solicited by consultant	2.4%
15	Job fair	0.8%

(7) When did you start your current job? (yyyy/mm)

The continuous working months	n=127	Mean 55.97	Mode 3	SD 55.63
Lug of getting a job (months)	n=102	Mean 7.09	Mode 0	SD 24.76

(8) Have you been promoted since you joined your current company? (n=126)

1	Yes	41.3%
2	No	58.7%

(9) Please input zip code of current work place.

Zip code of work place(current job)					
Zip Code	Frequency	Zip Code	Frequency	Zip Code	Frequency
93405	1	94301	3	95037	1
94010	1	94303	2	95050	2
94025	3	94304	3	95051	3
94035	1	94305	3	95054	6
94040	2	94306	2	95110	5
94041	2	94402	1	95112	4

94043	10	94404	2	95113	1
94054	1	94539	1	95122	1
94061	1	94544	2	95123	1
94063	2	94555	1	95124	2
94065	2	94588	1	95131	3
94085	3	94618	1	95134	6
94086	2	94945	1	95136	1
94087	4	95003	1	95153	1
94089	8	95008	2	95192	2
94103	4	95011	1	95438	1
94105	1	95014	2	96743	1
94107	2	95030	1		
94132	2	95035	2	Total	125

(10) Did you have a previous job? (n=128)

1	Yes	81.3%
2	No	18.8%

Q6-2 Please answer some questions about your previous paid job.

(1) Which one of the following general classifications best applies to your previous job? (n=104)

1	Company President, Company Executive	8.7%
2	Regular Full-time Employee	73.1%
3	Temporary Employee, Part-time Employee	11.5%
4	Employee Dispatched by a Temporary Employment Agency	0.0%
5	Contract Employee, Employee on a Short-term Contract	3.8%
6	Self-employed, Freelance Independent Worker	1.9%
7	Employee or Partner in Family Business	0.0%
8	Home Worker (engaged in piecework at home)	0.0%
9	No occupation	0.0%
10	Students	1.0%

(2) What kind of business did you work for? (Industry) (n=100)

1	Manufacturing	10.0%
2	Trade (Wholesale or Retail)	5.0%
3	Information	30.0%
4	Finance and Insurance	9.0%
5	Professional, Scientific, and Technical Services	27.0%
6	Management of Companies and Enterprises	3.0%
7	Administrative and Support and Waste Management and Remediation Services	0.0%
8	Educational Services	5.0%

9	Health Care and Social Assistance	7.0%
10	Other Services (except Public Administration)	3.0%
11	Public Administration	1.0%

(3) What kind of work did you do at this work place? (Occupation) (n=99)

1	Management, business, and financial occupations	31.3%
2	Business and Financial Operations Occupations	8.1%
3	Computer and Mathematical Occupations	37.4%
4	Architecture and Engineering Occupations	10.1%
5	Life, Physical, and Social Science Occupations	4.0%
6	Legal Occupations	0.0%
7	Education, Training, and Library Occupations	4.0%
8	Healthcare Practitioners and Technical Occupations	4.0%
9	Others	1.0%

(4) Approximately how many people did the entire previous company employ? (n=102)

1	1	2.0%
2	2 - 4	2.0%
3	5 - 9	3.9%
4	10 - 29	13.7%
5	30 - 99	15.7%
6	100 - 299	6.9%
7	300 - 499	2.9%
8	500 - 999	3.9%
9	1000 or more	48.0%
10	Government or Other Public Office	1.0%
11	Not Applicable (Home Worker)	0.0%

(5) Did you hold a managerial position when you left your previous company? (n=101)

1	No Managerial Title	59.4%
2	Supervisor, Foreman, Group Leader	12.9%
3	Subsection Chief or an Equivalent	3.0%
4	Section Chief or an Equivalent Position	3.0%
5	Department Head or an Equivalent Position	7.9%
6	President, Director, Executive Officer, Board of Directors	13.9%

(6) How did you find your job at your previous company? Please choose all that apply from the following list. (n=104)

1	Introduction by my family or relatives	7.7%
2	Introduction by co-workers from the previous workplace	15.4%
3	Introduction by my friends or acquaintances	15.4%
4	Introduction by alumni at my school	8.7%
5	Career center or teacher at my school (including school recommendation)	8.7%
6	Introduction by public employment agency	1.9%
7	Introduction by private placement organization	6.7%
8	Applied directly by looking at job placement ads or magazines	21.2%
9	Took over family business (entered the family business)	0.0%
10	Started my own business	2.9%
11	Solicited by this employer	10.6%
12	Through social networks among technology professionals	1.0%
13	M&A	1.0%
14	Solicited by consultant	0.0%
15	Job fair	1.0%
16	From out of U.S.	0.0%

(7) When did your previous job start? (yyyy/mm)

(8) When did your previous job end? (yyyy/mm)

The continuous working months	n=102	Mean 50.01	Mode 11&24	SD 55.44
Lug of getting a job (months)	n=52	Mean 5.70	Mode 0	SD 30.26

(9) Why did you change from this previous job? Please choose all that apply from the following list.

(n=99)

1	Retirement, the end of contract, etc.	3.0%
2	Bankruptcy, closing, employee layoff, etc.	21.2%
3	Found good job	34.3%
4	Family reasons(marriage, child-rearing etc.)	8.1%
5	To take over family business	0.0%
6	Dissatisfaction with the workplace	13.1%
7	Starting new business	9.1%
8	M&A	1.0%
9	relocation	1.0%
10	to study abroad	1.0%

11	Go to back to school	4.0%
12	move to another state	2.0%

(10) Did your salary change when you moved from your previous job to your current job? (n=103)

1	Up	63.1%
2	No change	14.6%
3	Down	22.3%

(11) Did your job classification change when you moved from your previous job to your current job?

(n=101)

1	Up	44.6%
2	No change	35.6%
3	Down	19.8%

(12) Were you promoted while you worked at your previous company? (n=103)

1	Yes	46.6%
2	No	53.4%

(13) Please input the zip code of the second previous work place.

Zip code of work place(previous job)					
Zip Code	N	Zip Code	N	Zip Code	N
10017	1	94111	1	95122	1
20520	1	94129	1	95124	1
46902	1	94132	1	95126	1
90103	1	94303	1	95128	1
90245	1	94304	1	95129	1
90723	1	94403	1	95131	1
94010	1	94404	4	95134	3
94024	1	94520	1	95138	1
94029	1	94538	2	95139	1
94035	1	94555	1	95192	1
94040	1	94568	1	95242	1
94043	4	94611	1	95616	1
94059	1	94702	1	98005	1
94061	1	94704	1	98075	1
94085	2	95014	3	From India	1
94086	2	95050	2	From Japan	4
94087	2	95054	7	From Canada	1
94089	3	95101	1	Australia	2
94101	1	95110	3	Others	2
94103	1	95112	1		
94110	1	95113	1	Total	91

(14) Did you have a second previous job? (n=102)

1	Yes	51.0%
2	No	49.0%

Q6-3 Please answer some questions about your second previous paid job.

(1) Which one of the following general classifications best applies to your second previous job?

(n=53)

1	Company President, Company Executive	11.3%
2	Regular Full-time Employee	71.7%
3	Temporary Employee, Part-time Employee	7.5%
4	Employee Dispatched by a Temporary Employment Agency	0.0%
5	Contract Employee, Employee on a Short-term Contract	1.9%
6	Self-employed, Freelance Independent Worker	7.5%
7	Employee or Partner in Family Business	0.0%
8	Home Worker (engaged in piecework at home)	0.0%
9	No occupation	0.0%
10	Students	0.0%

(2) What kind of business did you work for? (Industry) (n=52)

1	Manufacturing	13.5%
2	Trade (Wholesale or Retail)	3.8%
3	Information	32.7%
4	Finance and Insurance	11.5%
5	Professional, Scientific, and Technical Services	23.1%
6	Management of Companies and Enterprises	0.0%
7	Administrative and Support and Waste Management and Remediation Services	0.0%
8	Educational Services	3.8%
9	Health Care and Social Assistance	7.7%
10	Other Services (except Public Administration)	3.8%
11	Public Administration	0.0%

(3) What kind of work did you do at your second previous work place? (Occupation) (n=52)

1	Management, business, and financial occupations	28.8%
2	Business and Financial Operations Occupations	9.6%
3	Computer and Mathematical Occupations	36.5%
4	Architecture and Engineering Occupations	7.7%

5	Life, Physical, and Social Science Occupations	3.8%
6	Legal Occupations	0.0%
7	Education, Training, and Library Occupations	1.9%
8	Healthcare Practitioners and Technical Occupations	5.8%
9	Others	5.8%

(4) Approximately how many people did the entire second previous company employ? (n=51)

1	1	2.0%
2	2 - 4	5.9%
3	5 - 9	2.0%
4	10 - 29	11.8%
5	30 - 99	15.7%
6	100 - 299	11.8%
7	300 - 499	3.9%
8	500 - 999	2.0%
9	1000 or more	43.1%
10	Government or Other Public Office	0.0%
11	Not Applicable (Home Worker)	2.0%

(5) Did you hold a managerial position when you left your second previous company? (n=53)

1	No Managerial Title	60.4%
2	Supervisor, Foreman, Group Leader	15.1%
3	Subsection Chief or an Equivalent	0.0%
4	Section Chief or an Equivalent Position	1.9%
5	Department Head or an Equivalent Position	7.5%
6	President, Director, Executive Officer, Board of Directors	15.1%

(6) How did you find your job at your second previous company? (n=)

Please choose all that apply from the following list.

1	Introduction by my family or relatives	2.0%
2	Introduction by co-workers from the previous workplace	14.0%
3	Introduction by my friends or acquaintances	20.0%
4	Introduction by alumni at my school	10.0%
5	Career center or teacher at my school (including school recommendation)	2.0%
6	Introduction by public employment agency	4.0%
7	Introduction by private placement organization	4.0%

8	Applied directly by looking at job placement ads or magazines	24.0%
9	Took over family business (entered the family business)	0.0%
10	Started my own business	6.0%
11	Solicited by this employer	8.0%
12	Through social networks among technology professionals	0.0%
13	M&A	0.0%
14	Solicited by consultant	0.0%
15	Job fair	0.0%
16	From out of U.S.	2.0%

(7) When did your second previous job start? (yyyy/mm)

(8) When did your second previous job end? (yyyy/mm)

The continuous working months n=51 Mean 49.59 Mode 7&60 SD 48.40

(9) Why did you change from your second previous job? Please choose all that apply from the following list. (n=50)

1	Retirement, the end of contract, etc.	4.0%
2	Bankruptcy, closing, employee layoff, etc.	28.0%
3	Found good job	30.0%
4	Family reasons (marriage, child-rearing etc.)	6.0%
5	To take over family business	0.0%
6	Dissatisfaction with the workplace	14.0%
7	Starting new business	10.0%
8	M&A	0.0%
9	relocation	2.0%
10	to study abroad	2.0%
11	Go to back to school	2.0%
12	move to another state	2.0%

(10) Did your salary change when you moved from your second previous job to your previous job?

(n=52)

1	Up	67.3%
2	No change	13.5%
3	Down	19.2%

(11) Did your job classification change when you moved from your second previous job to your previous job? (n=51)

1	Up	45.1%
2	No change	41.2%
3	Down	13.7%

(12) Were you promoted while you worked at your second previous company? (n=52)

1	Yes	48.1%
2	No	51.9%

(13) Please input the zip code of the second previous work place.

Zip code of work place(second previous job)					
Zip Code	N	Zip Code	N	Zip Code	N
10014	1	94304	1	95128	1
10019	1	94306	2	95129	1
77041	1	94401	1	95134	1
80201	1	94420	1	95193	1
93035	1	94536	1	95237	1
94043	1	94538	1	98005	1
94063	1	94539	1	98052	2
94065	2	94601	1	98144	1
94089	3	95014	2	From China	1
94101	1	95020	1	From Japan	5
94103	2	95035	1	From Australia	1
94104	1	95101	1		
94109	1	95125	1	Total	48

About yourself

F-1 What is your sex? (n=126)

1	Male	60.3%
2	Female	39.7%

F-2 How old are you? (n=127)

1	Under 24	8.7%
2	25 ~ 29	11.8%
3	30 ~ 34	13.4%
4	35 ~ 39	15.7%
5	40 ~ 44	19.7%
6	45 ~ 49	13.4%

7	50 ~ 54	9.4%
8	55 ~ 59	4.7%
9	Over 60	3.1%

F-3 What is the highest degree or level of school you have COMPLETED?

Choose one choice. If currently enrolled, select previous grade or highest degree received. (n=127)

1	Some college credit, but less than 1 year	0.8%
2	1 or more years of college, no degree	11.0%
3	Associate degree(for example AA,AS)	0.8%
4	Bachelor's degree(for example: BA, AB, BS)	40.9%
5	Master's degree(for example: MA, MS, MEng, MEd, MSW, MBA)	35.4%
6	Professional degree(for example: MD, DDS, MVM, LLB, JD)	1.6%
7	Doctorate degree(for example: PhD, EdD)	9.4%

F-3-1 Where was that? (n=127)

1	In the United States	66.1%
2	Outside the United States	33.9%

F-3-2 When did you begin studying to earn your degree or highest level of school? (Year)

F-3-3 When did you finish your highest degree of level of school? (Year)

(n=120)

Continuous	70.8%
Re-education	29.2%

F-4 Please choose your heritage. (n=123)

1	American (if one or more parents was born in the United States)	18.7%
2	Mainland Chinese	8.1%
3	Korean	0.0%
4	Indian	8.7%
5	Japanese	39.0%
6	Taiwanese	6.5%
7	Southeast Asian	4.9%
8	South American	4.9%
9	Israeli	0.0%
10	European (excluding Russian)	3.3%
11	Russian	0.8%

12	Canadian	3.3%
13	Australian	0.8%
14	Middle Eastern	0.8%

F-5 What was your approximate yearly income range, before taxes, for the past year? Please include all casual income and additional income such as annual pension, dividends on stock shares, etc.

(n=121)

1	None	1.7%
2	Less than \$50,000	19.0%
3	\$50,000 or higher but less than \$100,000	25.6%
4	\$100,000 or higher but less than \$150,000	27.3%
5	\$150,000 or higher but less than \$200,000	18.2%
6	\$200,000 or higher but less than \$250,000	4.1%
7	\$250,000 or higher but less than \$300,000	0.0%
8	\$300,000 or higher	4.1%
9	Don't know	

F-6 Where were you born? (n=129)

1	In the United States	30.2%
2	Outside the United States	69.8%

F-6 In which state were you born? Please choose Vermont

Hometown state					
State	N	State	N	State	N
Alabama	2	Illinois	1	New York	2
California	24	Kentucky	1	Oregon	1
Colorado	1	Massachusetts	1	Utah	1
Florida	1	Michigan	1	West Virginia	1
Georgia	1	Nebraska	1	Total	39

F-6-1 Please print the name of the country in which were you born. (n=88)

1	China	11.4%
2	India	11.4%
3	Japan	54.5%
4	Taiwan	6.8%
5	South Asia	3.4%
6	Canada	4.5%
7	South America	1.1%

8	European(excluding Russian)	2.3%
9	Russian	1.1%
10	Others	3.4%

F-6-2 Please print the name of the city in which were you born.

F-6-3 Did you graduate from a high school in the United States? (n=89)

1	Yes	19.1%
2	No	80.9%

F6-4 Are you an H1 visa holder? (n=88)

1	Yes	6.8%
2	No	93.2%

F-6-5 Are you a Green Card holder? (n=90)

1	Yes	51.7%
2	No	48.3%

F-6-6 When did you come to live in the United States? Please print the year in the box.

A residence career (Months) Mean 14.98 SD 9.18 Mode 12 N 89

F-6-7 Will you return to your country within several years? (n=88)

1	Yes	22.7%
2	No	77.3%

F-6-8 Would you like to keep working for a long time in the United States? (n=88)

1	Yes	87.5%
2	No	12.5%

F-6-9 My visa does not permit me to work in the U.S. continuously, though I would like to stay here.

(n=70)

1	Yes	7.1%
2	No	92.9%