BROGRAMMERS, TECH HOBBYISTS, AND CODING PEASANTS: SURVEILLANCE, FUN, AND PRODUCTIVITY IN HIGH TECH

by

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DISSERTATION ABSTRACT

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This project is based on an ethnography of Trifecta Tech (pseudonym) a major high-tech firm on the West coast of the U.S. Although a growing group of organizational theorists started investigating high-tech firms' organizational model and management mechanisms, they are still limited by their neglect of two latest trends in the high-tech industry: the rejuvenation of the workforce through disproportionally recruiting young college-educated men and the masculinization of the organizational culture. Drawing on 46 in-depth interviews and 11 months of participant observation, this study argues that these two latest dynamics result in some significant organizational processes that have not been examined before, including

the gamification of the workplace; the promotion of "playful" organizational culture that attempts to blur boundaries between work and off-work activities; and the reinforcement of masculinized racial hierarchy to facilitate managers' division of labor.

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CHAPTER I

NEW DYNAMICS IN TECH, NEW THEORY OF TECH LABOR GAMES

Tech Culture, Tech Industry, and the Significance of Studying Tech

A Sketch of Tech Culture and Tech Industry

There is a persistent theme embedded in much of the existing literature on internet culture and high-tech workplace culture, that is, the tension between the the "technological supremacy culture" and the "technological entrepreneurial culture" (Castells 2002; Cassell 2002; Kirriemuir 2006; Turkle 2005). "Technological supremacy culture" is defined by three key factors, including "technological freedom," "technological innovation," and "technological games." To technological supremacists, technological freedom is a fundamental value, particularly the freedom to have access to the cutting-edge technology and to redistribute the technology (Castells 2002; Turkle 2005). In addition, in the technological supremacist community, "technological innovation" becomes the only resource to measure authority and status (Csikszentmihalyi 1997). Specifically, only the ability to create and share excellent and innovative technology is respected and valorized in this community. Such a standard also implies that the potential of technology to make profit is largely devalued by tech supremacists, which sows the seeds of this community's tension with technological entrepreneurs. Finally, as scholars claim, the intertwined relationship between videogames and technological learning ecology determines that this tech supremacist community can only

attract certain group of people while at the same time repelling others (Turkle 2005; Barron, 2004). For example, as Justine Cassell (2002) points out, it is the invention of video games and online playing technology that leads to the masculinization of human-computer interactions. Before the 1980s, women from Mathematics backgrounds were the major group of programmers, as computing had been treated as a secretarial type of work. It was the popularization of video games after the 1990s that changed the situation, as the gaming market assumed that boys were the target consumers. Consequently, games became a part of male dominated "learning ecology" (Barron, 2004; Ensmenger, 2010; Wajcman 1991) and male students started to dominate informal learning spaces such as school computer clubs (Kirriemuir 2006).

However, the exclusiveness of the technological supremacist community determines that all the revolutionary technological innovation can only be traded within the community. Then how do these extraordinary technologies achieve to expand to every corner of the world and reform almost every normal people's lifestyle? Scholars credit another group of key players in the high-tech industry for discovering and promoting these cutting-edge technologies -- the technological entrepreneurs (Castell 2002). Indeed, technological entrepreneurs represent another major thread of internet culture that is completely distinct from the "technological supremacy culture." As Castell elaborates, "The realization of the potential of transforming mind power into money-making became the cornerstone of the entrepreneurial culture in Silicon Valley" (Castell 2002:57). And technological entrepreneurs who are responsible for prospering such money-oriented entrepreneurial culture are the people who are called the "two-headed creatures" by Castell (2002). On the one hand, these creatures also have the

"technological head," possess technological credentials, and share similar experience of obtaining inner joy of technical creation with tech supremacists to some extent. On the other hand, unlike the tech supremacists who do not believe that technological value should be measured by money, these internet entrepreneurs treat money-making as their benchmark of success. Money-making is their second "head" and also a more important one. In other words, technological entrepreneurs also valorize innovation. But for them, innovative ideas should be sold to venture capitalists and transformed into money. Bearing this understanding on their mind, they nurture innovation, shape it, and gear it toward market image. To put it simply, technological entrepreneurs make money out of idea and then conquer the world with the usage of technology. And of course, through this way, these entrepreneurs transform the technology that majorly invested by tech supremacist into the backbone of every normal person's life. Therefore, the tension between tech supremacists and tech entrepreneurs is located at whether the technological innovation should be measured by the technological breakthrough itself, as the supremacists always claim, or measured by its marketing value as tech entrepreneurs believe.

Interestingly enough, the general tension of the internet culture described above also extends to high-tech corporations and becomes one cornerstone of high-tech firm culture. For example, through investigating a major tech firm's culture, Kunda (2009) demonstrates that the major cultural control mechanism adopted by the tech company he studies involves "normative control," which concentrates on controlling their employees' mind and world view to let them internalize the organization's goals and values that put emphasis on expanding market and increasing profits via tech innovation (Kunda 2009).

And Kunda emphasizes that only through letting engineers internalize the organization's values can managers achieve to reconcile the conflict between engineers' prioritization of technological excellence over profits and managers' prioritization of profits over technology.

Of course, Kunda also emphasizes that articulating the "fun" and "casualty" of working in this tech firm is a key mechanism adopted by managers to help them increase engineers' sense of belonging to the community and thus achieve normative control. Obviously, Kunda is not the only scholar who points out that the articulation of fun at work is a key mechanism for tech companies to attract job applicants (Kunda 2009; Slack and Wise 2005; Flemming 2005). Similarly, many writers notice that high-tech culture also involves heavy promotion of informality and casualty through encouraging their employees to dress down, bringing their dogs to the team space, and working to follow whichever schedule they prefer. In addition, knowing too well that a large group of their engineers are passionate about videogames or science fiction, major tech companies all strive to create a work environment that embodies this particular type of youth "fun," and filled the work space with "Star Wars," "The Matrix," and "The Westworld" posters, board games, and Xbox or PlayStation (PS) consoles. To a certain level, such efforts of valorizing fun, freedom, and casualty can also be read as the corporations' way to construct a culture that is more aligned with the culture in the tech supremacist community, so they can attract tech supremacists and increase their internal commitments to the corporate value.

The Importance of Investigating High-tech Industry and High-tech Work

Before I move to the discussion of the latest dynamics of the tech industry and their influence over the tech culture and tech firms' work process, I will offer a brief discussion of the significant role that the high-tech industry plays in the economy. Firstly, according to the U.S. Bureau of Labor Statistics, high-tech industries have employed nearly 17 million workers by 2014, which account for about 12 percent of total employment in the U.S. (BLS 2014). In terms of output, high-tech industries contributed to 7.1 trillion dollars in 2014, which accounts for 22.8 percent of total output in the U.S. (BLS 2014).

In addition, the rapid development of technology and tech industry also profoundly transforms the occupational structure, increase the demand for skills, redefine job tasks, and enlarges the polarization of labor market opportunities between high skill jobs and low skill ones (Brown, C., & Campbell 2002; Manyika et al 2016; Wolf & Terrell, 2016). Specifically, studies have shown that 30 percent of activities among 60 percent of all occupations can be either fully automated or partially automated, resulting in the ever increase demand of highly skilled workers due to their enhanced work performance with the help of technology and the rapidly shrinking demand of low-skilled labor who can be easily replaced by machine (e.g. factory workers, clerks, dental lab technicians, sales representatives) (Manyika et al 2016; Wolf & Terrell, 2016). Of course, the development of tech industry not only transforms the existing job structure, but also creates a mass of new jobs as the byproducts. For example, in the past 25 years, one-third of new jobs created in the United States are completely new types of jobs that have not

existed before, such as self-employed video bloggers (e.g. “youtuber”), big data analysts, and user experience specialists (Manyika et al 2016; Wolf & Terrell, 2016).

Of course, the new occupational structure and job opportunities brought by technological development also introduce a high-level of uncertainty for scholars, job seekers, and employers. For example, what would be the ideal type of future workers suitable for the future economy? And what can be the best work organizational structure that helps attract those ideal workers and maximize their productivity? Here the model of high-tech work organization itself, along with high-tech workers’ characteristics or abilities, become a valuable demonstration of future work and workers. For example, as we all know, facing the deep sea of the online information, most engineers are required to have the ability to effectively and technically navigate, organize, and transform these information into specific knowledge that is useful for their job tasks (Lyman and Varian 2000). It is reasonable to speculate that such ability will soon be demanded for most occupations as all workers are experiencing the information explosion now, and face the challenge of sorting out, processing, and distilling overwhelming information from websites, emails, and online documents. Similarly, engineers’ competence of constantly and rapidly re-programing themselves in coding skills, knowledge, and thinking mode to adapt to fast-changing technology will eventually become a required ability for most occupations (Castell 2002). Finally, tech firms’ organizational and operational methods will also become a useful model for most future businesses. These methods include structuring companies based on a flat hierarchy and team system, retaining engineers through stock options, meeting the labor demand through massively absorbing immigrant labor, hiring online working employees, and allowing employees to work distantly from

their countries of origin (Bresnahan, Brynjolfsson, and Hitt 2000; Saxenian 1999). All these discussions in fact demonstrate that it is an urgency right now for us to investigate the high-tech industry, its business model and labor force, as well as its work process more closely.

Four Major Transitions at High-tech Industry

In the above section, I provided a general portrait of high-tech industry and its culture and offered a brief discussion of the significant influence of high-tech industry over the U.S. economy. In the following section, I will move to the latest transformation of the high-tech industry and particularly concentrate on four new dynamics at the center of the transformation, which include the domination of young college-educated labor force, major high-tech firms' promotion of brogrammer culture, and tech hobbyists' struggles over maintaining their own status at high-tech, and the influx of Asian engineers. Through reviewing these four latest trends happening in the high-tech industry, this study attempts to present that high-tech labor force and its culture now are highly diversified. This insight also lays down the foundation for the central argument of this study, that is, labor study needs to be updated to keep up the pace of high-tech industry's fast transformation. One improvement of labor study that will be concentrated in this study is to present the heterogeneity of labor force and the corresponding demand of diversifying labor games, which will be discussed in the following section.

Rejuvenation of Tech Labor Force

To look back at the major dynamics happening in recent 20 years at high-tech, the most predominant one is the rejuvenation of tech labor force. Indeed, the tech-industry is gradually dominated by the growing armies of young college-educated (if not graduated) men. Today's high-tech industry is filled with legendary figures who revolutionized technology in their early 30s, such as Bill Gates, Steve Jobs, Sergey Brin, Larry Page, Elon Musk, and most recently, Mark Zuckerberg. Popular culture also helps convey a message that high-tech work environment is suitable for young people with energy, enthusiasm, and potential. For example, David Fincher's movie *The Social Network* represented the historical hiring scene of Facebook -- the hiring event was organized as a coding competition and those who prevailed would be chosen to work for the company. Competitors who participated in the hiring events are all college students who just graduated. They were surrounded by nubile young women who were prodding them to down a tequila shot – one for each ten lines of codes they completed.

The median age of the high-tech labor force is considerably young compared to the larger workforce. At 35 the average age of the high-tech worker is eight years younger than that of the average worker in the larger workforce (American Community Survey 2015). Among two of the most influential tech companies, Google and Facebook, employee median age is between 28 and 29 years old. Twitter, which was sued by its employees for age discrimination lawsuit in 2014, has a median age of 28 as well.[1] As

[1] Griswold, Alison. 2014. "Former Twitter Employee Sues the Company for Age Discrimination" http://www.slate.com/blogs/moneybox/2014/07/15/twitter_sued_for_age_discrimination_it_s_not_uncommon_in_silicon_valley.html

many news reports show,[2] high-tech companies now aggressively recruit "fresh talent" just out of university (some even just out of high school). The entry-level wages offered newly minted college graduates who are fresh on the market and without family responsibilities, make them a relatively inexpensive labor force. Moreover, new graduates are familiar with the latest coding languages and technologies in the rapidly transforming industry.

There are several consequences of the high-tech industry's pursuit of young employees. Born in the digital era, these workers use technology as an extension of the self and have an unparalleled ease with new computer technologies. They came of age using social media and not only understand its nuances but invest the self in these platforms. These young workers are less likely to confine themselves to one company for life and do not draw hard boundaries between work and private life. T-shirts and jean are emblems of their status. And most importantly for the culture of engineering, work can be as fun as play.

Popularization of "brogrammers" and Promotion of Bro Culture

If the domination of young employees essentially makes a request for high-tech firms to transform their workplace into a playground filled with toys to appeal to the practices of college men, then the popularization of one particular group of young men (i.e., brogrammers) as will be described below in fact sets up a highly masculinized gaming tone for the work environment. Indeed, contemporary high-tech giants

[2] Relevant news reports include "Silicon Valley's Dark Secret: It's All About Age", "The Strange Rituals of Silicon Valley Intern Recruiting", "Technology Workers Are Young (Really Young)" "Age and Tech"

increasingly draw upon what can be called a brogramming culture to orchestrate workplace relations, norms, and practices. The term "brogrammer" is a portmanteau of "programmer" and "bro," and captures a breed of jock-like engineers who attempt to turn high-tech workplaces into frat houses (Cooper 2000; Losse 2012; Parish 2014; MacMillan 2012; Weissmann 2013; Wynn and Correll Forthcoming).

High-tech's promotion of brogrammers culture derives from the influx of a crowd of young men who embodied the "brogramming" traits into the high-tech industry. As shown from various resources, more and more young men who have Ivy League background and should have chosen working in the finance, switched to join the tech industry.[3] Plenty analyses have shown that Silicon Valley has gradually become the new generation's Wall Street, especially after the financial crisis in 2008 (Roose 2014; Griffith 2016). In other worlds, the tech world becomes the new appeal and also an alternative route from banking for the ambitious new generation of young elites who are eager for success and wealth (Chace 2014).

For brogrammers, it doesn't matter whether it is the investment bank or the high-tech company offering them the high-status. Brogrammers' great acuteness of success cultivated through immersing in the elite circle (from their families to their educational institutions) make them realize that the high-tech might replace finance to become the

[3] For example, there is a gradual increase of Harvard Business School graduates who choose joining Silicon Valley instead of joining finance: 18% of the class of 2012 moving into tech comparing to 12% in 2011. On the contrary, MBAs who joined finance dropped from 35% in 2011 to 27% in 2012. And the number looked similar in other elite universities, such as Yale which has 25% graduates worked in finance in 2005 but only 14% in 2010.

next biggest player to change the landscape in the capitalist world. Indeed, brogrammers are becoming the new tech elite in the high-tech industry.

To attract more young graduates from elite universities to abandon finance jobs but to join the tech industry, high-tech corporations heavily promote this type of brogrammering culture and introduce a "frat house" flavored form of fun into workplace. This type of fun promoted under the brogramming culture is distinct remarkably from the family-based fun that is examined by previous literature on organizational culture. Indeed, while fruitful organizational studies literature and labor scholarship have identified a popular trend that many companies are now prescribing "cultures of fun" to enhance their organizations' productivity, their analysis of fun concentrates on bringing family-based fun (pleasure and casual atmosphere) to the workplace (Flemming 2015). However, reflecting distinct characteristics embodied by such young engineers, high-tech corporations draw from college culture and introduce fraternity related games (e.g., drinking game, betting, pranking games, sport). High-tech workplaces are veritable playgrounds, equipped with ping-pong and foosball tables, Lego-play stations and beer-kegs. In fact, as will be shown in the following chapters, these fraternity related games become key channels through which brogrammers convert their "bro" traits, cultivated in college, into competence desired by this work site (e.g., aggressiveness, ruthless, and leadership spirits).

Influx of Asian "Coding Peasants"

In addition to the rejuvenation of the high-tech industry and the popularization of brogrammers and their culture, the third trend that shapes the recent high-tech labor force

is the influx of Asian immigrants. Asian immigrants, especially those from China and India, since the late 1990s have been overrepresented in high tech work.[4] In recent years their numbers have grown even faster. According to the 2010 Census Bureau statistics, the percentage of Silicon Valley's Asian tech workers grew from 39 percent in 2000 to more than 50 percent in 2010 (Nakaso 2012). Based on the diversity reports submitted by major companies to U.S. Equal Employment Opportunity Commission,[5] Asian workers in the tech positions account for one-third of the total tech labor force in most big tech companies (see chart 1.1 below). And for companies such as Yahoo and Linkedin, Asian tech workers have become the majority of total tech labor force.

Foreign-born first generation Asian immigrants who have vulnerable migrant status are the ideal job candidates for high-tech firms. Due to their heavy reliance on foreign talence, high-tech corporations have always been most active sponsoring organizations to help immigrant apply for H1-B visa. In 2017, tech companies assist 900,000 to a million foreign-born tech workers in applying for H1-B visa (Wakabayashi and Schwartz 2017).[6] More importantly, the setup of H-1B visa program as an employer-

[4] This phenomenon of over representation of Asian immigrants in the high-tech industry has close relationship with the skill-focused immigration reform that is largely reflected as the H-1B professional worker temporary visa program and the much wider change of skilled-focused immigration policy in the late 1990s and early 2000s (see e.g., McLaughlan and Salt 2001).

[5] "Diversity in High-tech" report (https://www.eeoc.gov/eeoc/statistics/reports/hightech/)

[6] According to a Goldman Sachs report in 2017, while H1-B workers hold about 12%-13% of the jobs in the tech industry in the U.S., they only hold 0.6%-0.7% jobs in other industrial sectors (Torres 2017). In addition to the favorable migrant policies, in comparison to other industries' recruiting process which laid down strong emphasis on cultural fit, the high-tech recruiting process for junior engineers is one of the most objective one: all the interview questions are revolving around solving programming and mathematical questions. As long as the interviewees can write down the correct codes and provide reasonable solutions for th mathematical puzzle on the whiteboard, they basically show their engineering competence and thus most likely get the jobs.

bonded system increases H-1B workers' vulnerability in the labor market. If a foreign worker in H-1B status is dismissed from their sponsoring employer, they need to find another sponsoring employer to continue the H-1B within 60 days. If no employer wants to renew the worker's H-1 B status within 60 days, the worker needs to leave the United States to avoid being considered as illegal stay. So it is not difficult to imagine that, in comparison to native workers, Asian workers much more hesitate to express their dissatisfaction in the workplace. They also hesitate to bring up their experiences of unfair treatments in fear of being fired and losing their legal status.

In addition to the H1-B status, first generation Asian immigrant engineers' identity also contributes to their vulnerable status on the labor market and within high-tech companies. As will be shown in the following chapters, Asian immigrant engineers' identity plays a critical role in guiding their reaction to companies gamified management strategies, directing their participation strategies into labor games, and contributing their marginalized position in the high-tech corporation, and shaping their career path. To articulate this group's identity, this study deploys a concept developed among Chinese immigrant engineers -- "coding peasants/workers" -- and expands it to represent the first generation Asian migrant communities in general.[7] "Coding peasants/workers" (Ma Nong/Gong)[8] is a popular term used both by Chinese media and Chinese engineers to

[7] During my interviews with Asian immigrants come from asian countries other than China (e.g. Indian, Singapore, Korean), I share this term with them and describe what the characteristics embodied by "coding peasants". Most of my Asian immigrants express that they see large overlap between their own identities and identities embodied by coding peasants. Many interviewees express that they thought this term vividly captures their identity and experience by working in the high industry as immigrants.

[8] Sometimes also interchangeably phrases as "coding workers"

label themselves. “Coding Peasant” are used interchangeably with “Coding Workers,” since the term “peasant” used here actually describes the peasant workers (nongmingong or mingong),[9] who originate from the farming families in the countryside and migrate to the cities working as either manufacturing/service/construction labor.

Many of my interviewees used the term “coding peasant” together with “moving bricks,” and drew a parallel between their own work and the work done by construction workers. These interviewees told me that writing codes was basically a same task as moving brick - all they did was “copying and pasting” just like all construction workers did was moving the bricks from one side to the other side. Such a self-identification makes a majority of Asian migrant engineers lack of the motivation to request doing more challenging job, and are more willing to take less creative and more supportive tasks (e.g., doing refractory/code reviews for other engineers instead of doing self-design) in the process of labor division.

To some extent, coding peasants’ obedient identity and vulnerable immigrant status contribute to their marginalized positions in the office. In contrast to the high representation of Asians in technical positions, they are largely underrepresented in management. Many scholars have used different sources of data to present Asian engineers’ ethnic and immigrant based disadvantage in obtaining managerial positions and the consistent differences between Asian and non-Asian engineers in achieving managerial positions (Fernandez 1998; Tang 1993; Shih 2006; Iwata 1993). For example, drawing on a survey study, Iwata (1993) reported that 80 percent of Asians perceived that

[9] Here the term peasant does not refer to farmers but rather peasant workers. And this is the reason why it can be used interchangeably with “workers” instead of “farmers”.

they were under-represented at the highest levels of their companies and disadvantaged in getting managerial positions. Similarly, through investigating the labor composition within one particular company (i.e., Intel), Tang (1993) points out that, while Asians compose 18 percent of the professional workforce at Intel, there is only 8 percent of them who hold managerial positions. On the contrary, whites compose 70 percent of the professional workforce but 85 percent of the managerial and official jobs (Shih 2006). What these scholars fail to illustrate is the mechanisms through which these Asian engineers become disadvantaged. This will be one of the major focus of this study and more thoroughly examined in the following sections and chapters.

"Tech Hobbyists" Struggling over Maintaining their own Status

Finally, the popularization of "brogrammers" and the influx of Asian "coding peasants" work together to threaten another group of engineers' status in the high-tech industry -- the "tech hobbyists." Indeed, before the influx of brogrammers and coding peasants, it was "tech hobbyists" who dominate the tech world. "Tech hobbyist" is an engineer's self-labeling term. In my interviews, many participants described themselves as "Computer Hobbyist," "Tech Hobbyist," "[Computer] Game Hobbyist," or just "Hobbyist" in general. Their explanation of why they label themselves as "[Computer] Game Hobbyist" is always associated with their passion towards computers, technology, and video games.

To some extent, tech hobbyists represent the technological supremacy culture in the tech world. For a majority of the tech hobbyists, the passion for technology is the most critical reason for them to join the industry. And their passion for technology is

fostered through playing video games starting from a very young age. Indeed, as many scholars have shown, more than often, tech hobbyists are more likely to be socially-awkward youth and their socially isolated childhood leads them to retreat to developing video gaming skills and gaining recognition in the virtual gaming community as compensation. As a result, most of these tech hobbyists' computer literacy (e.g., programming) and relevant passion to technology are developed due to their early access to computer-based video games (Ching, et al., 2005; Seiter, 2008; Schulte & Knobelsdorf, 2007). This is why for most tech hobbyists, the boundary between their passion for "programming" or "technology" and their hobby of "gaming" is extremely blurred. Facing this specific feature embodied by tech hobbyists, another key culture at tech workplace involves constructing a "PC gaming" atmosphere in the workplace through gamifying the work process and relationship, which helps further blur tech hobbyists' programming and gaming habits or activities, and work and leisure time in general.

From the above description of tech hobbyists, one can tell that the characteristics embodied by tech hobbyists mark a sharp distinction from the features embodied by brogrammers and coding peasants. On the one hand, tech hobbyists do not have those personal traits that belong to brogrammers that make them the future techno-business entrepreneurs in this industry, such as the ability of harmonizing the conflicts between market interests and technological innovation, the leadership competence, personal charisma, and the strong communicating and organizing ability. On the other hand, tech hobbyists are apparently not as docile and obedient as coding peasants. Facing the threats from both brogrammers and coding peasants, one method that tech hobbyists adopt to

defend their position at tech is to furiously invest in technology, and demonstrate their technological obsession, commitment, and competence. As will be shown in the following chapters, while brogrammers reinforce their "bro" image through investing into "frat house" flavored work games, hobbyists attempt to participate in video-game related workplace games promoted by the company to display their technological strength; this in fact further blurs their work and leisure activities.

One final thing that needs to be pointed out is that gender has a central role in shaping all these new dynamics of tech industry. In other words, despite all these new trends, women remain highly invisible in the tech worlds. In fact, there are many scholars who argue that it is the masculine atmosphere constructed by high-tech firms that makes the tech world exclusive to women, regardless whether it is constructed to highlight the hyper masculinity embodied by brogrammers or constructed to match the geeky masculine traits embodied by hobbyists ((Gross 2012;; Wei 2012; Weissmann 2013). If looking at women's employment in the STEM field in general, although women now manage to compose half of the U.S. labor force in general, they only constitute 24 percent of jobs in the STEM field. In addition, among women who have a STEM degree, there is only 26 percent of them who can work in the STEM job after getting relevant degree. On the contrary, 40 percent of men who obtain STEM degrees are able to get STEM jobs (Beede et al 2011; President's Council 2012). Particularly, in the high-tech industry, as shown by diversity reports released by major tech companies like Microsoft, Google, and Facebook, women only occupy less than 20 percent of tech positions in most of these tech giants. Indeed, as already frequently emphasized by other researchers and writers (Huhman 2012; MacMillan 2013; Weissmann 2013), the domination of young men in the

tech industry and the companies' efforts to masculinize the workplace become key factors that make the tech industry a chilly environment for women.

The Urgency of Updating Labor Scholarship

In the above section, I have laid out four major new trends at the center of current high-tech industry, which include the rejuvenation of the tech labor force, the popularization of "brogrammers" and brogramming culture, the influx of Asian "coding peasants," and "tech hobbyists" struggling over maintaining their status in the tech world. By investigating these four new dynamics and their implications, this study calls for an update of labor study in order to keep up with latest changes of work environment.

Specifically, as will be discussed firstly in the following section, the high-demand of constructing a fun work environment to attract young college educated men makes the classic labor game literature a useful theoretical tool. However, facing the very diversified labor force described above (e.g., brogrammers, tech hobbyists, coding peasants), this study illustrates that the labor games organized in the workplace need to be diversified. This insight will largely update the labor games literature to make them more applicable in analyzing a workplace characterized by more complex labor process and more heterogeneous labor force.

This study aims at contributing to the theoretical niche identified above. I will introduce four other conceptual tools that help illustrate the necessities and possibilities of diversifying labor games in the second half of this section. On the one hand, by bringing in masculinity and ethnicity literature, this study further illustrates the heterogeneity of the engineers due to their distinct ethnicized masculine traits, which

determines which game they are going to play and how they are playing it. On the other hand, through introducing gamification literature and the literature on workplace joking practices, this section also plans to show the distinct features embodied by different games: while brogrammers' games resemble features described in joking practices literature, the games tech hobbyists invest in tend to be more consist with the games covered in gamification literature.

Labor Game Scholarship and Two Problematic Assumptions

Management techniques that aim to increase productivity have been one major focus in labor studies. Beginning with Roy (1959), several scholars have explored the role of games, specifically in shaping these interactions. These scholars highlight how games can engage workers in otherwise monotonous tasks, while also serving as a means of managerial control aimed at increasing productivity (Burawoy 1979, Fleming 2005, Rey 2015, Walz and Deterding 2015). Research on games has enabled us, more generally, to move beyond a focus on strictly pecuniary incentives to understand the role of social forces – namely, competition and "fun" – in shaping interactions among employees and between employees and managers.

Specifically, labor process theorist Burawoy (1979) demonstrated that a game of "making-out" was used on the shop-floor to motivate competition between workers in a piece-rate system to drive high levels of production (Burawoy 1979). Competition and financial incentives drove workers to beat production quotas, or give up early and create a reserve of completed parts to exceed the next day's quota. By organizing production so that workers might thus strategize and compete, managers gained the consent of workers

to extract surplus labor—a practice termed "hegemonic regime." This regime type emerges as a means to motivate workers during historical periods offering legal protections that buffer them from easy dismissal and replacement.[10]

Nearly all of the research on games in the workplace have focused on particular environments – those in which work itself is standardized; people and roles are interchangeable

(or at least are considered as such); task-oriented teamwork and interaction are limited; the prevailing organizational interest is in consistency and efficiency; and employees and managers are distinguished by educational background and career trajectory. In turn, these features of the empirical settings studied have been the key to theorizing the role of games as tools of engagement and control and to documenting the ways in which workers themselves experience games. As several scholars remind us, however, the nature of work itself has changed dramatically in recent years: In many modern work settings -- such as software engineering -- the nature of work is different: work is not standardized, workers are engaged in complex work such as problem solving, creativity, and generating new ideas; people occupy specialized roles and are not easily interchanged with one another; teams are a dominant form of organization and organizational hierarchies may be flat; organizations value creativity and innovation over standardization and mass production, and workers and managers may share similar backgrounds and education (Adler 1992; Barley and Kunda, 2001; Barley et al. 2017; Colbert, Yee and George, 2016; Rangaswami 2015).

[10] When no such protections exist, employers tend to revert to "despotic" regimes of labor, characterized by strict work rules paired with financial or reputational penalties.

In such work settings, it seems plausible that the role of games and the ways in which workers experience them may be different, too. Yet unfortunately, later scholars who attempt to adopt classical labor game literature to investigate high-tech industry did not offer us a very accurate depiction of how games are updated in modern workplace due to their ignorance of the heterogeneity of the labor force in contemporary high-tech industry and the consequent need of diversifying labor games in such type of workplace. To be specific, following Burawoy, labor scholars of high-tech workplaces documented diverse types of hegemonic control that managers deploy to simulate engineers' productivity in a workplace where the product is highly intangible and heavily relies on engineers' self-management. More importantly, most control techniques documented by this group of scholars share game-like qualities highlighted in Burawoy's study—for example, they use award scores, promote competition and cooperation, and have winners and losers.

Sharone (2002) discusses how managers develop a "competitive self-management" game, which is based on awarding scores to engineers and using these scores to rank engineers against each other. Through this way, managers motivate workers to compete with each other and work long hours. Similarly, both Perlows (2001) and O'Riain (2004) document how symbolic and financial incentives drove engineers to compete with other teams and work to death to meet the deadlines. Through rewarding the winning team and complimenting their heroic behaviors of meeting unrealistic, managers achieve to increase engineers' work pace.

However, following the traditional school of labor games literature, these researchers' analysis of high-tech labor games is problematic as it is constructed based on

two implicit assumptions which are also the problems shared by classical labor game scholars: first, when this school of theorists illustrate how labor games facilitate productivity, they assume all workers are equally willing and able to invest in such competitive labor games. Second, most scholars analyze labor games based on an assumption that there only can be one labor games operated in the workplace, whether it is the "making out" game, "deadline circle" game, or the "competitive self-management" game (Ó'Riain 2004; Sharone 2002; Burawoy 1979; Perlow 2001).

Therefore, one goal of this project is to problematize these two assumptions through illustrating the heterogeneity of the labor force and the related consequence of the emergence of multiple labor games coexisting on the work floor that draw different groups of workers to participate. Specifically, through unpacking engineers' interpretation and reactions to high-tech workplace games, this study attempts to show that not all engineers are equally willing and able to invest in competitive labor games. Indeed, games are a cultural affair and the ways workers understand and engage in games are deeply affected by their own cultural resources, which are in turn shaped by their own gender, ethnic, and national backgrounds (Swidler 1986). Further, due to the variation in labor force and the complex nature of labor process in the modern workplace, labor games cannot be assumed in a single and simplest format any more. Instead, through investigating the operation of labor games at my study site, this study calls for labor scholars and especially labor game theorists to update relevant game analyses to a multiple format and thus make it more applicable to modern workplace. To summarize, this project marks an attempt to highlight the existence of multiple games within one workplace to meet the demand for a far more complex labor process and heterogeneous

workplace, illustrating the variation of labor force and the heterogeneity of the modern workplace, and thus updating the existing scholarship on labor games.

Bourdieu's Game Metaphor as a Solution

Then the question becomes, how can we understand the variation within labor force and its relation to the variation between different labor games? Here Pierre Bourdieu's (1984) account of game metaphor and related analysis of habitus contain important insight for this project's analysis. Bourdieu conceptualizes habitus as a type of deeply ingrained habits, skills, and disposition, which is closely associated with one's objective position in the social structure obtained by individual throughout lifelong time of cultivation. To highlight the role of "habitus," Bourdieu introduces the "game" metaphor and illustrates that it is exactly people's habitus that gives them the feeling of which "game" they should play. Specifically, Bourdieu conceptualizes the social world is divided into various games. Each game has its own distinct set of rules and valorizes its specific type of capital (e.g., while cultural capital such as a doctorate degree is valued in the educational game, economic capital like money is requested in the investment game). It is the individual's habitus that helps him or her decide which game matters and which game he/she should play. And it is also peoples' habitus that informs them what strategic activities they can adopt and which type of capital they should draw on when entering the game field to advance their own position in the game.

Therefore, Bourdieu's game metaphor can help us overcome labor scholars' ignorance of the variance within workers habitus and thus different games workers invested into. To be specific, based on this understanding of Bourdieu's game metaphor,

we can then propose that, if there are different groups of engineers in the workplace, then it is reasonable to speculate that the distinct habitus embodied by different groups of engineers would guide them to invest into different labor games. These various games must have distinct rules and valorize different capitals. Indeed, as will be shown in the following chapters, the very different life experiences and educational backgrounds of brogrammers and tech hobbyists result in distinct habitus embodied by them: while the "bro" habitus embodied by brogrammers reflects their fraternity experience, leadership skills, aggressive personality, and possession of cultural capital; the "gamer" habitus embodied by tech hobbyists reflects their rich gaming experience, habitus of bonding with people via computers, lack of social skills, and possession of technological capital. Therefore, these very dissimilar habitus embodied by brogrammers and tech hobbyists urges these two groups to invest in very different games: while brogrammers chose to play the "party/fraternity like games" that allow them to demonstrate their toughness, competitive spirits, and possession of cultural capital valorized by tech industry, tech hobbyists choose to invest "techie/computerized games" that require players to possess gaming habits and technological capital.

In fact, Bourdieu's gaming metaphor not only allows us to investigate the differences between games, but also helps us further explain why engineers wholeheartedly invest in the games even at the cost of contributing their own free labor. As Bourdieu argues, when individuals are heavily immersed in the game and concentrate on how they can play and win the game strategically, they in fact lose the sight of questioning why they even start investing into the game, why they should care about winning it, and what they may lose for playing the game. Due to this, engineers' intensive

investment in the games obscures the fact that the capitalist is actually the biggest winner of these games, and what they have lost through playing the games (e.g., extra time and labor) are exactly what the capitalist class earns. Thus, the engineers lose the opportunity to challenge the rules of these games and question the exploitation. This in fact makes the analysis of the third group of engineers -- the Asian immigrant engineers -- especially valuable. For Asian immigrant engineers who lack both gaming habitus and the bro habitus, they are unable to invest in both games and their absences from games reproduce their powerlessness. However, Asian immigrant engineers' isolation from both games also allows them to step back and see the big picture, thus give them an important insight to see the nature of both games while at the same time questioning why they should play the game, to whom their play would benefit.

Masculinity and Ethnicity: Stakes to Invest into Games

To investigate what are some of the factors that contribute to the variations between different workers and games, I firstly introduce the masculinity studies. Since the mid-1980s, masculinity scholars promote to investigate the system of "hegemonic power relations" among different men and treat masculinity as heterogeneous by using of the plural "masculinities" (Collins 2004; Connell 2005; Staples 1982; Wingfield 2013; Wilkins 2012). The New Sociology of Masculinity (NSM) is developed based on the critique of the failure of sex role theory, and thus emphasizes that gender should not be just a preordained script that regulates two polarized sex role, which fails to grasp a multiplicity and acknowledge dynamic within genders. Based on this reflection, Connell defines masculinity as "...a place in gender relations, the practices through which men

and women engage that place in gender, and the effects of these practices in bodily experience, personality and culture" (Connell 1995: 71). In addition, by conceptualizing four configurations of masculinity (i.e., hegemonic masculinity, subordinate masculinity, complicit masculinity, and marginalized masculinity), masculinity scholars further highlight that men are normally positioned differently, and hierarchically, in societies where a group of men embodied hegemonic masculinity located at the top (Connell 1987). Among four types of masculinities, hegemonic masculinity is the dominant form of masculinity and its domination operates through the subordination of the other three types of masculinity (subordinate masculinity, complicit masculinity, and marginalized masculinity).

Among the literature on masculinity, a particular group of scholars focuses on the relationship between masculinity, labor control, and workplace interaction. For example, several studies have shown that masculinity has become important resources to be used to legitimize unequal division of labor in male dominated workplaces (Cockburn 1993), and to be drawn on by different male groups to confront each other in the decision-making process (Messerschmidt 1996), Masculinity can also be compensated and re-negotiated through utilizing other organizational resources (Chen 1996). In addition, there also exists literature that depicts workplaces where masculinity apparently underlies work process and interaction, even without explicitly pointing it out (Burawoy 1979; Collinson 1988; Willis 1977). Taking classical manufacturing labor studies, for example, workers' masculinities obviously are located at the center of their subjective investment in the format of redefining their "self" through confirming or resisting shop floor culture, and it

plays an important role in mobilizing blue collar labor to battle for dignity and "make out", thus facilitating competitions on the shop floor.

What is missing from the literature on masculinity at workplace, however, is the discussion of the coexistence of multiple masculinities and its influence over work interaction. In other words, workplace masculinity studies also face the risk of treating organizations as homogenous containers and thus assume a simple type of masculinity dominating workplaces (e.g., business masculinity in professional workplace, and working-class masculinity on shop floor) without considering the existence of other types of masculinities that potentially are able to confront the dominant ones. Treating business organizations as a relatively homogenous containers, scholars tend to conflate other types of masculinities (e.g., engineering masculinities) with managerial masculinities, and thus overlook the fact that multiple types of masculinities can coexist and even confront each other in the struggles for domination.

Fortunately, Messerschmitts' study does set up a good model to show that, under certain organizational conditions, alternative types of masculinity (i.e., computing masculinity) can be endowed with enough status to confront the dominating masculinity (i.e., managerial masculinity). While the former type disdains risk-taking to avoid technical failure, the later type rewards risk taking. The confrontation of these two types of powerful masculinities within organizations directly influence the organizational decision-making process. Inspired by Messerschmitts, one can say that the nature of high-tech workplace offers engineering masculinities even more space to contest business masculinity, which is normally considered the dominant one. Specifically, the high-tech corporation provides a critical context where engineering masculinities have more

resources to claim hegemony since engineering culture is highly valorized while managerial culture is relatively devalued (Rosemary Wright, Kunda). Engineering culture, which emphasizes calculation, technological freedom, and strict logic of binary codes and technological sophistication or innovation, plays a key role in defining engineering masculinities and benefiting employees who possess this type of masculinities, such as the tech hobbyists (Cockburn & Ormrod 1993; Kunda 2009; Ó'Riain 2001;). As a result, high-tech organization becomes an important context where tech hobbyists can valorize their own engineering masculinity, compensate the masculine deficiencies (e.g., antisocial, women rebellions), and thus have more leeway to confront with brogrammers who are considered to possess the classical dominating type of masculinity (e.g., business or managerial masculinity).

To summarize, diversifying masculinity in the workplace and investigating the confrontation of different masculinities not only allow masculinity theorists to eliminate the static usage of hegemonic masculinity as a fixed model, but also offer the opportunities for us to gain more sophisticated insights on questions such as how different groups of people can draw on their own distinct masculine traits to confront each other while entering their game fields, and how their masculine traits can guide them to choose to invest in different games. The discussion of the masculine demission in the workplace indeed can help us further the analysis of workplace heterogeneity, and develop better understanding of the variations among workers and the various strategies different groups adopt while investing in games.

Ethnicity is another important factor that contributes to the variation in engineers' habitus and their strategies of participating in the games. While disadvantaged and

marginalized positions of Asian immigrants in the tech industry is well documented in the literature, few of this literature have examined the mechanisms and processes through which Asian engineers are becoming marginalized, let alone mentioned the even narrower analysis on how Asian engineers are disadvantaged in labor games. Specifically, significant amount of quantitative analysis has been done to present consistent differences in career advancement between white and racial minority groups in the tech industry (DiTomaso and Smith 1996; Tang 2000), the underrepresentation of Asian employees at the high level of tech firms (Iwata 1993), and the lower rate of Asian engineers switching from technical tracks to managerial tracks (Tang 1993, 2000). By comparison, relatively little attention has been paid to the ways in which ethnic status plays a role in shaping the work relations and labor process within high-tech corporations. One reason that contributes to this lack of attention is methodological: qualitative researchers face a challenge in examining the racialized interaction within workplaces since employers are highly reluctant to grant researchers access (Vallas 2003).

However, within the few qualitative scholarship which concentrates on the relationship between ethnic or immigrant status and labor process, some demonstrate many critical mechanisms through which ethnic and immigrant status is used as key factors to victimize workers. For example, some excellent ethnographic works have documented how ethnic or immigrant status is used by managers to control low-skilled manual labor at the point of production. Specifically, scholars of immigrant-dominated factories have found that managers highlighted immigrant workers' high risk of losing job and their labor market vulnerability in order to secure these workers' "consent" to

harsher punishment, overtime work, and lower pay. For managers who share ethnic backgrounds with immigrant workers, they are very skillful at producing ethnic solidarity in factories and constructing themselves as the "head of the community" (Bank Muñoz 2008; Chun 2001; McKay 2006; Wells 1998).[11]

These literature on immigrant-dominated factories offers a unique insight into how immigrant and ethnic status are utilized on the shop floor. However, they can hardly expand to explain how ethnicity and immigrant status can be used by other workers to victimize ethnic minority in labor games, used by managers to facilitate control over immigrant professional workers, and mobilized by ethnic group themselves to navigate their position. Also, while labor market vulnerability accompanied with immigrant status is a crucial resource used by managers to extract more low-skilled immigrant labor, it cannot be effectively used in extracting professional immigrants' hard work, especially in the high-tech field characterized by labor shortage (Shih 2006). However, this literature does remind us that ethnicity and immigrant status could play a key role in the engineering workplace where interpersonal collaboration across ethnic groups in a team environment is a critical aspect of engineers' work. In other words, through investigating how ethnicity also becomes a key factor to increase the heterogeneity of work games in particular and work process in general, this project brings attention to the ethnicization of the labor process in the high-tech industry, and examines whether immigrant status can be managed to facilitate control over highly skilled tech workers.

[11] In workplaces consist of mixed groups, pitting workers to against and compete with each other is an important mechanism used by managers to maintain low pay, increase productivity, and ensure mutual surveillance among workers (Bank Muñoz 2008; Bonacich 1972; Chun 2001).

To analyze ethnic minority groups' strategies of navigating their positions in the labor game, Aihwa Ong's work *Flexible Citizenship* (1999) in fact provides a very inspiring cultural explanation of why Asian immigrants cannot develop effective strategies to gain social acceptance in the labor games developed in the firm, despite of the fact that Ong's work itself does not involve the discussion of high-tech industry or professional immigrants work experience in particular. Through analyzing the overseas Chinese business elite, Ong illustrates that two factors that result in these elites' difficulties of obtaining social prestige and acceptance in the receiving country. On the one hand, it involves Chinese immigrants' difficulties of converting their economic capital into social or cultural capital in the U.S. society because the symbolic ethnic hierarchy is too stable to be broken. On the other hand, Ong argues that another reason that damages Asian immigrants' efforts to fit in is the resistance from white domestic residence. To illustrate, she details a case on a white neighborhood group's racialized opposition to newer "monster homes" purchased and remodeled by these Asian immigrants in the community. Ong argues that the key reason results in this resistance is the white residences' commonsensical view of ethnic succession as "recent arrivals from non-Western countries are expected to enter at the bottom of the socioeconomic ladder and wait their proper turn to reach middle-class status" (Ong 1999: 100). Although Ong's study does not concentrate on the Asian professional immigrants' struggling over acceptance in the workplace, her argument on immigrants' difficulties of converting economic capital to cultural capital and her analysis of white residence's resistance are indeed very helpful to examine the difficulties faced by Asian engineers in converting

their own capital and habitus into ones useful for investing in games, as well as the possible resistance Asian engineers might need to face when trying to participate games.

What Ong has missed when depicting Asian migrants' converting strategy is the factor of Asian masculinity and how it can be utilized as a resource to help navigate the conversion? Indeed, by incorporating the masculine demission into the analysis of Asian engineers' converting methods and gaming strategies, we can gain more insight on how Asian engineers masculine traits that are shaped in Asian society become an important factor to further constrain their conversion of economic or educational resources to the type of resources that advance them in games and work process. In fact, by adding the masculine demission into the experience of Asian engineers in labor games, this study manages to draw on an intersectional perspective to investigate how ethnicity intertwined with masculinity to further affect Asian engineers' different interpretations of their white colleagues who embodied different types of masculinity, and thus affect different interacting and reacting strategies when facing these two groups. In addition, the ethnicized masculinity embodied by Asian engineers might also play a critical role in guiding themselves in formulating coping strategies when entering games.

Gamification and Workplace Humor: Additional Concepts to Analyze Game Variance

If the masculinity and ethnicity literature provides invaluable perspectives for this study to see the heterogeneity within the labor force due to their distinct ethnicized masculine traits, the literature I will discuss below (gamification and joking literature) offers critical insights to show how labor games can vary according to their different nature, their participants, and their functions. Many recent works have documented the

growing prevalence and importance of games in the workplace, often using the terms "playbor" and "gamification"; "playbor" is a combination of the words "play" and "labor," and "gamification" is used to describe "the use of game design elements in non-game contexts" (Deterding et al. 2011: 9; Golumbia 2009). Despite the new language, however, this study still focuses largely on the functions of games theorized by classical labor game scholars such as Roy (1959) and Burawoy (1979). Thus, to these gamification scholars, games remain a tool to engage workers and to relieve boredom around monotonous tasks. Games can be a form of control, pushed by managers and aimed at improving productivity and/or motivation (Mollick and Werbach 2015). For example, Colbert et al. (2016:735) note, "gamification … has already become a popular strategy for increasing employee motivation in business organizations." Studying a vertically-integrated garment factory, "StitchCo," Ezzamel and Willmott (1998) find that game-facilitated teamwork "appealed to StitchCo management when accounting calculations indicated that it could provide a cost-effective, continuously improving way of enhancing profitability" (p. 359). Similarly, Rey (2015, pp. 278) writes, "The basic appeal of gamification is that it has the power to spur economic activity. … Gamification is one mechanism through which post-Fordist capitalism appropriates such non-alienated activity and renders it useful to the capitalist goal of wealth accumulation. … The valorization of fun." Adopting this same perspective, Bogost (2011) claims that gamification is "exploitationware" − "a perversion and simplification of the game medium created by marketers and big business for the purpose of easy profit."

Among all the game design elements adopted in work settings, video game design is the most popular type of gamification designs that has been adopted by managements

to introduce a virtual gaming environment into workplace to bring more fun to workers. For example, *The Virtual Leader* video game is developed to train workers to lead in the virtual world before they attain managerial positions in the realistic setting. By putting players in the virtual world, their computer-controlled co-workers have their own agendas and react to the players' action by looking bored, interested, or nervous, depending on the situation (Edery and Mollick 2008). With typical game settings (conquering challenge to level up), such type of games has successfully boosted players' enthusiasm. By playing game like *The Virtual Leader*, employees are largely motivated to accept challenges and devote their own time to constantly re-request trainings to level up.

As these examples highlight, the conversation around gamification has focused largely on why managers and their organizations push the use of games. Scholars have offered less attention, however, to how workers' own identity and habitus play a key role in determining their decision to participate in the games designed and promoted by managers, and in shaping their playing strategies in games. In other words, workers' identity is not a part of this story and has no roles in guiding workers' participation in the games. However, as has been elaborated in previous sections, considering the distinct identities and habitus that are held by different groups of engineers (e.g., brogrammers and tech hobbyists), it seems plausible that different workers with distinct identities will invest in such gamified labor games differently, and the tech hobbyists' video gaming habitus and their gamer identity will allow them to consent more with company's gamification as many designs of gamification involves adopting elements from video games to work settings (e.g., *The Virtual Leader* game).

Unfortunately, we have little evidence on the use, roles, and employees' experiences of games in high-tech settings and the different reactions that might emerge when different groups of engineers react to these gamification set up. Indeed, in a literature review aimed at understanding how gamification may apply to software engineers, Pedreira et al. (2015) note, "The results we obtained during the analysis of the primary studies show that the existing research on gamification applied to [software engineering] is very preliminary or even immature. … few of them offer sound empirical evidence" (p. 166). Colbert and colleagues (2017: 737) focus specifically on the prevalence of digital technologies in the workplace and new "digital natives" who inhabit the workplace and conclude, "Research is needed … to examine the effects of the growing use of [digital] technology by a digital workforce." Indeed, without an understanding of how gamification works in the high-tech industries and how it might work differently among different groups of engineers, our theories of gamification itself are limited. In addition, through introducing the gamification theory and its reliance on digital technologies to attract the participating group of "digital natives," we can further illuminate the distinct nature of this type of labor game, how it is constructed differently from classical labor games and other types of games coexisting in the modern workplace.

Joking Practices: Another Type of Game to Attract the Bros

Extensive empirical research has documented the pervasive character of joking relationship in various types of organizations, including schools (Willis 1977), hospitals (Pettegrew 2017), semi-public organization and government departments (Holmes and Marra 2002). Among organizational literature on humor, the use of humor in workplaces

to facilitate control has always been one of the most prevalent topics, investigated by numerous labor scholars and management theorists (Collinson 1988; Fleming2005; Ackroyd, S., & Thompson 1999; Pohancsek 2010; Avolioet al. 1999; Holdaway 1988; Posse 2010; Collinson 1992).

When discussing the role of joking practices in workplace, scholars tend to fall into two opposing camps. On the one hand, a considerable portion of organizational theorists hold that managers play a key role in designing and initiating joking activities. To these scholars, humor is a potent resource to be harnessed by managers to boost creativity and productivity (Avolio et al. 1999; Fleming 2005; Pohancsek 2010), increase discipline, normalize workers' behaviors (Holdaway 1988; Pohancsek 2010), and break down barriers between managers and workers (Posse 2010). According to this body of work, by bringing humor into workplace, managers can break down barriers between people and improve communication (Clouse & Spurgeon 1995; Meyer 1997; Posse 2010), lower the level of anxiety (Pohancsek 2010; Martineau 1972), and make tedious routine work more tolerable (Holmes & Marra 2002). There is a consistent pattern that underlies management approach on workplace humor, that is, humor should be initiated and promoted by managers in a rather formal and pre-scripted way.

By contrast, labor scholars argue that such scripted humor runs the risk of appearing rigid, inauthentic, forced, and thus can be easily seen through by workers. In fact, workers always avoid participating joking activities initiated by managers since they are well aware that these managerial humor belongs to a wider control strategy to simulate their commitments and work efforts (Fleming 2005; Collinson 1992). Instead, labor scholars emphasize workers' agency to organize joking activities. They claim that

joking is a part of the informal culture in the workplace, initiated by workers to reduce boredom (Roy 1958), express collective resistance to management (Collinson 1988; Martin 2004), fulfil demands of group conformity, reinforce male bonding, and increase collective solidarity (Fine and Soucy 2005; Lyman 1987; Collinson 1992). An implicit assumption of antagonism between managers and workers underlies the diverse analysis of resistance humor. On the one hand, the antagonism is conditioned by workers' strong agency to organize joking practices in ways that could create resistance against management. On the other hand, it is shaped by managers' incapacity to initiate or engage in joking activities to elicit consent.

Given the fun and enjoyable environment that is always cited as the iconic culture of tech firms, it is surprising that very few organizational theorists who concentrate on engineering workplace have paid attention to the role of humor in tech workplace management. Similarly, labor game scholars also only offered few (if any) discussion on the role of joking relationship in facilitating the organization of labor games, despite the fact that humor is heavily embedded in most of the labor games carried out on the shop floor. Inspired by Peter Lyman and his illustration on how fraternal bond is majorly built upon a joking relationship, this study attempts to apply the joking literature to understand games organized by brogrammers at the workplace, as well as the fraternal bond that these brogrammers formalized through carrying out these games. Indeed, several literature has offered detailed discussion on how joking games such as pranks organized in fraternity clubs or other similar types of male-dominate social groups/clubs (Collinson 1988; Lyman 1987; Fine 2005). On the one hand, fraternity-based or similar male groups-based joking games function to create an exclusive atmosphere through setting

boundaries in contrast to those who are defined as external to the fraternal group and do not share similar "bro" traits (e.g., teasing or even torturing newcomers who tried to join). On the other hand, such fraternal-based joking practices also aim to maintain social order within the group (joke as an excuse to cover conflict), to perform "soft" control (e.g. mocking misbehavior), and to articulate and reinforce group shared culture (e.g. teasing each other as a way to demonstrate the "cruel" and "tough" culture).

In brief, bridging labor game scholarship and workplace joking practice literature allows us to better conceptualize the games conducted in high-tech workplaces, and presents the distinct nature and function of joking games organized by brogrammers through drawing on their fraternity background and marking their own group's and games' exclusiveness and uniqueness. In addition, the cutting-edge features that a high-tech workplace has as a modern work site, such as similar backgrounds that may be shared by workers and managers, and education and innovative team collaboration as the dominant organizational format, allow scholars to examine workplace humor from a new perspective. If recalling earlier discussion on organizational theorists' and labor scholars' analyses of workplace humor, I present a rather opposing viewpoints on the role of workplace humor, as organizational theories incline to conceptualize jokes as a potent resource utilized by managers to facilitate control, and labor scholars focus on joking practices organized by workers to express resistance. However, as shown in this study, in the high-tech industry where managers' and engineers' identities are highly overlapped due to their shared educational background, interests, and professional experiences, there exists a new approach to investigate workplace joke practice, which can foreground the

straddling of manager-initiated formal humor and worker-organized informal joking culture.

Research Questions

Overarching the observations discussed above, this dissertation proposes to investigate the possibility of the coexistence of multiple labor games in the high-tech workplace, the variance between different games, and the role of workers' habitus in shaping their participation in different games. Specifically, this study examines the following research questions: What are the games that people played in the workplace? How can engineers' habitus direct their strategies of investing in games? Can different habitus result in the differentiation of games and game-playing strategies, and if so, how? What are the roles of engineers' masculine and ethnic identity in shaping their habitus? What is the organization's role in these games? What are the organizational imperatives that either support or suppress these games? In what ways can these games motivate engineers' productivity and facilitate control?

The Engineering Work and Work Organization

Organizational Structure at Trifecta

The company where I conducted my investigations is Trifecta (pseudonym). Trifecta is a multinational corporation with about 100,000 employees, which ranked as one of the top 20 largest tech company in the United States. It operates an ecommerce website, develops hardware products, and provides infrastructure services (e.g., "cloud" access) for other companies. Trifecta has a reputation as one of the most influential and

innovative high-tech companies in the world. As is common in the technology industry, its employees skew young, with an average age of just 31 years old. Employees describe Trifecta as a decentralized and flexible work environment, and one marked by frequent reorganization.

The overall management structure at Trifecta consists of senior vice-presidents who are "level 10" administrators and responsible for different functional areas (e.g., personnel, finance, marketing, and engineering). In turn, engineering is divided into a number of technical areas, such as Security Products (SecProd), each of which is led by a "level 9" vice president and each of which consists of a number of development groups. For example, the E-commerce Sec Group (ESG) with the SecProd group consists of roughly 600 employees divided into six technical subgroups or, in Trifecta-speak, "organizations."

These organizations are all charged with developing specific security products, putting them on the e-commerce platform of the company, and allowing other Trifecta developers to use their products through the platform. This study focuses on one ESG organization, Pipe Org, which consists about 60 people working on 4 major projects that are either independent products or parts of other projects. Each of the four projects has an associated team: the Wizard team, the Knight team, the Assassin team, and the Ranger team. Each team has a "level 5" or "level 6" team manager, who supervises between 5 and 15 software engineers and who reports to Jonathon, the "level 7" manager of Pipe Org.

The engineers have their own engineering level system, which roughly ties to these administrative levels. For example, the majority of the engineers in the teams are

first-level engineers, which are called Software Development Engineers I (SDE I) and treated as "level 4" employees in the administrative system. SDE II ("level 5" employees) are engineers with some seniority and recognized skills, and are always project owners or technical leads for the team. In addition, some of the more highly-skilled engineers are assigned to the teams but do not report to the team managers. They are normally SDE III ("level 6") and work as "individual contributors" or "consultants." Occasionally, the teams also hire technical support specialists, who typically are temporary workers and not included in the administrative system. For teams that have heavier operational tasks, they also have an outsourcing team in India which is responsible for taking care of the low-skilled operational chores.

As is evident from this description, some Pipe Org engineers are at the same administrative level as their team managers (and, occasionally, at a higher level). The engineers and managers also have similar backgrounds and education: Almost all of the engineers and managers have degrees in computer science. Looking across managers, SDE I, SDE II, and SDE III engineers, however, about half of the employees at each level have a Bachelor's degree and about half have a Master's degree, and the proportion does not change with level of seniority. Finally, Trifecta frequently reshuffles these teams. For example, over the 11-month period of my fieldwork, Pipe Org experienced two rounds of reorganization and half of the teams had either combined or further divided. In these ways, Trifecta presents a very different work environment and structure than prior work on labor games has explored: Trifecta's hierarchy is blurred at the level of the workgroup; employees move in-and-out of engineering versus managerial or leadership

roles; teamwork is essential; and work itself is highly-skilled and focused on problem-solving and innovation rather than standardized production.

Work Setting and Daily Work Activities

Trifecta adopts an open-office settings in most of their buildings because management believes that open office is one important foundation to encourage collaboration, increase bonding and communications, and boost creativity. However, to mark the team boundaries, Trifecta puts low walls to separate teams. In other words, the work floor at Trifecta is in fact organized in the unit of development teams and the space is divided into different team areas. The team-based open space area apparently works effectively to increase the exchange of ideas among teammates and strengthen the bondings within team. Indeed, team-based solidarity is one outstanding feature at Trifecta, which can be reflected at different teams' effort of decorating their own team to highlight their own distinct team culture through hanging team mascot, logo, and posters. Normally all teams under the same organization are assigned on the same floor. For example, all four teams of Pipe Org are on 13th floor in a building located at the east campus area. On the 13 floor, there is a public area shared by all teams on the floor which consists of an open kitchen; a ping-pong room; a video game corner occupied by an electronic band equipment set, different types of play console, and a TV; also a bar filled with a tall table, 5-6 booth settings, and one pool table.

Apparently, the open-space work setting also has its downside. For example, within the team areas, the cubicle-free open space environment creates lot of distraction for engineers. To deal with this problem, companies encourage engineers to wear noise-

cancelling headphones when they feel they need to concentrate on their individual work. So once seeing someone put on their headphone, it is a sign that this person is not available to discuss questions and does not want to be disrupted at the moment.

Complemented by the flexible workspace is the flexible time schedule. Engineers normally are allowed to manage their own schedules and design their days based on personal preference. Taking Wizard team for example. Their engineers' schedules fail to two extremes: while two of their team members are early birds who tend to come to work at 5 AM and leave workspace around 4 PM, several of other team members are typical late night owl who are not able to arrive the team area until 11:30 AM and can stay in the team space to work till 8 or 9 PM. In the day time, engineers can also design their daily schedule based on their own habits: while some engineers choose to spend the morning dealing "non-coding/non project" chores (e.g., responding emails, communicating with client teams, doing one-on-one meeting with managers) and spare the afternoon as the time to concentrate on coding and project designing, others would do the opposite -- starting the day with two to three hours of concentrate-coding and using the rest dealing with "non-coding/non project" chores.

However, there are three time slots that require all engineers to gather together and follow the same schedule. While two of these time slots are mandatory, another one time is set up voluntarily. The first collective team activity is the daily scrum meeting or, in Trifecta-speak, "daily standup." The precise time slot can vary across teams and is decided as a result of the whole team's discussion and agreement on the most convenient time. During the standup meeting, each team member needs to report the progress on the project he/she is working on, the tasks that have been finished, the next tasks to tackle,

and the problems he/she is facing right now. The second time slot that requires the team's uniform action is the weekly meeting, which very often overlaps with sprint's retrospective meeting, which will be explained in more details in the later section on development process. The basic goal for this meeting is to let the team evaluate their collective efforts on the former stage software development progress – identifying successful attempts and problems that need to be avoided in the future.

The final team uniformed activity during the day is the team lunch, which is also an optional one that is not adopted by all teams. For example, in the Pipe Org, while three teams tend to have their lunch together (i.e., Wizard Team, Knight Team, Assassin Team), one team decides to let its members eat lunch individually. Quite often, during lunch time, two or three teams of Pipe Org will go down stairs together to get food from food carts and go back to the public kitchen to eat together. The lunch hours can be extended to 1.5 to 2 hours if engineers from different teams who play the same video games want to use their lunch time to discuss the newly added characters or the "heroes" in the latest version of video games, or to congregate around the pool table to play for an hour or two.

The Engineering Development Process

Trifecta adopts a scrum development process to guide their engineers' software development process. Scrum is an agile software development framework, and adopted by most major high-tech companies. It is invented by two Japanese scholars, Hirotaka Takeuchi and Ikujiro Nonaka. They claimed, "Companies are increasingly realizing that the old sequential approach to developing new products simply won't get the job done.

Instead, companies in Japan and the United States are using a holistic method – as in rugby, the ball gets passed within the team as it moves as a unit up the field" (Takeuchi and Nonaka 1986: 137). The term "scrum" comes from this rugby metaphor.

Like most other companies, the scrum development process at Trifecta is divided into five steps, including creating the list of features needed for the products, designing the best path to produce the software and dividing each development step as a sprint, working on each sprint, testing products, and organizing retrospective meeting to evaluate each sprint. Normally, a scrum process is started with a creation of a list of features and functionalities that would be implemented during the development process. Normally, the creation of the final list is a result of an arduous process of negotiation between the client teams/departments who attempt to make a laundry list of features that could take engineers years to develop and the engineering teams who attempt to translate the client teams' "wish lists" into realistic and feasible projects. This is always the process that can easily trigger the conflict between engineers' priority of technology and client teams' priority of profits or markets. After creating the feature lists, engineer teams will move on to figure out a best path of assembling all the features together, a reasonable division of labor, and a sprint plan that allows the team to divide the whole development process into several short sprints and get timely feedbacks from clients after each sprint.

Finishing the general design, engineer teams will move to the process of pushing forward the projects sprint by sprint. This is also the process through which all functionalities and features are produced in the formats of computer codes. In this process, the responsibility of transforming several features to codes will be divided among many engineers. Although they need to write about these features alone, they need

to frequently consult with each other. To ensure every team member is on the same page of this process, a task board is commonly used for every team to track the working process. At Trifecta, the board is divided into five columns that represented five key steps of each sprint, including the "To Do (Input Queue)," "In Progress," "Code Review (CR)," "Release/Testing," and "Done."

To track the process on the task board, the team usually writes tasks that need to be done on stickers. When the tasks have been started, a corresponding sticker will be created and put under the "To Do (Input Queue)" column. And the sticker will move from "To Do" column to "In process" during the code-writing process. When engineers finish writing the chunk of codes requested for this particular task, they can move the corresponding stickers to "Code Review (CR)" column. This means they send codes to peers for them to review. When the CR is completed, the sticker can be moved to the ""Release/Testing" column and after the task is successfully tested, the sticker goes to the "Done" column.

One thing that needs to be emphasized is that, unlike manufacturing process that is characterized by standardization, engineers coding work is very flexible. For example, while asking three engineers to produce the same functionality or feature for a software, they will most likely write the segment of codes that look completely different (e.g., using different programming language, structure, and finishing the segment either within 10 lines or more than 1000 lines). However, no matter how different each segment of codes are, by the end when they push the codes into deployments, these high individualized segments must be joined together and function as though written by a

single individual. To reach this goal, engineers are required to be very familiar with each other's coding styles, and even personality.

Since the goal for each sprint is to produce a deployable functionality or feature, a testing process then becomes especially important in order to detect the errors and bugs of this functionality/feature. While some bugs are just simply grammatical errors, others are much more serious and can potentially lead to a crash of the completely finished system. To most engineers, the number of bugs in the segment of code that they write is an important sign of their skills and commitments to the project. Finally, after a whole sprint process is completed, each development team will organize a "Retrospective Meeting", which is used to evaluate their last sprint in terms of what the successful attempts they conducted for the spring are, and what they can improve in the future. After the the Retrospective meeting, the team can start planning a new sprint and start a new circle.

Method

During the 11 months of ethnographic work at Trifecta. I collected data through semi-structured interviews and participant observation. The research was divided into three phases. For my initial trip, I spent 3 months (November 2013 - January 2014) negotiating my access to the corporation, familiarizing myself with the corporation structure, engineering daily routines, and localized knowledge and culture, and hanging out in various worksites that I was granted access by that time. I had also established relatively rapport relationship with two Chinese engineers (one male and one female), who had become vital guides in my second phase research.

Being introduced by my guides, I completed 11 formal interviews and informally talked with engineers and managers from diverse teams. The interviews were designed to broadly investigate labor processes and culture at Trifecta and were conducted under the explanation that I was interested in "learning about engineers' life and work." Interview questions were divided into three parts: personal history, workplace interactions, and off-work activities. A high degree of flexibility was retained to allow the conversation to flow naturally. The personal history portion included questions about an interviewee's first experiences with computers, as well as his or her familial background and education. The workplace interactions portion typically began by asking interviewees to walk through a typical work day in detail. I then asked clarifying questions on major work activities such as stand-up meetings, email checking and replying, one-on-one meetings with managers, lunch breaks, coding, project design, meetings, code reviews, and leaving work. In addition to discussing daily activities, I also asked interviewees to describe major weekly events such as weekly retrospectives, brown bags, or their on-call week, and some major annual events such as all-hands meetings, half-year reviews, and annual evaluations. Finally, the third portion of each formal interview probed interviewees' off-work activities, such as what they do and whom they spend time with during their leisure time. All formal interviews were recorded, and mostly conducted in restaurants chosen by respondents or in their homes.

The initial trip offered me the opportunity not only to socially adapt the engineers' world, but also to discover several major themes that need to be further explored. For example, jokes and pranks had become popular topics, and different groups of engineers offered me very opposite narratives of their roles in the joking practices --

while Chinese engineers expressed their anxieties of not being able to understand their white colleagues' jokes and frustration of failing to appropriately react to pranks or jokes, my white informants constantly showed off to me pranks they just pulled off or shared with me some good jokes they just learnt from Reddit. Similarly, the interests of video games emerged as another important theme. When I asked interviewees to recall their childhoods, they typically shared memories of playing "Nintendo," "tweaking around" on computers, learning to program in Basic, and/or making their own games. Similarly, video games were a favorite and frequent topic of lunchtime conversation, and interviewees said they were a favorite leisure-time activity, too. Yet games were not constrained to engineers' leisure time. Instead, they were brought into workplace and blended with many work processes. This realization led us to focus on games in the workplace as a topic of formal inquiry.

For the second phase, which was also the focused phase of my search, I spent 6 months (June 2014 - December 2014, except for July 2014) grounding myself in one of the key organizations (Pipe Org) to observe engineers' daily activities, and conducting 27 formal, semi-structured interviews. With the vital help from my contact, my presence became relatively legitimate in the wizard team under Pipe Org. I sometimes went to their team area after having lunch with them and stayed two to three hours till 3 PM. Other times, I came to the team areas at around 5 PM before engineers started to leave work and stayed till 7 PM. These two time slots are the time when most engineers stayed in the team areas. The interactions and conversations among engineers were more intense in comparison to other time slots when most engineers hid their head behind screens and concentrated on coding. As my observation moved along and my exposure was accepted

by more and more engineers on the 13th floor, I started to visit the Knight team where my other vital guide worked at more often and also shadowed the Assassin and the Ranger team.

While in the teams, I normally chose to sit in front of an empty desk in the corner (which normally belonged interns who worked temporarily on the team for a couple months), fading into engineers' working background, as I observed them carry out their daily routines, organize or divide their work around different projects, discuss codes (or code reviews), argue over scale of projects, handle emergent events, design pranks to tease newcomers, gossip about things like new start-up companies, team reorganizations, people leaving the company, and conduct diverse playful activities in their team areas (e.g., shooting each other using toy guns, playing Lego, scootering around, etc). I also participated in the farewell parties that engineers threw for their colleagues who jumped to other companies, joined their lunch and coffee breaks, took convention trips with my guides, attended organization meetings or corporation events that I have gained access (e.g., training sessions, brown bags, recruiting events, all-hands meetings, Diwali festival, post-holiday parties, corp picnic, etc). I socialized with engineers from diverse teams, but especially those at the Wizard and Knight team, with whom I often went out for drinks or dinners after work, and hanged out during weekend (e.g., hiking, game-watching, potluck, birthday parties, promotion celebration parties). I took daily notes focusing on how managers mobilized and supervised engineers, how engineers self-motivated and monitored each other, how different groups of engineers interacted with each other at work, and how they fit into the team.

During the second phase of my research, I also conducted another 30 interviews. Interviews during this second phase followed the same initial protocol described above, but with the addition of specific probes on gaming. For example, I asked engineers about the incorporation of gaming language in the office, whether and to what extent engineers mobilized their gaming habits/memories in work activity, what types of video games that they played together with their teammates, and whether and how gaming relationships shaped engineers' work interactions. Interviewees were recruited through three ways during this second phase: for the core informant at Pipe Org, I recruited them through informal interactions when I conducted my observation in their team areas or Pipe Org organized events. I talked to this group of engineers about my research which I presented as "learning about engineers' work and life." A majority of the female engineers recruited through a group called Trifecta Women Engineers (pseudonym). With the help of one female informant in Pipe-Org, I managed to send out a formal invitation email to the email list organized by this women engineering organization and phrased my research as a Ph.D student who was interested in learning the topic on diversity in the engineering community and willing to treat volunteers with a meal. The recruitment of engineers coming from teams outside the Pipe Org mainly followed a snowball method. I started recruiting this group of engineers through my Chinese interviewees' informal network (they recommended their friends, neighbors, roommates, current or previous teammates who also worked at Trifecta for me) and snowballed from there. In-depth semi-structured interviews normally lasted for approximately two hours. All formal interviews were tape-recorded, and mostly conducted in restaurants chosen by respondents or their homes.

Finally, I returned to the field for two months during the summer of 2015. This visit provided an opportunity to probe on specific themes and questions that emerged from the ongoing data analysis, such as team-level managers' strategies of carrying out the stand-up meetings, engineers' interpretations of Trifecta-organized Las Vegas trips, and female engineers' participation in hackathons. This final phase also enabled me to explore whether themes that emerged from our study of Pipe Org might apply to other groups within Trifecta. Thus, I visited with additional teams outside the building where Pipe Org works and with completely different technological foci (e.g., the web design team, the cloud computing organization, and the payment solution department).

In sum, the data consist of several hundred pages of field notes and supplementary materials, including internal memos/documents, brochures, posters, and information copied from key informants' Facebook pages, as well as notes from informal conversations and 46 formal interviews. The formal interviewees, in sum, include 19 engineers and managers from Pipe Org and 27 engineers from 26 other teams. Among all 46 interviewees, 15 self-identified as "white," 18 self-identified as Chinese, and the remainder self-identified with other ethnic groups, including Indian, Pakistani, Korean, and Vietnamese. Twelve of the interviewees were female. The interviewees ranged from 22 to 38 years old (averaging 27), and had worked at Trifecta anywhere between 3 months and 6 years (averaging 1.5 years). Twenty-nine had obtained a Master's Degree and the remainder held Bachelor's degrees, meaning that they had considerably more formal education than did employees in previous studies of games in the workplace.

The Analytic Model and Chapter Outline

The Analytic Model

A sketch of our analytical model appears in figure 1.1. First, the dominance of college graduates (A.1) creates a very young labor force that guarantees high-tech organization's imperative to construct a gameful workplace. The two branches under the general rejuvenation trend -- Brogrammers' intrusion (A.2) and influx of Asian immigrants (A.3) -- lay down the foundation for diverged gaming formats adopted by high-tech corporation. These new dynamics of high-tech industry also generates three distinct labor groups who embodied distinct ethnicized and masculinized habitus in the industry, which include brogrammers (B.1), tech-hobbyists (B.2) and coding peasants (B.3). The new dynamics of the industry coupled with the formation of these three groups of engineers enables high-tech corporations to adopt different strategies to construct a gameful workplace that both facilitate labor control and justify the unequal labor sorting. Realizing tech-hobbyists' geeky masculinity and its associated gaming habitus that can potentially makes them contribute longer working hours, one strategy adopted by the firm emphasizes on incorporate computerized elements into the labor process (C.1). To adequately mobilize brogrammers "bro" habitus and its associated hegemonic masculinity to increase competition thus productivity, the company adopt games that strengthen the party-like work environment (C.2).

Facing corporations' gamified strategies, different groups of workers draw on their own habitus to selectively invest into the game that can most effectively maximizes their strength: brogrammers draw on their bro habitus to invest in the party-like games and explore a "party to the top" career path (C3); tech hobbyists draw on their gaming

habitus to invest in the video gamified labor game and set foot on the technical path that leads them burning in the virtual world (C4). Coding peasants, who do not possess neither of the type of habitus fit for the two games, are largely excluded from the company's gamification practices. Reinforced by organizational resources, managers' justification, and different group workers promotion, these largely varied gaming processes also help construct a hierarchy within the workplace: brogrammers demonstrate their cultural similarities with managers through organizing party-like games and take the fast career path to the top (D.1); tech hobbyists are absorbed into the video gamified labor process due to their gaming habitus and thus risk to be burnout (D.2); coding peasants who always struggle over getting access to the game practices are considered as "bad" team players and become more and more marginalized in the workplace (D.3).

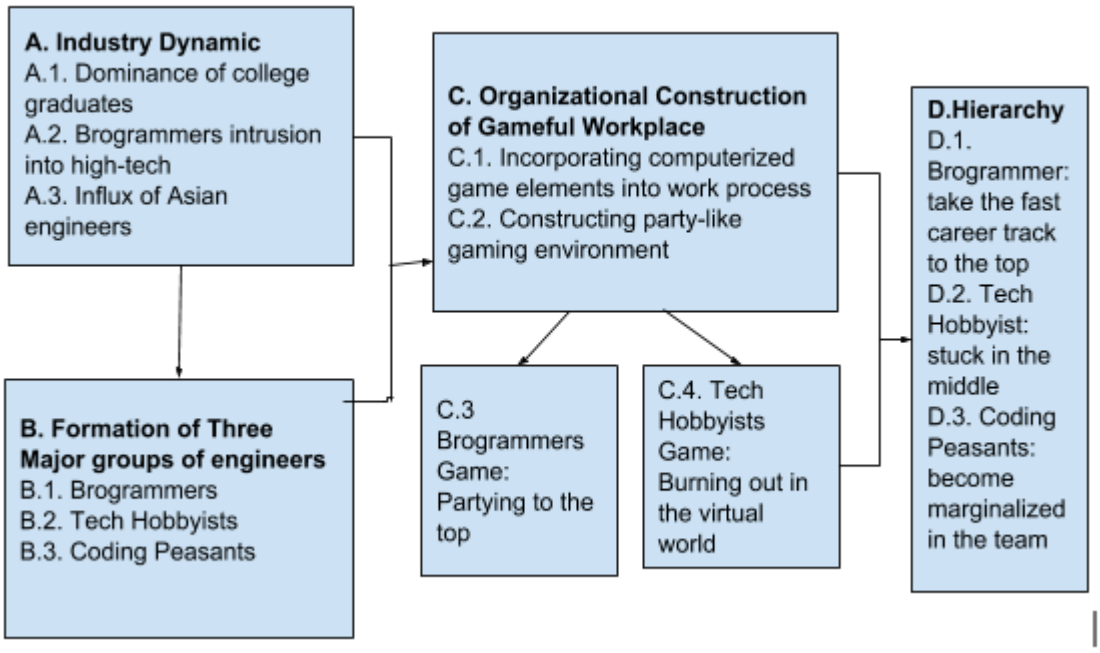

Figure 1. Analytical Model and Key Concepts

Chapter Outline

Throughout the dissertation, I will explore different games constructed on the work floor and the strategies the three groups of engineers (i.e., brogrammers, tech hobbyists, coding peasants) adopt to invest in these games. Chapter 2 and Chapter 3 are designed to introduce two different sets of games and the dominating players in the games. Specifically, Chapter 2 concentrates on computerized games and tech-hobbyists' investment in such games. Chapter 3 is used to demonstrate the party-like games and brogrammers' role in promoting and organizing such games. Within each of these two chapters, I alternate between the structure of the game and the ways through which different groups of engineers interpret and react to it. Starting from Chapter 4, the focus shifts to Asian engineers (i.e., coding peasants), their interpretation of the other two groups of white colleagues, and reactions to two games. While Chapter 4 is used to demonstrate coding peasants' reaction to hobbyists and hobbyist-demonstrated computerized games, Chapter 5 is used to illustrate coding peasants' interpretation of brogrammers and their party games.

Specifically, in Chapter 2, I will examine the construction of computerized games and tech hobbyists' investments into this type of game. I start the discussion by giving a general portray of tech hobbyists, their gaming habitus and gaming history. One very important feature identified in this section is that gaming memories, activities, and skills are very blurred with programming memories, activities, and skills in tech hobbyists' narrative. And this feature together with many other gaming traits of tech hobbyists provide insights to explain why tech hobbyists are most likely absorbed into the computerized games. After laying down this foundation, this chapter then moves on to

discuss the mechanisms through which the company successfully video-gamifies the workplace, with the support from tech hobbyists. Firstly, I detail three methods adopted by managers to insert video gaming design into work process, which include incorporate badge collection game, use countdown bar to speed up workers ticket-solving, and insert leaderboard for the ticket game. The second gamification mechanism conducted on the work floor involves introducing characters from video games or board games into workplace to encourage tech hobbyists to draw on their gaming memories to fantasize their engineering work process and activities. If the implementation of the previous two gamification mechanisms are built on hobbyists' consent to managers' gamification, the last gamification mechanism is developed, initiated, and implemented by hobbyists themselves, which concentrates on hobbyists' importation of a gaming relationship built through their leisure time video game-playing into workplace to facilitate their building of work relationship with colleagues.

In Chapter 3, I firstly offer a general portrait of the brogrammer group: unlike tech-hobbyists who were the nerds obsessed with technology and whose motivation of entering the high-tech industry is to get in touch with the most cutting-edge technology, brogrammers come from a very elite background, their leadership spirit and possession of hegemonic masculine traits always make them the popular group, both in the past educational institutions and current work setting, and their major goal of entering the industry is to conquer the technological market and become the new generation elites in the tech field. After offering a general description of brogrammers, I present brogrammers' investment into party-like games in the high-tech corporation, and discuss how the company's support and promotion of this type of game ensure brogrammers to

be able to convert their "bro" traits cultivated in college into competence desired by high-tech industry. On the one hand, I focus on one genre of partying games brogrammers developed and dominated, which is called the "donut email prank." When unpacking brogrammers participation in donut emails, I concentrate on discussing how brogrammers' investment in donut email pranks allows them to not only demonstrate their hyper masculine characteristics and leadership ability, but also partially replace managers to perform surveillance and discipline over their coworkers. On the other hand, to echo Chapter 2's analysis of company's gamification setup and tech hobbyists' reactions to these gamification setup, I also present how brogrammers participate in and contribute to company's gamification setup and discuss how their fraternity traits ensures their different approaches to these gamification practices in comparison to hobbyists. For example, one gambling game (e.g., Russian roulette) that brogrammers developed solve the labor division crisis is a perfect demonstration on how brogrammers adopted partying/drinking game they obtained from fraternity to fulfill some managerial responsibilities (assign tasks and decide labor division method).

Chapter 4 and 5 will switch the attention to Coding Peasants' Interpretation of white hobbyists and brogrammers, and their navigation of two types of games. Chapter 4 will concentrate on Coding Peasants' reactions to hobbyists and hobbyists' games. To begin with, a brief portrayal of Asian engineers will be provided. Following the general portrayal of Asian engineers, I will investigate how Asian engineers interpret tech hobbyists and how Asian engineers compare themselves to tech hobbyists. The discussion of Asian engineers' image and their interpretation of tech hobbyists would lay down an important foundation for us to understand Asian engineers' coping strategies to

hobbyists' game. When discussing Asian workers' reactions to hobbyists' games, I will firstly concentrate on the gaming strategy adopted by hobbyists to import video-gaming relationship to workplace. In this section, I will present Asian engineers' interpretation of this strategy, and how they are largely victimized in the process of hobbyists' investment of this strategy, as well as the coping strategy Asian workers develop. Secondly, I will switch attention to another game that hobbyists heavily invest in, that is, the badge collection game. In this section, I will discuss the method that the Asian engineers adopt to survive the badge collection game and the situations under which they remain victimized in this game.

Chapter 5 will concentrate on coding peasants' reaction to brogrammers and their games, and how brogrammers' games largely disadvantage coding workers in the workplace. The chapter will start by a discussion of coding peasants' interpretation of brogrammers. Asian engineers express their respect towards Brogrammers' organizing ability and individual charisma, and attempt to use a concept of "underground world big brothers" (*Jiang Hu Da Ge*) to highlight brogrammers' leadership and competence of solidifying their own circle. However, coding peasants' self-modesty that is cultivated and valorized in the Asian society makes them easily feel resentment to brogrammers' aggressive expression of individuality. After laying down the foundation of Asian engineers' interpretation of brogrammers, I will spend the second section discussing coding peasants' reaction to brogrammer-initiated pranks. I will start by presenting Asian engineers' victimization and navigation in one of the most systematically-organized prank -- the donut pranks. Specifically, coding peasants are very reluctant to participate in the donut email games, as the donut pranks initiated or promoted by brogrammers

become an important way to expose Asian workers' cultural naïveté in a Western context and thus to victimize Asian workers. To navigate their own position in the donut pranks, Asian engineers develop two important coping strategies, which are shared by a majority of Asian engineers, and constructed by relying heavily on an Asian value system: one is never sending donut emails to people who ranked higher them themselves, and another one is always minimizing the exposure scale of donut emails. In addition to donut emails, I will also identify two other types of contextual pranks in which Asian engineers become the group that most easily to be targeted. One such contextual pranks are the series of highly ritualized "welcoming pranks" that used to tease newcomers. Another type of contextual pranks are the spontaneous pranks which usually happen too quick and too sudden for Asian engineers to organize strategies to react.

I wrap up in Chapter 6 by returning to the main theme of the dissertation: multiple games are developed in the workplace as a result of cultural matching between employers' imperative and employees' habitus. I underscore the necessity of the high-tech industry to update their labor games to make them more fit for the new generation employees. Through a brief comparison between the two types of games, I highlight again the distinct nature of these two games. In this way, I problematize mainstream labor game scholars' assumption of the homogeneous employee group which has undifferentiated attitude and strategy when investing in the game. Finally, I discuss the theoretical implications of my findings for the scholarship in organizational inequality and point to the practical and policy lessons that I can draw from my empirical research.

CHAPTER II

TECH HOBBYISTS AND THEIR INVESTMENT IN GAMIFICATION

Labor scholarship has highlighted how labor games can engage workers in otherwise monotonous tasks, while also serving as a means of managerial control aimed at increasing productivity (Burawoy 1979, Fleming 2005). Research on games enables labor scholars, more generally, to move beyond a focus on strictly pecuniary incentives to understand the role of social forces – namely, competition and "fun" – in shaping interactions among employees and between employees and managers. The problem is, as stated in the introduction, nearly all of the research on games in the workplace has focused on environments in which workers share an identity (as white male workers), work itself is standardized, people and roles are interchangeable (or at least are considered as such), teamwork is limited, the prevailing organizational interest is in consistency and efficiency, and employees and managers are distinguished by educational background and career trajectory. In turn, these features of the empirical settings studied have been key to theorizing the nature of labor game as identity irrelevant, in a singular format, and being organized by workers themselves.

As several scholars remind us, however, the nature of work itself has changed dramatically in recent years; in many modern work settings, work is not standardized, workplaces consist of workers of diverse backgrounds, who embody distinct identities, people occupy specialized roles and are not easily interchanged with one another, teams are a dominant form of organization, organizations value creativity and innovation over standardization and mass production, and workers and managers may share similar backgrounds and education (Adler 1992; Barley and Kunda, 2001; Rangaswami 2015). In

such work settings, it seems plausible that the formats and roles of games and the ways in which workers experience them may have likewise diversified. Yet given the literature's focus on managerial strategies for game adoption in "traditional" work settings, we lack systematic evidence on how games are diversified into varied formats within one workplace, as workers' distinct identities direct the character of their investment in workplace games. We also have scarce understanding of the changing role of managers in the diverse workplace. Do they facilitate such diversification of labor games?

This chapter addresses this gap by presenting one type of labor game adopted in the engineering workplace, which serves interest of one particular group workers -- the tech hobbyists. To illustrate how different group workers' distinct identities actually play a key role in diversifying labor games and in determining which game they will invest in, this chapter starts by unpacking tech hobbyists' distinct identity, its association with their background, its influence over their work behavior, and its difference from the identities of brogrammers and coding peasants. After laying down this foundation, this chapter will present three most important work mechanisms through which the work process and relationship are video-gamified, including: insert game elements, introduce game roles and fantasy characters, and import off-work game relationship.

Who are These "Tech Hobbyists"?

"Tech-Hobbyists" as a Self-labeling Term

"Tech-Hobbyist" is a self-labeling term, and constantly invoked by my interviewees. During my conversations with them, these interviewees described

themselves as “computer hobbyist”, “tech hobbyist”, or just “hobbyist” in general. For “tech hobbyists”, programming is their “hobby”. For example, when I talked with Mike about why he chose to work at Trifecta, he answered,

> ...well I guess it's like, I love programming. I do it in my spare time as a hobby even though I do it full time as a job. So I still do lots of personal projects for fun but now that I'm at Trifecta there's a lot of personal projects I can do that are also work related and I might want to test out some new framework or just I don't know, Trifecta is nice because there's so many different problems to solve and everyone is so busy that there's a lot of problems that no one's working on.

Theoretically, hobby is defined as a pursuit beyond one’s occupation, which is used to describe a leisure pursuit one finds particularly interesting and enjoys doing for its benefits of self-actualization, self-expression, self- enrichment, re-creation or renewal of self, feelings of accomplishment, enhancement of self- image (Stebbins 1980). However, based on my interviewees’ narrative, I found their description of hobby is largely blurred with workplace activities. Like Mike, many interviewees associated their “programing” hobby with their orientation of entering the tech industry, and claimed the major reason for them to enter the company is that they found it’s incredible enjoyable by doing a job that happen to be their hobby. For tech-hobbyists like Mike, Trifecta is a dream workplace since it satisfies his needs of developing “programming hobby” regardless of work time or spare time, as Trifecta can provide countless new problems or projects that Mike can play around.

Along this line, it’s not difficult to understand why few hobbyist mentioned factors such as money, desire to consume goods or social status brought by their profession as significant motivators for them to join the industry. In fact, many hobbyists

told me they didn't even know how to spend their salary except for constantly updating their PS4, XBox, mechanical keyboard, gaming mouse, and headphone. In other words, the most direct way for them to splash their money was to invest and update their gaming gear. Of course, we probably can infer that the reason for Tech Hobbyists to be obsessed with technology is that they do not possess other types of skills or traits that they can gain status. For example, they probably do not have other type of "hobby" that brogrammers possess (e.g. travelling, wine tasting, skiing), which allow them to invest their money and transform it into certain culture or social capital.

Blurring between Gaming and Programming

In addition to the feature of blurring their programming hobbies with workplace activities, another important character embodied by most tech hobbyists is blurring between video gaming and programming memories, ability, and feeling of achievement. For some tech hobbyists, if programming is the primary hobby, then video game playing is their secondary hobby. For others, the opposite is true -- gaming as the primary and programming as the secondary hobby.

In fact, many hobbyists admitted that their passion about coding started with playing games. It is their gaming hobby that gave them the strong willingness to study programing. The consequence is that gaming and programing were developed into two most important and inseparable hobbyists. Ricky illuminates this trajectory of habit formation. He comments on his earliest gaming and programing experience:

> ...I grew up in a farmhouse, kind of in the middle of nowhere. I guess I had always played a lot of video games as a kid. ... playing like Nintendo...or tweaking around on the computer...so back then.. when you bought the

> Commodore 64, it came with a basic programming book...So, the assumption was that ...you bought it because you wanted to write your own software..then I just...I remember working with my dad, we made a game where you... there a little jet that flies across the screen, and there's like a dam. And when you press the spacebar, it drops like a little bomb…and ever since...I was teaching myself to program just as a hobby, for fun, and then I got to internship ..I feel like I just kind of end up doing programming ever since…

As shown in Ricky's narrative, gaming and programming are largely intertwined, which becomes an important precondition for managers at Trifecta to draw tech hobbyists into the video-gamified labor games. Firstly, the memory of this gaming activities (i.e. playing "Nintendo" games[12]) was happening together with memory of programming a new game of bomb-dropping from a jet. From Ricky's narrative, one can tell he was very satisfied with the inner joy of creation from making such a game using the new computer "Commodore 64" and the basic programming book that came together with the computer. Such type of feeling of accomplishment from designing, programming, and playing the game is a very important attribute among tech hobbyists. Or as Csikszentmihalyi (1997) claims, this type of individual surge for creativity contributes the most important psychological drive for tireless programming for these coders.

In addition, in his narrative, Ricky also identified one reason for him to start concentrating himself on video games, which was his isolated childhood as "grow up in a farmhouse ...in the middle of nowhere…" It indeed reflected some important characteristics of that shared by many of the tech hobbyists, including very isolated and lonely childhood and antisocial or introverted personality. In fact, these characteristics

[12] Nintendo is one of the world's largest video game companies by market capitalization, creating some of the best-known and top-selling video game franchises, such as Mario and Pokémon.

contributed to tech hobbyists' choices of pursuing video gaming as a habit. For a majority group of tech hobbyists, isolated childhood and awkwardness in the real life social activities were very common struggling encouraged throughout their childhood. As a result, they chose to cut their ties of communication with the society and retreat to the virtual community (e.g. gaming community, online forum).

For tech hobbyists, the virtual community was a computer-illiterate world which allowed them to communicate with each other via computers, focusing essentially on issues on programming (e.g. how to use Commodore 64 to program a game "where there is a little jet that flies across the screen"). In fact, many tech hobbyists had expressed their "addiction" and reliance on the "virtual community" to socialize and bond with people having similar interests, while at the same time sharing their communal feeling of excitement of technology and gaming. To some extent, tech hobbyists' distinct growing trajectory also helped explain why brogrammers and coding peasants did not devote their childhood or personal life to video-gaming or programming. For the other two groups, as will be discussed in chapter 3 and chapter 4, they have a rather more colorful childhood and relatively extroverted personality that offer them more opportunities to find other hobbies to fill their life.

From the discussion above, we see that there are many critical factors that contribute to tech-hobbyists' socialization around video games (e.g. isolated childhood, advantage of getting access to a computer). And also it is exactly this prior life socialization centering on video games, programming, and virtual community makes these tech hobbyists to become most venerable group to the company's gamification techniques of labor exploitation, which I will unpack later in this chapter. Using the

particular life trajectory and distinct gaming socialization or self-labelling as hobbyists as standards, there are 14 engineers among my 46 interviewees who should be categorized as tech-hobbyists. And among these 14 engineers, most of them are white male except one white female engineer and one Indian engineer. And among all engineers at Pipe Org (about 45), there are 8 engineers who share similar life trajectory and gaming/programming habits as tech hobbyists. And within these tech hobbyists in the Pipe Org, a majority of them are white male except for one second generation Vietnamese who also self-labels as hobbyist.

Self-differentiation from Brogrammers and Coding Peasants

No matter what the reason for hobbyists to highlight their technology-centered motivation to enter the industry, this strategy did effectively help tech hobbyists draw boundaries against brogrammers and coding peasants and mark their distinct image in this workplace. Facing the influx of coding peasants and brogrammers and feeling their status being threatened, one way constantly used by tech hobbyists to valorize their status while at the same time devaluing the other two groups was to highlight their more pure and passionate motivation to enter the industry in comparison to the other two groups. Or, as Paul put it:

> I would definitely...I mean, I have a personal bias towards...The people, that as kids, just felt compelled to experiment and play and teach themselves the computer, those are the guy that are going to be the good engineers. You don't want... people are like, 'Oh, I want to be an engineer because it pays me money' and start learning in college. The guy you want to hire is the guy who's been in his basement playing with his computer his whole life…

The problem is, tech hobbyists' self-promotion of "doing programming as a hobby" makes them the most vulnerable to managerial efforts that blur the line between work and life. This point can be made clearer in comparison to the other two groups -- brogrammers and coding peasants.[13] Specifically, brogrammers devote their leisure time to bars, concert hall, football stadium, and coding peasants associate their off-work activities with families, friends, and relatives from their ethnic circles. To these two groups, the work-nonwork boundary is reinforced through much differentiated work and off-work space, atmosphere, activities and social circle. On the contrary, for tech hobbyists, the boundary between work and private life can be very blurry due to their tendency of treating programming as hobby and doing it both during the work time and leisure time, which makes them invariably face the computer screen, sit in front of a computer desk, keep the same post and do very similar activities both in the workplace and at home. This sense of blurred boundary certain hinted in Mike's quote when he said "I love programming. I do it in my spare time as a hobby even though I do it full time as a job. So I still do lots of personal projects for fun but now that I'm at Trifecta there's a lot of personal projects I can do that are also work related and I might want to test out some new framework". So in general, the blurring boundaries leads tech hobbyists to voluntarily bring work back to home and do "work-related personal projects", which

[13] As discussed in the introduction and literature, blurring the work-home boundaries is a mechanism adopted to achieve a type of "just be yourself" management (Fleming 2015). For Fleming, "just be yourself" management is an updated version of culture control which aims at incorporating employee's' private life into labor process to maximize creativity and productivity. The problem is that methods adopted by managers to blur the work-home boundaries (e.g. incorporate home kitchen to the workplace) can always risked to be superficial, scripted, staged and easy to be seen through by employees. This is remain very true to the other two groups of engineers.

helps management to appropriate more extra labor. And occupational hazard of this kind of arrangement is that the workers tire of their hobby.

Three Major Gamification Mechanisms

In the sections that follow, I will discuss three key mechanisms through which the work process and relationship are video-gamified, including: insert game elements, introduce game roles and fantasy characters, and import off-work game relationship. The key of gamification is to incorporate game design elements into a non-game context. Following this approach, in this section, I will concentrate on analysis of the usage of three game design elements (i.e. badge collection, countdown timer, and leader board) at Trifecta. I will firstly discuss how the badge collection, as a classical gamification set up, is used for Trifecta to promote workers to participate into one type of corporate work activity: phone-tool icon collections. Secondly, I will present the adoption of countdown timer and leader board into the ticket solving process, which is another key work process at Trifecta.

Task-Rabbiting the Workplace

The use of phone icons at Trifecta most closely resembles examples of gamification from the literature, which is operated in the format of inserting gaming elements into non-gaming context (e.g., Hamari 2017; Kumar 2013: 72). Indeed, phone-tool icons precisely mirror the most simplest yet classical gamification set up in workplace captured in relevant literature, which depict employees strive to complete a well-defined challenge or to amass a certain number of points based on clear performance

metrics such as the number of widgets produced in a given time period (e.g., Edery & Mollick 2008; Fleming 2005; Kumar 2013; Walz & Deterding 2015). However, the special feature of this badge collection system is that it achieves to congregate hundreds or even thousands of tasks that distinct in nature (e.g. tasks can be in the format of giving quiz, asking for testing or debugging, or posing challenge) on the same online platform (phone-tool icon page) and convert each of this task's value into a special type of currency (i.e. badges) awarded to employees.

To some extent, this badge system resembles the TaskRabbit system, which is a type of online marketplace that helps match freelance labor with customer demand in miscellaneous types of tasks. Similarly, the badge system can be seen as an internalized version of the TaskRabbit system and the icons provide a kind of symbolic glue that binds together all the multifarious tasks under one system of work. Thus the programmers are tasked with diverse type of assignments beyond their job responsibilities which should originally be assigned to specialized paid labor.

Specifically, "phone-tool" icons are pictures, modeled after the virtual gaming badges that display on an employee's personal page called "phone-tool" page. The reason why the icons called "phone-tool" icon is that they are displayed on the "phone-tool" page[14]. They are designed by Trifecta and given to employees who complete particular tasks or challenges. None of the people whom I interviewed was aware of a monetary reward or promotion/advancement advantage tied to obtaining Trifecta phone-tool icons;

[14] The phone-tool has two functions: one is to be used as communication platform that include instant messaging, video chat/conference, phone-call features; another is to be used as a personal website to display basic information (e.g. level, managers to report to, length worked at Trifecta, team worked at) and personal achievement in the format of the icons.

instead, the reward lay simply in the bragging rights and social status that accompanied the achievement. Thus, the use of these icons drew directly upon the video gaming environment, where virtual badges or similar status indicators (e.g., "re-tweets" or positions on a leader board) are used to encourage continuous and increasing engagement.

While most engineers has around 20-50 icons collection listed on their personal page, tech hobbyists are much more keen to collect icons and their collections can reach to more than 200 icons, which in fact will even give a visual impact of their achievement when other engineers skim through their "phone-tool" page. For tech hobbyists, when playing video games, one important feeling of achievement is obtained through constantly collecting virtual resources (in the format of virtual coins, points, trophies, and badges) by conquering certain challenges, and using the virtual resources to update gaming equipment. In other words, virtual rewards in the format of points, badges, and trophies are a very important type of internal drive for tech hobbyists to make process, develop skills, and eventually achieve mastery in the virtual gaming world.

At the corporate level, managers have a clear understanding that promoting engineers' engagement in such gaming activities can be very beneficial for the company as they can exploit more extra labor, time, and tacit knowledge. The company uses gaming language (play with the phone), gaming events (debugging party), and gaming symbols (e.g. badges and swags) to attract engineers to devote extra time and labor. And among all the engineers, tech-hobbyists are the primary target groups that the company is confident they can successfully allure to participate into the phone tool icon games. These

gaming setup can effectively recall tech-hobbyists' gaming memory and allow them to connect their gaming habits with work activities.

There are three major types of phone icons at Trifecta: 1) phone icons given for fulfilling certain trainings, tests or tasks; 2) phone icons used to promote creativity; and 3) phone icons used to reward engineers for contributing extra time and knowledge beyond their job descriptions. As examples of the first category, "Customer Connection" icons are given to engineers who participate in a workshop organized to train engineers to provide good service to customers; "Making Great Hiring Decisions" icons are awarded to people who join a hiring training session; and "Tier-1 Resolver" icons are used to certify to people who attend Event Management trainings, which discuss strategies used to solve "Tier 1" problems (the most urgent and serious ones). In other words, these phone icons are a type of certificate that engineers receive after attending trainings.

Importantly, the goals defined via each of these icons were clear, specific, and rather easy to achieve. For example, instead of tying the "Customer Connection" icon to an ambiguous and broad requirement, such as always being patient with customers, the icon requirements are concrete and straightforward: participate in a workshop and receive at least one phone call from customer/client team. Similarly, the requirement for obtaining the security badge is not a general standard, such as always keeping security on one's mind or always being conscious of risks that might result in the leaking of information or the loss of data; rather, it is a specific testing of thirteen scenarios that engineers may confront and that could affect Trifecta's data security.

A second kind of icon emphasizes innovation. For example, the "innovation puzzle" icon rewards employees who submit good and patentable ideas. (As shown on

the phone-tool icon page, there were 2,712 people who had received this icon at the time of our fieldwork.) In these cases, the icon is not tied to a particular event and the assessment is more subjective (i.e., what constitutes "good"?). Yet the mechanism – providing a "badge" that is readily viewable by one's fellow employees – is the same. Indeed, several engineers highlighted the innovation-puzzle icon as particularly desirable. When asked why, most of them replied that it reinforces their accomplishment – not only creating something new, but also tackling a complicated project. For tech hobbyists especially, their belief system makes them give much more weight on the value of technological innovation and the feeling of achievement attached to it. For example, Matt, one of hobbyists in Wizard team, is a senior engineer in the team and famous for his obsession with "clean code" and thus high-standard and requirement of code structure. He unpacked his adventure in finding an innovative idea and digging into it, and articulated his understanding how innovation puzzle played a key role in establishing the most important type of confidence for engineers -- the confidence of innovative ability:

> ...came up with something creative.....and really dig into it...think about some patent ideas and pick the one that from your perspective is you know, like, the most creative...and see what you can do with it. And if you really get the icon by the end and the company starts to make a patent application file for your project.. I think it's a very good confidence builder and you get at the end of saying like, 'yeah, I picked some of the most cutting-edge thing out there that I thought I could reasonably create and I did it'...

From Matt's narrative, one can tell that there are several factors that contribute to why innovation icon is one of the most favorite icon among hobbyists. Firstly, the process of exploration (e.g. "really dig into it") apparently generates sufficient amount of personal

enjoyment and thus becomes a very important motivation for engineers to invest into this process. Secondly, for engineers, whose value system largely valorize the ability of creating "cutting-edge" technology, being rewarded for creative competence is much more valuable than being rewarded for other type of achievement. Also, as Matt explained, if engineers really get the icon and the company starts to make a patent application file for them, it is also a "good confidence builder". What did not touch upon but equally important is that, the patent icon brought more materialistic benefits to engineers in addition to confidence and feeling of achievement. If the patent is something work-related and evaluated as having market-facing value, there is a possibility the corporation will help the patent-winner to organize a development team to realize this patent idea. In other words, patent icon becomes a shortcut for the engineers to let their own creative ideas heard from the top. This happened once during my fieldwork in the Pipe Org. One patent idea that proposed by Peter, which revolutionized Trifecta's way of charging music, had adopted by Trifecta as one part of their future plan of reforming their cloud-computing platform. As the innovator, Peter was transferred to the cloud-computing group, promoted to a team manager, and organized his own team to realize his innovation.

The first two categories of icons reward activities that are more readily identified as part of an employee's job. A third kind of icon reinforces a gaming environment that blurs work and non-work activity, by encouraging engineers to devote time, knowledge or labor to tasks that benefit Trifecta but that do not take place during work hours and/or are not tied to formal job descriptions. For example, the "I play with the Trifecta phone" icon is given to engineers who participate in "bug-bash" parties that help make the

company's newly-developed phone a better product. Testing and finding bugs can be the most tedious part of engineering work and most engineers are reluctant to test even their own team's products. Thus, to entice other development teams at Trifecta to test the phone before its release and to help them ensure that it was "bug free," the "Trifecta Phone" development team organized several noontime "I play with the Trifecta phone" bug-bash parties. They also created a special phone icon to reward people who participated in the event. Notably, as a lunchtime event sponsored by another team, the bug-bash parties were far outside most Trifecta engineers' responsibilities. Nonetheless, at the time of our observations, the phone-tool icon website showed that 6,604 people had received this award.

Finally, Trifecta not only organized icon-rewarding testing events to extract engineers' unremunerated labor, but also attempted to capture engineers' tacit knowledge through icons. For example, the company issued "best tipper" icons to engineers who posted tips to the "add-tip-of-the-day@trifecta.com" website, which was also one of the tech hobbyists favorite one and will be discussed in details later in this chapter.

At the team level, managers actively promoted engineers to participate into the badge-collection. For example, the enthusiasm of Pipe Org to participate in E-speaker testing was initiated by Wizard team manager Vikram. Before the E-speaker was released to the market, Vikram brought a testing version of the smart-speaker back to his team and put it on his desk. The new product excited huge interests among engineers of Wizard team. While the team members gathered around Vikram's desk and asked him how he obtained this not-released model to play with, Vikram told them that he had participated into the "I play with the E-speaker" testing parties in order to gain the phone-tool icon. In

the testing event, he also accepted the “5000 question challenge” -- it meant that for participants who were willing to bring the E-speaker back home and ask this E-speaker 5000 questions to test its reaction, they would receive a limited edition of the silver “I play with the E-speaker” that they can list on their phone-tool icon page and keep the E-speaker as an additional awards. And for participants who were willing to ask the E-speaker 10000 questions, they would receive a limited edition of a golden icon and the E-speaker as an additional award. What’s really interesting was that, after the day when Vikram brought his testing E-speaker back to the team area, many members of the Pipe Org successively went to the testing event and brought back their own E-speaker to participate in the 5000 question or the 10000 question challenges. By the end of the week, I found that there was a E-speaker on each engineer's desk in the Wizard team area. During lunch break times and other the short breaks those days, there would be constant stream of questions that engineers threw to their speakers: “Ok, E-speaker. What time is it now?”, “Ok, E-speaker. Will it rain in the next three hours?” “E-speaker, what's in the news?”, "E-speaker, give me a ‘Game of Thrones’ quote.”

Trifecta phone Icons are a “classic” example of gamification operated in the format of inserting gaming elements into non-gaming context. The icons are designed by the corporation and they are pushed by managers like Vikram. They also are intended to increase productivity, by encouraging attainment of clear goals (first category), sharing of ideas for the benefit of the company (second category), or encouraging extra work above and beyond employee’s job description (third category).

Tech Hobbyists gave their wholehearted support to the implementation of phone-tool icon collection into work process. For them, the connection between their habits in

video-game playing and the phone-tool icon collection games came so naturally. And as will be shown from their interpretation of this type of game, one can tell that in tech hobbyists' value system, earning more phone-tool icons indeed helped them earn other tech hobbyists' recognition, just like they always compared virtual badges/equipment they obtain in video games with their peers.

One common theme emerges from tech hobbyists' narrative of their participation into icon collection game involves using their habits and experience of playing video games as a reason to explain motivation of their participation into work game. For example, the tipper icon is one of the most popular phone-tool icons which has more than 6000 recipients. One reason that contributes to its popularity is that engineers get used to learn new knowledge through reading tipping page just like they always learn playing games through skimming through websites/forums where offer gaming-related tips as well. Mike, who is a senior engineer in the Pipe Org told me:

> ...working with new technologies you really have to kind of make time to learn it on your own. Like I'm really interested in cryptography and security, so I'm checking out a lot of tips related to this...like every day ...just kind of as a hobby...I also do the same thing for video games...I keep on top of things like...you know, read gaming tips on Reddit like...almost everyone else on the team…There's a gaming tip subreddit that I check out… it's got a lot of different stuff. A lot of it kind of not in depth...but very practical…

From Mike's discussion, one can learn that reading tips is one important method for tech-hobbyists to "keep on top of things". The "things", in Mike's narrative, can imply both "technologies" and "video games". The ambiguity of Mike's narrative derives from the constant switch between the updating of work-related technological knowledge and the learning of non-work related video-gaming knowledge. However, it is exactly this ambiguity demonstrates the similar nature of these two subjects. And learning through

tips becomes key mechanism to make these two activities even more similar. The question then becomes, why do tech hobbyists prefer to learn from reading tips rather than learning from more authoritative and comprehensive resources? Partially, as mentioned by some of my interviewees, their video gaming experience teaches them that no matter how well they comprehend a gaming strategies (e.g. killing, battling, and dueling strategies), it means nothing until they start practicing these strategies in the "battle field". It works the same for programing skills. In comparison to spend long time reading an entire book or chapter to learn a coding skill, they would rather get started quickly after only briefly reading a simple tipper page, and then keeping reading more specific tippers that target at particular problems they encounter during the process when they implement the codes. To keep it simple, the gaming experience makes tech-hobbyists sincerely consent with the company's promotion of tipper phone-tool icon. Tech-hobbyists know that these tippers can help them speed up the process of starting playing with the codes. And the sooner they start playing with the technology or the coding tricks, the faster they will master the skills/technology. In addition, as publishing a comprehensive article or book on new technology can be a long process, sharing new technology in the format of tips can be much more efficient. In the tech industry, new technologies and coding skills emerge with each passing day. Therefore, as Mike claims, it's more reasonable to learn new technology and "keep top on things" through reading tippers which are usually written timely yet less thoroughly instead of through books or articles.

In addition, not only do tech hobbyists' video gaming experiences guide their active participation in the tipper icon, their gaming experiences also ensure that they

would gain peer recognition and status among the hobbyist groups, which formalize another source to incentivize tech hobbyists to invest into the tipper icon. As Amir explained to me:

> ...I see sharing tips on the tip website just like posting your rampage in the Dota 2 activity feed or game streaming on twitch. You stream it because you want other players to learn how you play, your skills… Just like sometimes I put my coding tips or code examples on the tip website, you know, just to kind of provide an example, but also just to kind of keep like a permanent archive of all this good work that I did…

The sub textual meaning conveyed from Amir's comment is that only if he felt satisfied about his codes and believed they can be used as an example as good codes, would he share them on the tip website. This also depicted a very similar mindset of gamers that motivate them to stream their playing or "post their rampage" on popular game streaming platform, that is they want to present their playing skills and strategies and hope other people who watched their exemplary good play appreciated it. After all, gaining peers' recognition has always been especially important resource of satisfaction and confidence for gamers (Jackson 2016). And the recognition gained through posting good tips and code examples seems especially meaningful for tech hobbyists. Specifically, their mindset as a gamer makes them prefer to and feel more comfortable to use online platform as a channel to present their own technological competence. Many tech hobbyists have expressed to me that they feel their best social activities and "true" social network existed on virtual communities such as twitch (game streaming platform), STEAM (gaming platform), and facebook (online social networking software). To them, these online gaming platforms provide them a space where they finally can feel comfortable to present their competence in front of a virtualized community and social

networking with strangers on the internet. Again, this apparently marks difference from brogrammers who are confident and comfortable to present and talk with people face to face to gain visibility in the real workplace while at the same time earning recognition from colleagues instead of strangers.

Tech hobbyists usually tended to be socially awkward and inclined to use technical skills to gain recognition. Feeling uncomfortable to expose their skills in the real world, tech hobbyists relied heavily on virtual platform (e.g. gaming platform) to socialize and communicate with each other. The phone-tool icon games became an important virtual spaces where hobbyists felt more comfortable to devote their time and effort, presented their technological ability and knowledge, and interacted with other engineers from different teams.

However, as hinted above, their investment tended to be invisible to their own team managers and teammates. Specially, as shown by tech hobbyists' narrative, one can see that much of the effort contributing to icons (e.g. tipper icon) happened on the virtual community and. Similarly, as Matt claimed, when he became very addicted and devoted to help other teams test projects, he would do it "on him spare time" back home as a hobby, which in reality made his efforts largely invisible to managers. Also, working for other teams as hobby also implied that any fruitful result Matt produced for those teams would be unknown to his own team and manager, who played a decisive role in determining his promotion.

Game Over: Using the Countdown Bar for Work Speed-Up

Solving tickets is another important responsibility for engineers and thus becomes a fruitful territory where Trifecta insert gaming elements. Tickets are notices of problems or issues that require an engineer's attention to resolve. Solving ticket is an important maintenance task for a majority of development teams at Trifecta. Developers usually take "on-call" shifts in turn to solve tickets, during which Trifecta requires on-call developers to be available to solve tickets 24 hours-a-day for a seven-day stretch. (The shifts are modeled after on-call duties in the medical profession, though they last longer.) During the on-call week, programmers must clip pagers to their belt and keep a laptop next to them at all times (e.g., even when they are asleep). The engineers whom I interviewed avoided making any plans for off-work leisure activities during their on-call weeks. On-call duties are essential for software maintenance. In addition to solving urgent tickets that appear during the on-call shift, on-call programmers also are responsible for solving "leftover" tickets that other teammates had not been able to solve. Typically, each team will have from 50 to 200 leftover tickets, and these tickets typically are very tricky to solve (which is why they are leftover in the first place).

Ticket is the area where the conflicts between managers and hobbyists really get intensified. In comparison to other two groups, tech-hobbyists' resentment towards to ticket is especially prominent. The most direct reason that contributes to the conflicts between tech-hobbyists and managers is their two groups' divergent pursuit of technology: while managers' emphasis is maximization of profit through aggressively developing new technology at the cost of its quality, tech hobbyists place the perfection of technology at the center regardless of how long it potentially takes to make it flawless.

Drawing from Messerschmidt's analysis, this divergence drives from the different types of masculinity embodied by managers and engineers (Messerschmidt 2008). Specially, managers always tend to choose the risk-taking path to launch the new products even under the condition of knowing the technology is flawed, as this approach will advance both their individual masculine performance as well as corporate interest. In contrast, engineers are more concerned about lowering the risks of products and perfecting the technology as knowing where technological limit locates and improving it shows engineering masculinity.

Therefore, I found that the discussion of ticket and ticket-solving burden during my interviews became an outlet through which tech hobbyists expressed their dissatisfaction. For example, one engineer complained managers' nonstop delivery of new products without solving legacy tickets, which led to the heavy maintenance burden for his team:

> ... management is on the hook to deliver all this business things and features, and so, what they'll do, or what they did a lot, for years at a time, is that they didn't put any time into operational stuff. And so, what happens is, the operational burden increases or accumulates over time ... And, you know, it's just, it's a lot of prioritization. I think what it also boils down to is that, you know, it depends on whether your management is like upward facing or downward facing. Meaning like, do they come in everyday trying to make their boss happy, or trying to make their employees happy.

These problems make managers especially attentive to figure out strategies to make the ticket solving process more "exciting and sexy". As one manager told me while we discussed the necessity of adding more fun to the maintenance (i.e. ticket solving) tasks:

> …We get a lot of legacy code for maintenance and maybe you know when you are doing maintenance it's harder to get credit for. You get more credit for

> building a new one then you get by maintaining much older. So what you try to do is offer a balance...And good managers find the right balance for engineers. But sometimes, it's just difficult. Especially when you get a lot of legacy code for maintenance...so what you really can do is to make the maintenance exciting and sexy...

Then the question becomes, how can managers turn the ticket-solving task into something "exciting and sexy"? One solution is to insert gaming elements to the ticket-solving process. One gaming element added into the ticket-solving process is the "countdown bar", which in fact brings engineers huge pressure of tackling down the ticket within certain time limit. Wizard team manager Vickrum compared it to *Super Mario*:

> You know... when you start the game, a countdown time bar will be activated on the screen right? And you need to complete the level before the timer reaches zero, right? Otherwise you are going to lose a life. So, the idea is same here...on the ticket page, the company sets up a countdown bar… to notify engineers the time… and also add a sense of urgency...like, if you can't solve the ticket within 4 hours, you are out of the game... The ticket will be sent to your manager.

Later when I asked Vikram to help me describe the ticket page in more details, I learnt that there were several levels of time countdown within each ticket solving process. The first timer appears on the screen right after the oncall people is paged. It's a 30 minutes time countdown bar, which is used to trigger an action for engineers. Within the 30 minutes, the on-call engineer only needs to change the ticket status in order to notify the client team that the on-call person from the product (owner) team has already received the ticket and started to get his hands on the issue. Before the 30 minutes running out, the on-call engineer should get a preliminary understanding of the ticket and make a decision on which category of status he wants to put the ticket under. The first category titled "working in progress"-- if on-call engineers put the ticket under this

category, a 4-hour countdown timer will appear on the screen, which means that they need to solve the ticket within 4 hours. If the on-call engineers cannot complete the task within 4 hours, an alarm would begin to ring in the final seconds and the system would automatically page the team manager as the time runs out. Or engineers can put tickets under the "researching" category, which is the second category, to get a 8-hour countdown clock. It implies the problem is more complicated and they need more time to do research to solve the problem. The final category is "pending", which gives no time limit to engineers. And by putting the ticket under "pending", on-call engineers basically tell the client team that they might not be able to solve the ticket at that moment and might get back to deal it later that day.

From Vikram's explanation, it's clear that the setup of countdown bar actually blurred boundaries between a fantasy game, Super Mario, and a real-world challenge faced by the engineers that reported to him. It also should be plausible to speculate that tech-hobbyists are the group who would most easily to be attractive to this video gamified set up. According to Seaborn and Fels (2015), the "countdown" timer setup is a typical game design mechanic. To gamers, when the countdown bar occurs during their playing, it implies that the game was approaching to the life-and-death moment. When such moment occurs and countdown bar appears, gamers are trained very well to immediately become extremely focused to deal with the life-and-death situation and get out of the trap (Seaborn and Fels 2015).

In other words, as many theorists have shown, in comparison to normal people, gamers are more sensitive to countdown bar. And countdown bar can successfully create a sense of urgency, and largely draw gamers' brain attention, which can effectively

increases performance, productivity, problem-solving and learning ability(Edery & Mollick 2009:158; Dan Quine 2016). And as discussed at the beginning of the chapter, most tech hobbyists identified themselves as experienced even addictive game-players. In other words, through introducing this gaming element (i.e. countdown timer) into the work environment, the company successfully mobilizes tech hobbyists' "attention muscle" which is formalized in the gaming context, and transforms it to be used in the working context. Also, once tech hobbyists concentrate on solving one problem or achieving certain goals, the concentration itself can potentially bring more fun to the work itself and thus make the ticket solving more "exciting and sexy".

Inserting Leader Board for the Ticket Platform

Another important gaming element that Trifecta incorporates into the ticket-solving process is the leadership board. In the gaming world, the leaderboard is used to display the ranking of the gamers in competitive type of video games. It is designed to attract gamers to invest more time and energy into the games in order to boost their ranks and thus drive gamers' engagement in the games. To adopt the leaderboard design into the work setting, Trifecta displays the amount of legacy tickets each team remain unresolved on a platform that is called "dashboard". In other words, there are no settled target in terms of how many unsolved tickets one team leave on the dashboard. Instead, the only standard is that the fewer legacy tickets each team has, the higher ranks it can be located on the dashboard. It is such type of uncertainty that introduces a high level of anxiety for each team as they don't know how many legacy tickets they need to solve to meet certain requirement but they do know they need to solve more tickets than other

teams. If most of other gaming elements incorporated into the Trifecta engineering system aim at building fun environment, this ticket dashboard in fact introduces a highly competitive atmosphere where each team needs to beat other teams to move up on the dashboard.

For tech hobbyists, they have a long history of playing video games, which cultivate their habit of closely monitoring every moves of up and down of their ranks on the leaderboard. It implies that the adoption of this leaderboard element can be especially effective in the engineering work environment where contain a large group of tech hobbyists who can be extremely sensitive to rankings of the dashboard. When seeing their own teams' rankings dropped too quickly and/or hit rock bottom on the dashboard platform, tech hobbyists always developed several strategies that they used in the video-gaming world to boost their rankings. For example, during my conversations with some of the gamers in the Pipe Org, I learnt that when they wanted to boost their ranks on leaderboard, a common strategy they would use is to invite all their gaming teammates to their apartments and sit together to play for a whole night or a whole weekend so that they can communicate face-to-face, which was more convenient, efficient, and concentrated. It's called "sprint" by these tech hobbyists. Similarly, tech hobbyists adopted the same "sprint" strategy to boost their own team's rankings whenever they felt necessary.

In fact, the sprint strategy consists as one of the strategies that employed by tech hobbyists in their race to beat other teams on the dashboard, which I call a "self-defending" strategy and majorly concentrated on preserving their own team's current ranking. Another strategy played out by brogrammers, which I call the "trash talking"

strategy and will be discussed in chapter 3, aimed to impair other teams' performances. So for tech hobbyists, the "self-defending" strategy involved frequent "ticket sprints," as hobbyists borrowed from their video gaming experience to label this practice.

In a ticket sprint, one tech hobbyist or a group of hobbyists work extremely long hours in order to work through as many leftover tickets as possible. In one case, for example, Charles solved 60 legacy tickets over the course of a single weekend, single-handedly clearing half of total legacy tickets for his team. Charles later recalled that he stayed up through the night on both Saturday and Sunday nights for his "ticket sprint weekend." On Sunday night, he began doing shots of alcohol while solving as many tickets as possible. Finally, around 5am on Monday morning, he finished solving all the tickets that he was able to handle; he sent out a very brief email to all of Pipe Org on behalf of his team, which read, "[I] did a ticket sprint you jerks. Legacy tickets now down to 60"; and he went to bathroom to vomit, where he subsequently fell asleep on the floor until 9am. For their part, Charles' teammates hailed him as a "hero" and his social status in the group, in our observation, rose, as evidenced by the number of Pipe Org engineers who recounted to each other what Charles had achieved and the use of heroic language in these accounts.

As we can tell from Charles' case, "ticket sprint" is a method preferred by tech hobbyists, as it closely relates to their lifestyle and work habits. As discussed above, one most important feature of tech hobbyists is their lack of ability to differentiate work activity from the off-work activities. In comparison to the other two groups, only tech hobbyists are the group who are willing to bring work back to home, doing extra coding for other teams in their spare time as a hobby, and conducting a ticket sprint in the

weekend. Indeed, the precondition to conduct a successful ticket sprint is the willingness to spend the whole weekend concentrating on solving tickets. During weekdays, although the on-call engineers also contribute the majority time into solving tickets, they are remain constantly disrupted by other work responsibilities, such as doing stand-up report, participating to weekly meetings, answering emails, and holding "office hours" to answer sister teams' questions. And doing a sprint during weekend implies a complete devotion to this task without any disruptions, which undoubtedly increases the efficiency of ticket solving. And tech hobbyists' lack of leisure time activities and friend circles that makes them much more available to conduct the weekend sprint, in comparison to brogrammers and coding peasants. More importantly, they are also more willing to conduct the sprint. The way for them to obtain the feeling of achievement from "ticket sprint" involves intensively concentrating on these tickets, devoting long hours into it, and seeing the numbers of unsolved tickets go down on the ticket boards.

As discussed before, managers know very well that this ticket-solving task itself is not exciting. By encouraging tech hobbyists to adopt this "ticket sprint" strategy, managers can at least make the format of ticket-solving more exciting. Therefore, managers actively promote engineers to do ticket sprint, which can be seen from Zach's (an old manager in the Pipe Org) narrative:

> ... the [ticket] sprint is actually something they [engineers] come up with...but I find very useful to make the maintenance task more exciting...you know, some guys told me ...sometimes it's almost as exciting as doing a Star Wars marathon…

There are several interesting themes emerging from Zach's narrative. Firstly, from Zach's discussion, one can tell that "ticket sprint" is actually a method comes up from engineers rather than managers. Manager's role in this game is "supporters" rather than

"initiators". Secondly, at the end of Zach's narrative, he cited his team members and parallelized the activity of doing ticket sprint with the activity of doing a "Star Wars marathon". After consulting with my interviewees, I found Star Wars marathon is a very popular weekend recreational activities among engineers, especially among the tech hobbyists. I have talked with one hobbyist, Danny, about how he did the marathon. He told me he has done this several times. Sometimes, he would just do it by himself and other times he would ask other people to go to his apartment and watch together. But according to him, he always felt that he almost lost his mind whenever he spent the whole weekend doing the marathon. Based on both Zach and Danny's discussion, one can tell there are certain similarities between the ticket-sprint activity and star-war marathon. For example, both activities involves doing one task for a long time without interruption. Sometimes, the long hours devotion into this single activity might result lost of mind. And it seems like the endurance is the key to survive both types activity. For managers, the key similarity they try to emphasize is the similar feeling of "exciting" during the process of doing both activities.

Lords and Leiges: Fantasy Games and Inequality

If inserting game elements such as virtual badges and countdown timers represent the most systematic top-down gamification techniques that are operated at the scale of the whole corporation, then the introduction of game roles and fantasy characters represents more flexible and contextualized managerial strategies at the team or organizational levels. As discussed above, managers at Trifecta know too well of their tech hobbyists' obsession with the fantasy world constructed in the video game world or in the world of

tabletop board game. Therefore, one important strategy adopted by managers involves fantasizing the scrum system, and blurring the scrum game with tech hobbyists' video game.

Before diving into managerial introduction of game roles into scrum work process, we need to describe scrum,, which consists as another very important work process at Trifecta in addition to badge collection and ticket-solving. Scrum is an agile software development framework, invented by two Japanese scholars, Takeuchi and Nonaka. They claimed, "Companies are increasingly realizing that the old sequential approach to developing new products simply won't get the job done. Instead, companies in Japan and the United States are using a holistic method – as in rugby, the ball gets passed within the team as it moves as a unit up the field" (Takeuchi and Nonaka 1986: 137). The term "scrum" comes from this rugby metaphor.

As discussed briefly in the introduction chapter, a core aspect of the scrum system is the "sprint," which describes a portion a larger project and orients teams of developers around these interim sprint goals. A scrum starts with sprint planning, which is led by a "scrum master," who delegates tasks, and a "project owner," who sets the project priorities and direction. During sprint planning, a team typically identifies a chunk of the most important and doable tasks (called product backlog items) that they want to start and sets the length of a sprint (normally from one to four weeks). Every day, the scrum team meets to report and assess its sprint process. At the end of each sprint, the team holds a retrospective meeting to review their progress and to formally end the sprint. Then, the next cycle of sprint kicks off as the team organizes another sprint meeting and chooses another chunk of the product backlog items. Teams tracked their sprint progress on

"sprint boards" that were divided into five columns, with space to make brief notes under each heading: "To Do (Input Queue)", "In Progress", "Code Review (CR)", and "Release/Testing", "Done." By implementing this board, management achieves to make engineers familiarize with each other's progress while at the same time making them accountable to each other.

To stimulate engineers' commitment to and engagement in the scrum process, I found that managers fantasized the scrum system and blurred the scrum teams with engineers' off-work video-game playing and teams. For example, PipeOrg managers borrowed themes from the popular television show Game of Thrones[15] to design posters that depicted PipeOrg engineers carrying out sprints in service of the team's overall responsibility (addressing security vulnerabilities at Trifecta). These posters displayed a play-on-words from Game of Thrones – "in the game of security, we only play to win" – and portrayed security engineers as tough, brave, and loyal warriors marching in the world of ice and snow, never afraid to fight a (security) battle.

Other managers pushed integration of the fantasy into the real-world at Trifecta even further, "weaponizing" their teams by requesting that each team member to buy a toy gun in order to better imitate warriors. Still other managers drew swamps on the office wall and labeled them with the names of different fishing technologies (software intended to dupe people into revealing information such as passwords) and security bugs

[15] Game of Thrones is an American fantasy drama television series. It is an adaptation of *A Song of Ice and Fire*, George R. R. Martin's series of fantasy novels, the first of which is *A Game of Thrones* (https://en.wikipedia.org/wiki/Game_of_Thrones)

(e.g. The Heartbleed Bug). They warned their team members to "pay attention" to avoid these swamps.

As these examples highlight, Trifecta managers and employees imported imagery and artifacts from fantasies to inspire "real" work. Yet these tactics extended beyond imagery and artifacts, too. Thus, in observing how the scrum game unfolded, I found that managers and employees often drew upon games from outside Trifecta. One of the most popular strategies used by Pipe Org managers to lure their engineers to fantasize they are working in a game world was to draw a parallel between the scrum process and the fantasy tabletop role-playing game "Dungeons & Dragons," which can be considered as the precursor of computer games. For example, one team manager, Vikram, shared an article that he read from Reddit with his team titled, "A Dungeon Master's Guide to SCRUM." In the article, scrum team members are metaphorically referred to as a bunch of brave adventurers who possess different skills and who travel the vast plains of software development to reach the mystic Castle A (e.g., product backlog) in the cloud. With every sprint, the team moves closer to Castle A. Sometimes, the travel involves detours. For example, although the ideal plan is to travel straight towards the castle, the team might find that a bridge over a river is blocked and that they need to move south to find another bridge. Then, after moving to the south, the "blind oracle" (who is the only person who can fully see the castle in the clouds) may decide that from where they stand, going to a new destination, Castle B, is more reasonable than going to Castle A. The article generated considerable and long-lasting discussion among PipeOrg members, and PipeOrg managers frequently cited the detour story when they attempted to explain to

their team members that uncertainty, instability, flexibility, constant re-planning and re-organizing are key features of the scrum system.

Inspired by this article, Morgan, the team manager of the Assassin Team, made paper hats to put on his scrum team members' head based on the characters of Dungeons & Dragons. The Dungeon Master is the most crucial role in the D&D game, which requires the grasp of the rule system and every character of the game, a sense of creative leadership, and delegation skills. In turn, Morgan put the Dungeon Master hat on the head of the scrum master. Morgan also made a "Blind Oracle" hat to put on the project owner's head, along with "warrior", "wizard", "rogue" hats to put on the team members' heads.

For their part, the team members seemed to embrace this metaphor. For example, when describing his scrum master experience in an interview, Zhenhua proactively offered an analogy to the role of Dungeon Master:

> "...I knew we could definitely finish designing the add-on of datastore this sprint. But implementing it to completely replace the local backup might be too much…It would be challenging ... then I thought … well, I am the DM [Dungeon Master]. Just like the good DM who always needs to make players feel challenged to make the game fun, I guess I am also trying to find the right amount of challenge to inspire them to achieve their own feats of greatness…

These examples show how managers and engineers alike drew on fantasies to describe roles and to propel work, not only promoting abstract imagery but also encouraging the use of artifacts such as hats and weapons to reinforce the blurring of boundaries between fantasy and work reality.

More importantly, as shown from this strategy of drawing parallel between scrum process and D&D game, gamification of the scrum process produces a form of soft

power. In other words, gamification of scrum is a process of "subjectification of workers", which is a concept promoted by Foucauldian theorists to understand power as "not simply what we oppose but also, in a strong sense, what we depend on for our existence and what we harbor and preserve in the beings that we are" (Butler 1997: 2). This subjectification process works through implicit as well as explicit metaphorical statements and through meaningful gamification process as well as gaming languages. By drawing the parallel between scrum process and D&D game and calling scrum masters "dungeon masters" or project owner as "blind oracle", managers create work subjects that they need: highly motivated "warriors" who are willing to march together with each other to reach the destination. This subjectification process offers managers the power over engineers that goes beyond that of controlling their behaviors to that of defining engineers' self. As will be illustrated below, in playing along with managers' gamification strategies (e.g. team up for video game, draw pictures imagining selves as "warriors"), engineers actually become the self-motivated gaming characters who are always fight to move forward and level up.

Again, tech hobbyists are the group who are most attracted to manager's strategies of fantasizing the scrum work responsibilities and process. As Kimberly Young (1998) has claimed, gamers' fantasization of game playing and game roles was the key signal of their preoccupation with gaming, which would eventually lead to addiction. In other words, the gamer identity of tech hobbyists makes them lack of immunization to managers' effort of fantasizing the scrum. In addition, tech hobbyists' advocate of fantasization also reflects from their self-initiated activities to strengthen the role-playing theme of scrum work. Firstly, offering nicknames based on characters of fantasy drama,

science fiction, and video games is an important way tech hobbyists fantasize their work. For example, “Jack the North” is the nickname for Jack and is named after one character of Game of Throne - the King of the North. King of the North is portrayed as the symbol of loyal warrior marching in the world of ice and snow, and have never been afraid of fighting battles even the chance of winning was slim.

In fact, hobbyists’ embracement and further development of managerial fantasization of their work were such a common occurrence. For example, on the wall behind his desk, Ammir drew a picture that consisted of two key figures: 1) A warrior with the words “I am totally ‘Tier 1’” on his head, carrying a sword and a shield just outside the gate of a fortress. (Recall that Tier 1 is a phone icon and a certification given to Trifecta engineers who participate in a training series.) 2) A stretch limousine with three skylights and at least 7-8 doors, which was driving straight at the warrior. On the top of the limo, Ammir wrote, “Spike is coming.” When asked about his drawing, Ammir explained that he felt enormous pressure as the team pushed out a new feature at the conclusion of a sprint; at this point, there is a high risk of a large spike in errors, and Ammir’s job is to handle all of these errors. Ammir explained that he drew the picture to give him courage to face the potential spike in errors, fantasizing himself as a heroic well-weaponized warrior prepared to take on the onslaught of a spike.

From Virtual to Real: Use Games to Enable Interaction

Great collaboration is a key for the scrum system as the core of scrum is the whole team moves forward together. One of the tech hobbyists’ strategies of coping with the high requirement of cooperation in scrum is to utilize off-work video game as a tool

to socialize with scrum team members. In other words, tech hobbyists strategies involves building the rapport gaming relationship with scrum team coworkers in the virtual world at home and extending this gaming relationship to workplace.

Indeed, in comparison to other groups of engineers, tech hobbyists were more easily to be portrayed as "shy" and "socially awkward" and had more difficulties to interact with coworkers smoothly. Fortunately, their rich gaming history allowed them to feel comfortable enough to retreat to the virtual gaming world to build relationship with teammates. For example, an engineer, Danny, shared that it took him three weeks to open his mouth to say "Hi" to an engineer, "Little Zach," from another team. He eventually felt comfortable talking with "Little Zach" in real life after he ran into him on the Steam platform[16] and they played Final Fantasy together for several nights. Their first in-person conversations at Trifecta consisted of chatting about the game, only later broadening to include work topics.

Similarly, another tech hobbyist explained:

> A lot of the programming culture, a lot of the tech culture, stems from young people who are gamers...who socially not so – they are not socially ready...a lot of programmers don't know how to properly talk to...interact with others as coworkers, as friends...but they feel more comfortable when playing games with each other...because they grow up in the isolated type environment…like me. I guess I had always played a lot of video games as a kid. I guess this is kind of what I did, like, like I said, I kind of lived in a neighborhood without a lot of other kids ...all I can remember is playing like Nintendo with my brothers and another friend.

In short, online leisure interactions facilitate real-world workplace interactions. In fact, this strategy -- importing off-work gaming relationship to workplace to facilitate team

[16] A digital distribution platform which provides multiplayer gaming, video streaming and social networking services.

collaboration -- was very popular and adopted by most of the development team in the Pipe Org. For example, Wizard team was famous for battling together in CS:GO team and some hobbyists from Knight team joined Wizard occasionally to play together for CS:GO. But Knight team also had their own gaming schedule for League of Legends (LoL) and Danny from Wizard team also joined them for LoL. Very occasionally, members from Ranger team also played CS:GO together with Wizard team. Yet very often, hobbyists like Ben and Little Zach from Knight team also played together with Assassin team for World of Warcraft and Final Fantasy.

Specifically, taking the Wizard team's engineers as one example. Tech hobbyists like Danny, Matt, Old Zach, and Derick, agreed that they would get online the same time every Wednesday and Thursday night to team up and play Counter-Strike: Global Offensive (CS:GO) together. CS:GO is a multi-player first-person "shooter" game that pits two teams against one another. Each team is tasked with completing a challenge and with killing as many people as possible on the opposing team. The Wizard team formed a single CS:GO team that challenged various other (often unknown) teams in the game.

To show his support, Vikram, the Wizard team manager, moved his team's weekly meeting earlier (to be done by 4:30pm) so that his team could finish the day sooner and go back home to start their game. Moreover, the Wizard team's meeting room wall has a corner dedicated to tracking the team's ranking on CS:GO. When the team's rank moves up markedly, Vikram includes it as a success story in the weekly meeting or sprint retrospective. In fact, the Wizard team's off-work CS:GO game activity later also attracted engineers from a neighboring team (the Knight team) to join their CS:GO game.

One thing needed to be pointed out is that the role managers played in this process does not like the role manager played in process such like inserting gaming elements which has been discussed in the first section. In comparison to managers' roles in implementing those rather "top-down" gaming elements (e.g. badge collection, countdown timer, leaderboard) as initiators, managers' role here was close to supporters.This illustrates one important feature of this gaming-relationship importation process is the high level of workers' self-organization, which largely increases workers' sense of commitment. In fact, as scholarship has shown, when such type of process is completely controlled managers, it can easily lead to the risk of threatening workers authenticity and workers will feel phoney of the work games and withdraw from participating into it (Fleming 2005). Therefore, for this process at Trifecta, it was hobbyists who initiated the arrangement of playing video games together during off-work time.

The best story to illustrate the role of video game in facilitating tech hobbyists' survival in scrum process is Ben's narrative of his navigation of the project owner's role. Recall that a project owner determines the priorities and direction of the scrum team's product development – the "blind oracle" in the language of Vikram's article. The project owner's success depends on his knowledge of the client team and his interaction with them. Thus, when Ben was assigned the project owner's role for the Wizard team, he sensed a pressing need to engage with them. Knowing that almost all the members in

Wizard team played CS:GO[17] together, Ben immediately opened a CS:GO account and asked to join the Wizard team. His approach was a success. After playing together with Wizard team for two nights, Ben was invited to the Wizard team area to check out their CS:GO scoreboard. In a subsequent interview, Ben proudly shared that he was amazed that he could interact with Wizard team so well only one week into his assignment. In fact, Ben became so popular in the Wizard team that he was even allowed to join its "stand-up" meeting in order to ask some questions about a feature they had requested. It was a clear violation of protocol since such meetings typically are limited to team members to discuss internal matters and Vikram skeptically considered the request. Yet Peter, a Wizard team member, told Vikram that Ben not only visited the Wizard team area 3-4 times each day, but also played with them at night, adding, "He is basically one of us." Hearing this, Vikram reacted, "No kidding," and immediately asked Ben to join.

Of course, the at-work consequences of participation in non-work games were not always positive. In particular, one very demanding affect this process hason tech hobbyists is that ech hobbyists' work life and private life are further blurred, as they now have to stick with their coworkers as a team even when playing their favorite video games. In other words, they cannot even disengage from socializing with colleagues even after work. Less obviously, the blurring of scrum team and gaming team also leaves space for tech hobbyists to connect team players' video gaming personality with their work behaviors. For example, when I interviewed Suo from Knight team, he told me he

[17] Counter-Strike: Global Offensive (CS:GO) is a multiplayer first-person shooter video game. The game pits two teams against each other: the Terrorists and the Counter-Terrorists (https://en.wikipedia.org/wiki/Counter-Strike:_Global_Offensive)

also played CS:GO with his teammates for a while but quitted eventually, because he sensed that his less competent performance in the CS GO game potentially discredited his work ability:

Suo, another PipeOrg engineer, shared that he played CS:GO with him teammates for a while, but quit eventually:

> I actually don't really like playing CS:GO. I am more into games like LoL (League of Legends) or like WoW (World of Warcraft). But Fei [Suo's teammate] persuaded me that I need to try to play with my team together for CS:GO. You know, to be more social. So I just registered an account and I told Mike. Mike is more like the lead for our team. He seemed... very satisfied… and told me that I can just follow his lead… So I played several nights… and always followed Mike's lead.
>
> But there was one night… I played poorly...you know… I am so new to the game. And I [game character] almost died...so Mike told me to crouch to the room's corner to hide...and that's exactly what I did… but the thing is... I faced to the wall of that corner to crouch… then I heard Mike yell to me through microphone, "Suo, turn around … what the hell are you doing there?! Face to the enemy...shoot them!" Then I realized how stupid I was by … facing to the wall...and leaving my back to the enemy… But the thing is ...I don't think I am really stupid or something… It's just that I am new to the game… and I am trying to get used to all the stuff ...like the game setup…like how to use the shortcut key.
>
> The next day during lunch, Mike just broadcasted my mistake to ... almost half of the PipeOrg in the public kitchen...he was like, "Can you guys believe it? Suo just crouched there, facing to the wall, like he needed to do some serious thinking about his misdeed… so funny." So I quit [the game] after that day… it still bothers me a little bit whenever I remember Mike's cocky tone that day… I have to admit it affects my relationship with Mike a little bit...I just try to avoid talking with him if I can.

There were several very interesting themes emerging from Suo's narrative. Apparently, the factor that motivated him to join the CS:GO game was not his own interest. For Suo, the goal of playing CS:GO was to socialize with his work team. To some extent, playing games functioned almost the same as coworkers' happy hours for Suo. When Suo talked about how he became the joke of the team, it illustrated that gamers' ability was

constantly judged by their coworkers when playing games. Although such evaluations were made on the gaming platform in the private sphere, they could be easily brought to the public sphere and attracted workers who did not join the video games to participate in such evaluation. More problematically, in comparison to other type of profession, the ability required in software developers' scrum work activity (e.g. quick reaction and reformulate of problem-solving templates) sometimes can be overlapped largely with the ability needed for playing fast-paced video game. Although Suo attributed his chaotic reaction to his unfamiliarity with this game, Mike attributed his chaotic reaction to his tangled mind at that. Therefore, this left space for other engineers to extend Suo's gaming performance to explain work behavior, Obviously, Suo realized the negative effect brought by his participation into the game and thus chose to quit the game eventually. It is worth pondering that what if Suo did not choose to quit the game, but chose to devote more time and "grind" his shooting and escaping skills requested by this game. To me, it pointed to an essence of this importation of gaming relationship to work, which was an engineer's sacrifice of his personal interests to such type of team building activity and thus a activity of blurring off-work activity with work activity.

Finally, the blurring of scrum teams and gaming team also meant that tech hobbyists always tended to connect team players' personalities embodied in the game with their work behavior. For example, Jammar's teammates on the Ranger team frequently discussed among themselves and with non-Ranger members Jammar's "self-centeredness," such as only playing leader roles and not support roles, and quitting in the middle of the game. Gradually, other players from the Ranger team excluded Jammar from their CS:GO game and secretly asked Benjamin, an engineer from another team, to

replace him. Yet the sanctions were not limited to the online world. For example, when a manager accidentally left his computer unlocked (enabling others to access it), a Ranger team member used it to send an email to all of PipeOrg, titled, "Ranger is ready to trade Jammar with Benjamin." Although everyone claimed this was a prank, Jammar's unpopularity in the Ranger team was exposed to the whole organization. Ultimately, he was transferred to another Pipe Org team.

As these examples illustrate, relationships and experiences from the non-work gaming world had important impacts on relationships at Trifecta. Thus, far from being isolated to the workplace, the use of games at Trifecta transcended the workplace, serving as one mechanism by which the non-work world influenced daily interactions among Trifecta engineers.

Discussion

Firstly, this chapter's discussion on the computerized gamification process in the workplace demonstrated that the nature of work and the feature of workers have changed dramatically, which resulted in update of the labor games and gamification mechanisms. Modern workplace like Trifecta feature highly-skilled workers charged with innovation and problem-solving, developing new-to-the-world products that cannot be fully scoped in advance. In such a different environment, games themselves may play different roles and operate through different mechanisms. Taking the fantasy games managers promoted in the scrum system for example, it was far more complex and integrated into the labor process than most gamification literature depicted.

Moreover, the games are not well-defined with clear paths and there is little documented guidance of how to play the game. Gaming knowledge is accumulated not only through self-initiated exploration on the site but also heavily relied on workers' past experience. This is why tech hobbyists' gaming habitus accumulated in their childhood becomes their major guidance to invest in the game. For example, it is hobbyists' long time gaming experience make them especially sensitive to the gamification set up in the workplace that mimic their video game setup, such as the countdown timer, the leaderboard, and the badge system. Similarly, it is also their gaming history cultivate their habit of always retreading to the gaming world to build up relationship with team member through battling in the virtual world together. When investing into the workplace game, they intuitively mobilize such habitus to make attempt of blurring the video gaming team and work team in order to facilitate their collaboration with colleagues. The relationship between personal habitus and their formation of investment strategies in work game will be further clarified in the following chapter when I discuss how brogrammers different habitus guide them to adopt completely different gaming strategies even participating in the same game (e.g. the badge collection game).

Finally, this chapter's discussion also attempts to illustrate how gamification itself is a typical Foucauldian control mechanism and tech hobbyists are the group who are most vulnerable in such control. Foucauldian theorists understand power as "not simply what we oppose but also, in a strong sense, what we depend on for our existence and what we harbor and preserve in the beings that we are" (Butler 1997: 2). Viewed in this way, gamification is a process of "subjectification of workers" (Butler 1997) that works by shaping workers' identities. As workers internalized their roles as puzzle solvers or

ticket sprinters, they appear to think of themselves in terms of the games that Trifecta promoted. This subjectification process offers managers power over engineers that goes beyond that of controlling their behaviors to that of defining engineers' self.

Such a soft form of control has especially damaging effect over tech hobbyists as their off-work gaming self is largely blurred with their work self. In studies of normative and cultural control at work (Fleming 2005; Grugulis et al. 2000; Kunda 2009), workers rely on the private realm to rebuild their "authentic self" that they have disguised in the workplace. Moreover, the existence of the "authentic self" becomes an important source for workers to see through attempts by the employer to infuse them with particular corporate values.

Gamified control, however, distorts tech hobbyists' authentic self by reaching into the private sphere and constructing parallels between the identity that hobbyists have cultivated in their leisure pursuit of video games, often since their childhood, and repurposing these values, logics and imagery in service of corporate aims. Thus, in the process of "hanging out" with their friends and exploring longstanding personal interests (e.g., video games), hobbyists find their authentic selves repurposed in service of corporate aims, transforming social relationships and self-image as a teammate, competitor and warrior in the gaming world into something that is, in fact, very real with consequences for professional and personal lives. Ultimately, gamification pushes hobbyists to actually become the self-motivated gaming characters who are always fighting to move forward and "level up" – furthering Trifecta's objectives even as they surrender their social lives to Trifecta's team goals.

CHAPTER III

BROGRAMMERS: PARTICIPATION AND DEVELOPMENT OF "PARTYING STYLE" GAME

The Influx of Brogrammers and Brogrammers' Motivation

High tech's stunning financial success draws scores of would-be bankers and financiers away from Wall Street towards the Pacific coast. Researchers have noted a gradual increase of Harvard Business School graduates who choose Silicon Valley instead of Wall Street: 18% of the class of 2012 was employed in tech compared to 12% in 2011, a 50% increase. Similarly, in 2005, 25% of Yale graduates worked in finance in 2005 but only 14% worked in finance in 2010, with many choosing high tech over finance. Many argue that Silicon Valley is the new Wall Street, especially after the financial crisis in 2008 (Roose 2014; Griffith 2016). The tech world has become an alternative route from banking for an ambitious new generation of young elites who are eager for occupational success and wealth (Chace 2014).

Not surprisingly, this shift in personnel has altered high tech culture. These mostly white, elite young men bring a different sensibility and expectations to Silicon Valley and they confront legions of tech hobbyists as well as coding peasants, who have vastly different dispositions. The result of the marriage of high tech with elite masculinity is the *brogrammer* (a portmanteau of bro and programmer). One cannot find a better description of brogrammers' image than Katherine Losse's account. Katherine Losse is one of Facebook's first round of employees and she used to work as the "ghostwriter" for CEO Mark Zuckerberg. In her memoir *The Boy Kings: A Journey Into the Heart of the Social Network* (2012), Losse discusses the construction of "frat culture" at Facebook as

the result of the arrival of a super group of brogrammers known as "Microsoft Five": "...they were from Harvard and they were programmers, which made them the Valley's version of good old boys….The Microsoft Five quickly established themselves as a new, explicit kind of fraternity: they called themselves Tau Phi Beta, or TFB for the Facebook Fraternity, completely with Greek letters, custom T-shirts, and weekly keg parties at the house they rented together…" (Losse 2012:30).

Several important themes are touched on in Losse's description that actually help explain what makes brogrammers the new generation of elite: their double-sided skills. It is their intertwined identities both as Harvard graduates and "good old boys" and as "programmers" which makes them "the Valley's version of good old boys". Indeed, on the one hand, as illustrated by Losse, "programmer" remains at the core of brogrammers' identity. Brogrammers' engineering background in elite college makes them good at writing code, they have decent technical competence, and can recognize cutting-edge technologies. After all, most brogrammers started their career by writing code and deeply immersing themselves into programming -- both Bill Gates and Mark Zuckerberg are good examples. On the other hand, as depicted in Losse's narrative, brogrammers' fraternity experience and immersion in elite circles (e.g. Harvard, Yale) grants them the cultural competence that neither tech hobbyists nor Asian coding peasants possess. This competence consists of their own personal charisma, their ambition for success and domination, and their instinct to recognize technology's potential beyond its' functionality itself but also its' market value. It is exactly this competence of market value that makes them the ideal candidate to be promoted to manager or to start their own business after a very short working experience as a coder.

Unlike the tech-hobbyist whose motivation of entering the high-tech industry is pioneering cutting-edge technology, or the Asian coding peasants whose orientation is to find a stable job to support their families, the brogrammers' objective is to reproduce their elite status. Technological advancement is not their major concern. What they value most is the financial accumulation opportunities afforded by work in the high tech field, which offers an avenue to join (or remain within) the ranks of the privileged elite. High tech is simply the latest means of achieving this end, one which finance, investment, and real estate have served in the past.

To draw graduates from elite universities away from finance jobs and towards the tech industry, high-tech corporations cultivate a "cool bro" or "brogramming" culture, introducing a "frat" flavor of fun into the industry. In other words, the brogramming culture has become an alternative culture that coexists with the "nerdy" culture, associated with video games or sci-fi and comics, in the high-tech workplace. Through diversifying its culture, high tech firms appeal to both to tech hobbyists via the embrace of "nerdy culture" and brogrammers through the promotion of "brogramming culture".

Tech companies' valorization of fraternity type brogramming culture guarantees brogrammers' upward mobility in the high-tech world. This is of course ensured by the company's introduction of games familiar to college men who participated in fraternities (e.g. drinking games, betting, pranking games, and sports). In fact, these fraternity-related games become key channels through which brogrammers convert their "bro" traits cultivated in college into competence desired by this work site (e.g. aggressiveness, ruthlessness, and leadership spirits). Specifically, while brogrammers are not as technologically obsessed as computer hobbyists, they do possess the conventional

attraction normally embedded by business elites, such as their decent appearance and dressing codes, their leadership spirit and specific type of charisma, their linguistic competence and communication ability to present the technological vision, their strong willingness to take risks and expand aggressively, and their passion in sporting events. Through setting up games like the donut email game that will be explained later, the company offers brogrammers a platform through which they can present their leadership (e.g. by organizing the entire team to target one teammate), and their combativeness (e.g. never afraid of joking with managers), and their competitiveness cultivated through constantly participating in sport (e.g. won't end the game until finding a winner, or betting their life to win the game).

Brogrammers' Domination of Donut Game

In the following sections, I will present brogrammers' investment in labor games from two perspectives. On the one hand, I will focus on a group of games that brogrammers dominated, which I call "partying games". On the other hand, I will investigate how brogrammers participate in and contribute to the gamification embedded in the routines of the engineering work process, which I have introduced in chapter 3. Such games include the blurring of gaming and working relationship in the scrum system; the ticket competition, and the badge collection. Through presenting brogrammers' participation in such gamified processes, I will show how brogrammers' fraternity traits direct them to invest into these games in a completely different way from tech hobbyists.

The Distinct Nature of Donut Pranks at High-tech

I will start by discussing the "partying games" which are normally initiated and dominated by brogrammers, and concentrating on one genre of partying games -- the "donut email prank". The "donut email prank" is designed by the company but enthusiastically played out by brogrammers. The rule of this game is simple. When engineers fail to lock their computers upon departing their desks, colleagues hijacked their email, sending embarrassing email messages organization-wide. As penance, the guilty party has to purchase donuts for his colleagues. The discussion of this genre of joking practices -- the email pranks -- makes the distinct fraternity-based joking culture embedded in such joking practice prominent.

Joking and teasing are such important practices embedded in the donut email prank. Like joking practices conducted in the traditional work setting, this donut prank relies heavily on engineers' self-organization and it requires a certain level of spontaneity. In comparison to the classical labor joking activities, this brogrammer-based ridicule conducted on the engineering work floor has its own distinct features. In other words, the professional nature of engineering work differentiates the donut prank from joking practices conducted by blue collar workers. Most straightforwardly, while joking on the shop floor largely operated as a coping means of making routine tasks more interesting, the pranking game produced in the professional workplace are more easily utilized as an enactment of individual values, a tool of negotiating professional boundaries, and a vehicle to express competition (Collison 1988; Fine & Corte 2017; Holmes, Janet, and Meredith Marra 2002).

Less straightforwardly, the nature of engineering allows workers to operate joking practices online, which brings in a cyber-dimension of joking games in the high-tech industry. The result is that the operation of email pranks is radically divergent from more common joking practices. Specifically, while the audience for the joker's pranks depends on their selection of stages where they conduct pranks in real life, in the cyber realm they decide their audience on the internet through choosing who will be included via the email in which they circulate the jokes. Also, in comparison to completely spontaneous jokes, email humor does possess certain scripted factors to mark it out as an email prank among all-business emails. For example, through longtime practice, workers develop a scripted subject line for these donut emails (e.g. "I love XXX team" or "I love donuts"), which are obvious enough to allow readers to recognize them as donut emails. In addition, the online format of donut pranks reflects a very distinct cyber humor, which is embodied in cartoon pictures (e.g. LOL cat) and characterized by the topicality, self-containment or quick-fix nature (Krotoski 2011). In other words, the distinct culture, language, and symbols embedded in donut emails departs enormously from the joking practices organized in traditional work sites. And yet, very few scholars have paid attention to this new format of workplace humor. An important exception is Taylor and Bain's study which discusses online humor but concentrates on satire generated via the email system as workers circulated such subversive humor through email networks (Taylor and Bain 2003). The following section will present email humor as an important, if under-researched, component of the study of organizational humor.

Brogrammer: Joking to Increase Surveillance and Discipline

It was brogrammers who set the tone for donut emails. When playing the donut email game, the brogrammers had never been satisfied with just using donut emails to expose their teammates' lack of security consciousness. Instead, brogrammers were more keen to insult other engineers whenever they seized an opportunity to write on an unlocked computer. For example, via donut emails, brogrammers mocked coworkers' code quality and absence from work, and laughed at other team's slack in participating in donut games, their slowness of meeting deadlines, newly added features full of loopholes, and barely functioning service. Through this, brogrammers' donut emails transform the vertical control conducted by managers to lateral control and mutual discipline among workers.

As many scholars have demonstrated, when joking practices are initiated by the dominating party (i.e. brogrammers) over those who are less powerful, they are always provoked in a format of mockery or ridicule and ultimately utilized to elevate the superior group at the expense of the inferior group (Critchley 2002). As Ackroyd and Thompson (1999) defined, most jokes involves three actors: 1) the "teasers/jokers" who usually have a higher status than the butt of the joke and thus are able to conduct the jokes on the butts to further diminished the standing of the butts; 2) the "butts" whom the joke is targeted at; 3) the "audience" whom teasers aim to draw attention from and to amuse.

Thanks to brogrammers' exceptional leadership ability, the donut emails they participate in are more likely organized as a collective team behavior. As has been discussed in the previous chapter, the development team is the most important organ of

high-tech firm.[18] As leaders of team-based email pranks, brogrammers' own masculine traits ensure the team-based jokes are always expressed in a competitive style. As will be discussed in more detail in the later section, brogrammers' masculine traits accrued in college makes them always enjoy playing desperate games of one-upmanship and offering glory to acquire domination through beating opponents.

Examples of the content of this type of positioning email includes mocking other teams' project quality, or another team's slack at responding to the donut emails, tardiness in meeting deadlines, and/or producing new features full of loopholes.[19] Again, this marks a distinct departure from classical joking practices on the shop floor: while the conflicts on the shop floor emerged across antagonistic groups that were divided along status line (e.g. lines divided between age groups, lines divided between managers and workers, lines divided between gender groups), the conflicts on the engineering floor emerged along the division between different development teams.

Team v.s. Team: Team Competition over Meeting deadline

Delivering products prior to deadline is the most critical standard that high-tech firms use to evaluate development teams' performance. And different teams' competition over delivering products before deadline becomes an important instrument deployed by

[18] teams are product-based (i.e. 5-10 engineers are organized together as a team based on the purpose of working together to design, develop, and delivery one product). Each team member usually has very different skill set and all team members have to cooperate with each other to ensure the successful delivery of the product. Both the team performance and individual engineer's work performance are majorly evaluated based on the quality of products and the speed/efficiency of their delivery process.

[19] In the field of computing, a loophole is an error or opening in a segment of computing code, which can allow a software program to be exploited and thus increase the security risk of the program.

managers to control labor time and increase productivity (Berret 2004; Perlow 1998; Ó'Riain 2001). Therefore, deriding other teams' inability to meet deadlines is a common theme on the donut email platform. The problem is that, when engineers incorporate deadlines as a topic into their email content they are implicitly holding themselves to the same standards as management, and thereby play a kind of regulatory role.

Drawing on my observation in the Wizard team,[20] the following field note excerpt among Jack the North[21] (White, Male) and Dinesh (Indian, Male) serves as a typical example of how brogrammers' donut emails work:

> Jack the North approached Dinesh's unlocked screen and criticized a team that had recently been widely congratulated for finishing a major project, writing: "Finally, you [Knight Team] got the feature. You guys should have done this a long time ago!" Upon return, Dinesh reported to the recipients that his message was a prank, and proceeded to congratulate the team. The culprit, Jack the North, continued to chide Dinesh, suggesting his success at intimidating his co-worker by sending another email to the team: "Dinesh, you haven't left your desk in two hours… - Jack the North."

This donut email sent by Jack the North reflected a common strategy of brogrammers' donut pranks, which concentrated on using donut emails to monitor other teams' work progress in relationship to imminent deadlines. As discussed above, one critical mechanism that managers adopt to control software development team is the project deadline -- looking over engineer's work through looking over the timeline itself.

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[20] As mentioned in the introduction chapter, Wizard team is one of the four development teams in the Pipe Org where I conducted most intensive observation in the first and second phase of my field work.

[21] "Jack the North" is a nickname, which is named after one character of Game of Throne - the King of the North, who is portrayed as the symbol of tough, brave, loyal warrior marching in the world of ice and snow, and have never been afraid of fighting battles even the chance of winning was slim.

Accusing another team of delaying product completion was a serious accusation. In the tech world, a development process for one project might range from six or seven months to one or two years. On-deadline delivery of a project held the distinct possibility of promotion for junior engineers and even senior engineers. On the other hand, if the development team failed to deliver the project on time, consequences could be severe, including the possible dissolution of the entire development team.

Even worse, the accusing email sent from Jack the North in the Wizard team had an even more damaging effect to the Knight team: the software discussed in the email developed by Knight Team was used to serve the Wizard team -- it is an encryption software which was used to encrypt Wizard team's data transmission software. In other words, compared to other teams' engineers, every team member from Wizard team could speak more authoritatively about Knight Team's progress for developing the encryption software. To some extent, the progress evaluation from Wizard team as Knight's sister team seemed even more objective than the assessment coming from the Knight team itself.

Donut email pranks provided a stage where manager's time-control responsibility had transformed to the engineers' responsibility. That is, engineers performed managers' role of looking over their own work time and assessing the development team's productivity by discussing their ability to meet the deadline. By stating "Finally, you [Knight Team] got the feature. You guys should have done this a long time ago!", Jack the North actually conducted a supervision over Knight team's progress and shamed the Knight team's delay of launching in front of other teams on the donut email platform. To a certain extent, labor discipline in the engineering workplace was not based on

managers' explicit supervision, but handed over to brogrammers, cloaked under the guise of the joke. Such types of joking practice were very common on the donut email platform. By laughing at the other team's slowness at catching up to the deadline, engineers brought the intensification of time to the team they teased. As a result of constant mutual disdain against other teams' slowness on the donut platform, hierarchical control and surveillance became unnecessary and instead were replaced with development teams' mutual surveillance of each other.

Team v.s. Team: Correlation between slacker at donut game and heavy ticket load

The intensification of team-to-team teasing via donut emails always happened in the terrain where the competition between teams was concentrated. If the above case presented that software develop pace was an important terrain where teams would attack and compete against each other, then the following case showed ticket-solving was another fertile territory for teams to conduct surveillance and compete against each other via donut email pranks. As has been discussed in Chapter 2, solving tickets was an important work responsibility of developers.[22] If there was any error occurring when the client team used the software provided by the team which developed it (the owner team), the client team would "cut" a ticket to the owner team. Developers in the owner team who were on-call[23] to maintain the software would be paged and informed about the

[22] To some extent, tickets have similar functions as customers' complaints, except the fact that "customers" are actually engineers from "client teams".

[23] Each developer needs to take "on-call" weeks in turn. During their on-call week, they normally suspend any projects they are doing during the week but only concentrated on monitoring the major project (software) of their team to ensure there is no mistake happening while the project is operating. The requirement for on-call developers is to be available to solve

ticket, and needed to jump on solving the problem.[24] Developers usually take "on-call" in turn to solve tickets. One important characteristic of team's ticket-solving task was that each team's ticket-solving performance was measured relatively. In other words, there were no settled target in terms of how many tickets should one team solve within a certain period. Instead, the only standard was that the fewer legacy tickets each team had, the higher ranks it could be located on the ticket-solving dashboard. It was such type of uncertainty and relativity that introduced a high level of anxiety and the need of competition for ticket solving among teams. Donut emails became an important stage where development teams competed over tickets.

Brogrammers, as the most competitive and ambitious group of engineers, were always ready to lead their teammates to battle and compete against other teams over tickets. For example, Phillip once accused Ranger team of being slack in the donut email games, and made it related to their "poor software and heavy ticket load". Philip's theory was that Ranger's poorly functioning software resulted in their heavy ticket load, which made everyone in the team very busy dealing with tickets and thus too exhausted to participate donut email games. Philip hypothesized a linear correlation between team's ticket load and enthusiasm of participation in the donut email: teams with lighter ticket loads will participate the donut emails more frequently, and vice versa.[25] Philip's theory

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tickets 24 hours and 7 days. During the on-call week, programmers need to clip pagers to their belt and keep laptop next to them all the time even when they are asleep.

[24] In addition to solve the most urgent tickets cut during his on-call shift, on-call programmers are also responsible for solving leftover tickets cut to their team previously but not been able to solve. Normally, each team will have from 60 - 200 leftover tickets and those tickets are usually very tricky to solve.

[25] The logic of this so-called correlation is that only engineers in the team that has lighter ticket load will have more leisure time to goof around and also have more energy to involve in teasing

generated a heated discussion. Most respondents echoed Philip's theory and tried to provide more "data points" to strengthen Philip's hypothesis. By relating participation in the game to ticket load, Philip and his buddies actually brought intangible pressure to push teams like Ranger to join the game in order to avoid unnecessary skepticism of their team's workload.

Bro v.s. Bro: Mutual Shaming and Exploding Misbehaviors

Shaming coworkers' misbehaviors is another focus of brogrammers' donut emails. For example, one Monday, everyone in the Knight team received a donut email sent from Charles' account by an unidentified assailant with one sentence putting in the subject line "I will bring donuts for the team tomorrow" and with another sentence written in the content, "because I was drunk when solving tickets". As we have discussed above, solving tickets is an important work responsibility of developers and engineers were all well aware of the essentiality of their on-call duty for software maintenance, and they are inclined to avoid making any plans for off-work leisure activities during their on-call weeks.[26] However, during one weekend when Charles was on-call, he went to a keg party organized by some other brogrammers in the Wallet Org.[27] And he was completely drunk when his pager was annoyingly beeping to inform him a very important and urgent ticket. Seeing this donut email exposing Charles' misbehavior, Philip (a brogrammer

activities such as donut emails. On the contrary, engineers who are in the team with heavy ticket loads need to utilize all their spare time to help oncall member deal with legacy tickets and thus will have no leisure time and energy to participate in games such as donut emails.

[26] Through this way, on-call engineers can immediately open the laptops and get their brains into gear for solving problems the moment they receive tickets

[27] That's why he later told us he know very well the whistleblower was among those bros since they were the only people witnessing him getting drunk

from Knight Team) told Charles he needed to get the team some pastries nicer than donuts. So Charles brought scones to his team the next morning and replied the donut email, “Homemade cranberry scones (out of the oven an hour ago) on Nick's old desk. Hope you can taste the spite in every bite (Haha just kidding)”.

From this prank, one can see how donut emails function as a way to discipline misbehaviors, and occasionally would be adjusted by brogrammers based on the severity of engineers’ mistakes -- if bringing donuts is used for minor mistakes (e.g. not locking computers), then bringing “nicer” pastries signals punishments for more serious mistakes (e.g. drunk while on-call). However, unlike factory disciplinary regimes where punishments rely on docking wages and how much to dock is written in the handbook as fixed regulations, high-tech firms’ punishment in the format of bringing pastries can be adjusted depending on brogrammers’ decisions, which seems more humane on the surface but in substance more difficult to be resented. But this was not the end of the story.

Bro v.s. Managers: Teasing With Managers

Managers and brogrammers also ritually exchange insults, which help them formalize mutually beneficial ties: for brogrammers, challenging superiors shows their fearlessness; for managers, through teasing with brogrammers, they demonstrate that they are approachable and less intimidating, which make the workplace seem more meritocratic. To some extent, brogrammers share the most similarities with managers. This is the special feature of the high-tech industry. Managers are technical managers and also have engineering educational backgrounds. Before becoming managers, they were

the brogrammers in teams and promoted to move to the managerial track due to their demonstration of their leadership ability. Similarly, brogrammers will most likely become managers in the future to follow in their current managers' career path. And the exchange of insults that only happens between managers and brogrammers further illustrates the similar traits shared by them.

For example, Peter is well known for being keen to tease Jonathan, who is a senior manager of Wallet Org. One day after someone used Principal Manager Josh's account to send out a donut email, Josh started to chat with engineers to figure out who sent the email. Seeing this, Peter replied to Josh's donut email conversation, saying, "Make sure you thank Jonathan for teaching you about security." Seeing Peter's accusation, Jonathan's response went head to head with Peter, "I don't know why you're blaming me. This is a libelous insult to my character!" Ignoring Jonathan's self-defense, Josh replied directly to Peter, "Yeah, helpful of him." To certain extent, the conversation showed Peter's explicit resistance to authority, manifested through spoken disdain of a senior manager. By successfully fitting in donut pranks, managers are able to reshape the resistance-orientated joking practices that intensifies antagonism between managers and workers into a practice that builds solidarity across managers and workers.

Summary of Brogrammers' Donut Email Pranks

To summarize, the team vs. team donut needling over deadlines and ticket-solving shows brogrammers have partially replaced managers in performing surveillance and discipline over their coworkers. Specifically, through allowing brogrammers to lead their teams to conduct donut email pranks to attack other team's slowness at meeting

deadlines, managers ensure the pressure of promoting competition across teams is transformed onto brogrammers' shoulders. In turn, through sending donut emails to attack other teams' slackness at participating into donut games in comparison to their own teams, brogrammers demonstrate their potential of becoming a good manager: aggressively and ruthlessly promoting their own teams at the cost of devaluing other teams, enhance their own teams' status, and thus increasing their team's solidarity and visibility.

The function of individual vs. Individual donut emails both share similarity with and mark difference from team vs. team donut email. On the one hand, like the team-based donut emails, the mutual attacks between brogrammers not only increase the mutual surveillance, but also allow managers to transform the responsibility of discipline to brogrammers and thus redirect hierarchical conflicts to horizontal ones. And of course, brogrammers' self-valorization of being tough and able to take ridicule is also the precondition of justifying lateral surveillance and making it more tolerable. On the other hand, the constant mutual teasing between brogrammers and managers not only increases the bond among them but also reinforces the exclusive nature of these small circles. Indeed, fraternal bonding in everyday life takes a form of group teasing and this functions to reinforce group solidarity. In the meantime, by participating in brogrammers' donut games, managers not only show that they are approachable and tough enough to take the ridicule, but also demonstrate their trust to brogrammers who they believe have enough cultural capital to know the implicit rules of this game and thus won't push it too far. As a result, managers' trust towards brogrammers is gradually built up via their interactions

with brogrammers on the donut email platform, which lays an important foundation for brogrammers to move into managerial career paths.

The Role of Brogrammer's Masculine Traits in Donut Emails

Brogrammers' masculine traits acquired in college play a key role in guiding their strategies of developing and reacting to donut emails. This can be reflected in brogrammer Peter's narrative of how the hazing involved in initiation into full membership at his fraternity steeled him for professional life: "… it was like two months going through hell…And when you kind of work through that two months… you knew you beat it… So real life is more like…easily made of 8 hours…like for now, whenever I need to beat a deadline, I can just code for a week without sleeping, without doing anything else…" Therefore, masculine traits embodied by brogrammers become an important resource to mobilize their productivity in the engineering workplace.

In addition, brogrammers' donut emails also created a hegemony of masculinity that emphasizes "one-upmanship" and rewards exchange of insults between brogrammers. An excerpt that I wrote several days after Jack the North's prank shaming Knight team's slowness at meeting the deadline documents Peter's complement of North's cruelty: ".Jack regaled his fellow brogrammer, Peter, who was absent from the tale of the donut email. Peter replied: 'Jack, you are such a douchebag! You just have like… [been] surrounded by the douche air…' Jack laughed and muttered 'What the fuck'. And Peter added: 'Don't take me the wrong way. I like it.'"

This ritual exchange of insults between Jack the North and Peter defines typical interactions among brogrammers. Their mutual approval of cruelty for fun and the use of

foul language also interactively reinforces the fraternity-based masculinity, which emphasizes "being cool and funny" while enacting domination and strength. They would reply to their donut emails to ask the prankster to "come at me again, bro", accompanied with a picture of the joker from the Batman movie or a threatening remark like, "Someone hacked my computer. I hope he is drawn and quartered." And yet, when their "buddies" are caught, they would show their empathy by replying to the donut emails, "I know that feel, bro".

Brogrammers' Participation into the Gamified Work Process

If the donut email prank discussed above is the "home field" for brogrammers to display their masculine traits and leadership competence, then video-gamified project that tech hobbyists heavily invested is the brogrammers' "visiting field". As I have introduced in Chapter 3, tech hobbyists are the major players for these video-gamified project. Due to the video-gamified project's nature as highly invisible, technologically intensive and time-consuming, brogrammers only halfheartedly invest in these games. However, as will be shown below, when brogrammers participate into these games, their fraternity traits direct them to invest into these games in a completely different way from tech hobbyists.

Russian Roulette: Brogrammers' Solution of Scrum Labor Division Crisis

As last chapter has discussed, good collaboration is the cornerstone of the scrum system. Therefore, like tech hobbyists, brogrammers also need to develop their own strategies to increase their collaboration with other members in the scrum team. If the obstacle for tech hobbyists to improve their collaboration is their social skills, then the

factor that contributes to brogrammers' difficulty in building good team relationships is their "bro" traits such as aggressiveness, arrogance, and domination.

One example would be brogrammers' unpopularity during the peer Code Review (CR) process. One key stage integrated into the scrum development cycle is the CR process, which is used to let scrum team members review and examine each other's codes, detect mistakes, and offer suggestions to code writers before deployment.[28] While some of reviewer's comments might just involve identification with minor "grammatical" errors for their teammates, other comments are more complex and aim at identifying critical mistakes that might have the potential to crash a system (Andrew, Leir and Landry 2005). Like many high-tech giants in the U.S., Trifecta also incorporates CR into the scrum development process and designates CR as an obligatory requirement of development teams. However, Trifecta allows development teams to determine how they assign the CR task based on their own situations and interests. Some teams ask their team members to send codes to the whole team and whoever is available should jump in and do the CR. Other teams, such as teams in the Wallet Org, require code writers to send CR invitations to two teammates. To some extent, the mutual review of codes among teammates is also a mutual surveillance process. The number of the mistakes/bugs identified by teammates in the finished codes can be seen as a sign of the developers' coding skills, training, and their commitment to the project. Teammate's interpretation and evaluation of each other's coding skills and comments based on CR is used and

[28] CR is proved to be one most effective way to uncover flaws, ensure code quality, and encourage team members to get familiar with shared code base and establish common coding standards collaboratively.

incorporated into the half-year peer reviews. Finally, not only did reviewers encourage finding the mistakes for the coder, they were also encouraged to provide detailed comments to the code writer. As scholars have pointed out, commenting on developers' code plays an important role in ensuring coders from the same team share certain level of style consistency among their codes and thus has a function to standardize the team's coding process. Such attempts of standardizing codes through the CR step always elicited resistance from brogrammers, as their codes are always a representation of their unabashed individuality. This leads to brogrammers' teammates' reluctance to do CR for them. In other words, conflicts occur quite often in the process of allocating CR tasks.[29] Under the situation when conflicts are largely intensified, many teams developed their own methods to get through this tough phase.

Take the Assassin team for example. They have come up an idea of using Russian Roulette to designate a reviewer to do CR for Deron, who was a brogrammer in the Assassin team. Most engineers in the Assassin team attempted to avoid accepting

[29] During my interview with 48 engineers, I identified many reasons contribute to their hesitation of offering CR to teammates. For junior engineers I interviewed, many told me they really struggled over doing CR for senior engineers -- it takes them long time to even understand senior engineers' code. Once they can't understand code, they felt really shy to ask the senior code writer to explain for them. As FX elaborated, "I am always worried our senior engineer might laugh me out". Or others worried the senior coders might sometimes feel interrogated. For other experienced engineers, their reluctance to accept CR invitation is based on the consideration of earning credits -- CR is the type of work that requests high input (major time) but with low output. Feng, a Chinese engineer coming from the cloud computing team, told me there was one time when he spent two complete afternoon doing a CR for a huge chunk of code (more than 2000 lines). But the whole time he just wished he can re-write it from scratch by himself, which probably takes less time. Finally, many engineers complained that authors of codes can get offended easily and it takes so much energy to convince the writer. As one interviewee Howard told me, "All programmers have egos. It very common that the writer insist his approach is right and my comments are wrong. Sometimes I really don't want to ruin the quality of codes or to see something bad happen during release. So I have to point it out, which means I have to fight hard over this…. Sometimes it's really exhausting".

Deron's CR invitation because they believed that Deron's codes are "smart but messy". In other words, it would involve substantial extra labor for engineers to do code review for Deron. When Deron is in the mood of hacking a deadline, he tended to push his codes out to prod without waiting for his code reviewers' feedbacks and sometimes even completely bypassed the pipeline, which creates potential risks needed to be shouldered by both himself and his code reviewer. In fact, one of Deron's teammates Bob (a tech hobbyist in the Assassin team) offered a comprehensive analysis on why it was difficult to do CR for Deron's code:

> ...Deron was really smart and his codes.. all super complicated and weird it's just, like, you know, that's a real nightmare...When he wrote ...He can do really tricky stuff. But when you do CR for him, you kinda have to deal with the consequences of that...When you do CR, You expect things to be kinda, you know, ... lay out a certain way….But if he starts to do really tricky stuff...things that aren't standard. That just makes it hard for you. I think he needs to learn that simplicity and readability are almost the most important…

Like Bob, many of Deron's teammates interpreted his code as "elegant and smart", filled with "exciting new features [of a programming language] normally unknown from others", but at the same time criticized it for a "lack of consistency". Comments about Deron's codes reflected that he showed no respect to "rules, standards, and formats". In addition, Deron's teammates in Assassin team also mentioned that Deron did not like his code to be modified and could become irritable when his code reviewers request that he revise his codes. All these factors contributed to Deron's difficulties finding a volunteer to do code review for his project.

Without a manager's involvement, Deron's CR crisis was solved by his buddy Charlie through playing Russian Roulette. Charlie was another Brogrammer in the Assassin team. At that time when the Assassin team encountered difficulties in assigning

people to do CR for Deron, Charlie was participating the management training program, getting ready to be promoted to become a manager for a newly organized team, and thus very interested in tackling team management difficulties such as Deron's CR crisis. The delivery of one team member's toy revolver gun gave Charlie a flash of insight. Assassin team manager Logan encouraged his team members to be fully "weaponized". After WZH joined the team, he immediately adopted this "team culture" and ordered a toy revolver gun. After the toy gun was delivered to the team area, every team member gathered around WZH and praised the gun is so well made – the chamber could be spun very smoothly and make a complete stop before locked back in. Then some members started to discuss how to use the loaded revolver gun to play the Russian Roulette game. Not surprisingly, tech hobbyists were soon entangled in the topic of the odd differences of getting the bullet for each spin of the chamber. Hearing the team's zealous discussion of Russian Roulette, Charlie suggested that they could use this game to decide who was going to do the CR for Deron. In other words, whoever got the bullet would do Deron's CR.

Charlie's proposal immediately won the support of the team manager Logan. Logan solicited Charlie to collect ideas about how to play the game from team members during that day's stand-up meeting, and write down basic rules they came up on the board, including that Deron wouldn't participate in the game so that the team can have six players for the six-chamber revolver and players need to spin before every shot to ensure the odds are equal for every member. The scene was brutal while they played the game. WZH firstly started the game, loaded one bullet, spun the chamber, placed the muzzle against his head, pulled the trigger, but got an empty chambers and thus survived

the game, avoiding the CR responsibility. And after three engineers clicked off empty chambers, Charlie pulled the trigger and eventually fired off the bullet. So the game ended up with Charlie accepting the CR task. Later I learnt that they played the same game to decide code reviewer for other engineers several times also. The Russian Roulette game earned Charlie lot of credits as several engineers have complimented his "people skills", "managerial skills" and "talent of having fun". It also became a tradition of the Assassin team. When the Assassin team was sent to Las Vegas for a national tech conference, their team manager Logan organized his team together to play the roulette game in a casino.

The Russian Roulette game reflects core values of the high-tech workplace, including fairness as each person has the same odds to fire off the bullet. It also highlights the fun and informal working environment, solving a labor problem by turning it into a game. Brogrammers' ability to adopt the Russian roulette game to solve the CR crisis shows that they are not only good at cracking the corporation's culture, but also capable of promoting corporate culture through developing certain managerial strategies embodied in such culture. In addition, the Russian Roulette game itself embodies brutality and cruelness, which is closely associated with brogrammers masculine traits and fraternal habitus. The core of this game is reflected its brutality. After all, what the game bet on in real world is actual life or death.

In addition, it is not surprising that it is the brogrammer Charlie who came up with this gaming idea -- one of my interviewees reported that Russian Roulette is in fact a very popular drinking game in fraternities. There was an even specially made Russian Roulette revolver which could hold liquor in the handle. When they used it to play

drinking games, they loaded the revolver with liquor and passed it around. Who got the shot would drink the liquor from the revolver. In other words, by designing the roulette game, brogrammers like Charlie converted the fraternity habitus cultivated in colleges into the engineering workplace, which at the same time reinforced their heroic image through placing themselves in an interesting game of will with life and death stakes.

Trash Talk: Brogrammers' Participation in Ticket Competition

As briefly discussed in previous chapter, competition between teams is one important strategy that Trifecta adopts to motivate engineers to tackle their ticket-solving assignments. In comparison to workers' scrum project assignments, engineers generally feel less interested in devoting time to solve tickets as such tasks are less creative and less critical in comparison to finishing designing a new project. In other words, workers hardly feel accomplished and rarely earn credits by solving tickets. Yet, solving tickets and correcting errors for old project are crucial for the maintenance of the project. Facing such a situation, Trifecta does not set a fixed standard of exactly the number of legacy tickets each team should solve. Instead, the evaluation of whether each team does a good work of minimizing legacy tickets largely relies on its comparison to other teams. In this way, the company pits teams against each other. And the dashboard provides an important platform to not only allow each team to track their tickets metrics but also let them compare tickets relative to other teams. Such a set up effectively stimulates each team to compete against each other and set higher goals in such competitions.

Brogrammers' self-developed strategies of participating in the Ticket competition largely involve "trash-talking" about other teams' performance. Yip, Schweitzer, and

Nurmohamed (2016) defined trash-talking as an uncivil behavior in the format of boastful comments about the self or insulting remarks about competitors, which can be used in corporate setting to increase the psychological stakes of competition. In fact, in addition to the consequence of an increasing sense of competition, as will be shown below, brogrammers' trash-talking is operated on behalf of the whole team and thus its aim is to establish themselves as the core figure of their team.

Unlike tech hobbyists, brogrammers method of engagement with ticket-solving tasks does not involve doing "ticket sprint" (remind us what that is), rather they use it as an opportunity to grandstand. As we all know, the ticket sprint is closely connected with tech hobbyists' gaming habitus, which is conditioned by hobbyists' lifestyle which is inclined to blur work and off-work activities, their addiction to all kinds of sprints (e.g. Sci-fi movie weekend sprint, gaming night sprint, etc.), and their inertial thinking to obtain advanced positions in different types of competition by devoting to more time or effort to it. Brogrammers are also eager to beat competitors in the ticket competition. However, they adopt an alternative approach to achieve this goal -- a "trash talking" strategy. Specifically, brogrammers' trash talking strategy involves treating other teams as "imaginary opponents" and shaming these "imaginary opponents" in public to boost their own team's pride.

For example, Philip once accused Ranger team of slacking off in participating into off-work video games organized in the Pipe Org, and made it related to Ranger team's heavy ticket load. Philip's theory was that Ranger's heavy ticket load made everyone in the team too tired to handle the on-call burden and unwilling to participate into donut email games. Philip hypothesized a linear correlation between the numbers of

tickets and enthusiasm of participation in donut game: the more legacy tickets in the team, the less frequently that team's members participated in the donut games. Philip's hypothesis generated a heated discussion. Most engineers echoed Philip's theory and tried to provide more "data points" to strengthen Philip's hypothesis. The problem is, by relating donut email game participation with the legacy tickets burden, Philip and other engineers actually brought intangible pressure to push Ranger team to devote more effort to reduce their legacy tickets.

Several implications can be found from the trash talking strategy described above. Recalling last chapter's analysis, one strategy that tech hobbyists mobilize to cope with ticket competition between teams is the ticket sprint. By adopting weekend ticket sprint strategies, tech hobbyists in fact invest their leisure time into this game in order to enhance their own teams' standings in this ticket competition. Although the goal of such strategies is to boost teams' performance as a whole, the operation of the ticket sprint is an individualist endeavor and largely invisible to the public. In comparison, if tech hobbyists' ticket sprint strategy relies on their individual investment of leisure time and extra labor to achieve boosting of their own team's performance, then brogrammers' trash-talking strategies relies on their "people skills", their leadership spirit, and their superb expression/language ability to speak on behalf of their team to establish their own team's advanced position in the ticket competition. This is not through enhancing their own team's standing but through devaluing other teams' performance, mocking other teams' engineers by calling them as "slackers", "suckers", "douchebags", or conducting

inflammatory moves through throwing inciting comments to other teams (e.g. "come at me again, bro!").[30]

Bro Participation into Badge-collection Game

In comparison to tech-hobbyists, brogrammers show much less interest in the phone-tool icon games. It's reasonable to speculate that brogrammers' indifference to phone-tool games relates to the nature of icon games and brogrammers' personal traits. As stated in Chapter 3 on tech hobbyists, collecting phone-tool icons can be very time-consuming and is highly demanding of engineers' devotion to some tedious task (e.g. testing). And there is one factor that is not elaborated upon in the previous discussion, which is the high invisibility of workers' investment into the phone-tool icon games. In other words, for some icons, such as the icons used to reward engineers who devote extra labor to help other development teams to test their codes for bugs, to earn this type of icon involves monotonous, mundane, and time-consuming debugging activities. For some really tricky bugs, it can cost engineers a whole day or even two to debug. However, what they can gain from devoting 10-30 hours' debugging activities is just a phone-tool icon which has the same symbolic values as other phone-tool icons like the "security badge" icon, which would just cost engineers less than 30 minutes to obtain.[31] In other words, the extensive efforts and hours that engineers invest to obtain certain icons are highly invisible.

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[30] Several of these namings have been mentioned while introducing brogrammers' participation in donut email pranks.

[31] The way to get the security badge icon is to take a test involves questions on thirteen security protection scenarios. If people pass the security test, they will be awarded the security badge.

Obviously, such invisibility contained within the badge/icon collection game is not something that brogrammers would enjoy. On the contrary, brogrammers' personal traits and social skills acquired in college makes them highly valorize gaining recognition through exposing themselves under the spotlight, and obtaining status through dominating interaction or conversation. Therefore, when brogrammers participate in phone-tool icon collection games, they choose to collect those icons that are more visible to their coworkers and managers. In addition, they are also capable of attracting more people to discuss or participate in their own collection processes and thus achieve making their collection a public event. Finally, brogrammers have never been satisfied with playing along with the phone-tool collection game as the managers have set up. Whenever they invest in the collection game, they always add more "fraternity" flavor to it. Sometimes, it can be reflected by adding more teasing and pranking activities/conversations into their collection practice.

For example, the E-speaker testing badge was relatively popular among brogrammers. For one thing, it was the team manager Vikram who brought the E-speaker back to the team area and encouraged his team members to participate in the 5000 question-testing challenge for the E-speaker (i.e. 5000 question challenge). For another, the format of investing in this game involved testing E-speakers publically in the team area, which made this event highly visible to the team. When brogrammers participated in the E-speaker testing game, they turned it into a prank through teasing it with humorous questions.

Specifically, during the period when the whole Wizard team accepted the 5000 question-testing challenges for the E-speaker testing event, Peter, the brogrammer in

Wizard team, was not satisfied with just testing the speaker with basic questions such as asking about weather, news, sports, etc, Instead, he came up funny and tricky questions to test the speakers, such as “Ok, E-speaker. When is the end of the world?”, “E-speaker, did you fart?” “ "E-speaker, will you be my girlfriend?", “E-speaker, are you smarter than me?” He used it as a means to entertain and demonstrate his wit. During those days when the team tested the E-speaker, brogrammers like Peter would lead team to discuss all sorts of relevant issues related to the speaker during the lunch break. For example, leading by Peter, one favorite thing that the team discussed was how the E-speaker got to figure out answers for their testing questions. While tech hobbyists’ reaction to how E-speaker figured out answers involve serious discussion on the artificial intelligence design behind the smart speaker, brogrammers’ answer to how the E-speaker answered questions involved ridiculing the smart speaker design by assuming that there were actually no such AI designs but just a group of “outsourced laborers” hired to hide in a cave and answer all of these questions. For example, Peter imitated an imagined outraged “outsourced laborer” after answering the same question “what time is it now” over and over again and finally getting annoyed, “it’s 2:30 pm… it’s 2:31 pm, my lord… you have been asking me this same question 30 times...It’s 2:32 pm, you fucking Idiot! Stop asking me the same question...question….question!” (Peter mimics a fading echo, as in a cave.). Similarly, another brogrammer in the Wizard team, Jack the North, personified the E-speaker as well but reclined and acted out the the E-speaker as an “exotic lady”.

What is more significant is that we can learn from brogrammers’ personification of the E-speaker is their “two-headed” insights: on the one hand, they also can rely on their technological know-how to interpret software projects and thus have a decent

conversation with tech hobbyists. However, on the other hand, unlike tech hobbyists who tended to understand the E-speaker from a pure engineering perspective, concentrating on the artificial intelligence design, and interpreting the speaker as a complex blob of software programs, brogrammers' approach to interpreting the E-speaker is less-tech-savvy, and they are inclined to portray it as a real person. Obviously, brogrammers interpretation is more easily understood and thus more attractive to the technological layman, who actually make the majority of the potential consumers of the E-speaker. In other words, although brogrammers also have the technological competence to understand the existing functionalities of the E-speaker from an engineering perspective, they also possess the ability to identity potential exciting elements of the speaker from a "normal people" and customer's perspective. This "normal people" view point is gold for the company to attract potential customers and conquer the market for E-speakers. In fact, as shown from Trifecta's later advertisement campaign for its E-speaker, the strategy it adopted to attract customers is indeed to portray this E-speaker as a real person that people can talk with, *not* a cold-blooded yet technologically sophisticated software. Specifically, in a series of advertisement, Trifecta portrayed its speaker as a shy girl who has very "humble personality" and even portrayed her in certain common human situations such as losing her voice. Apparently, many months prior to the marketing department coming up with this advertising campaign, brogrammers like Peter and Jack had already depended on their sensitive sense of the market and customers' interests to develop a sketch of the advertisement plan, which to certain extent proved brogrammers' extraordinary competence in reconciling technological development and market interest.

Among all these badges, there is one badge named “innovation puzzle”, which is used to reward to people who submit good patent ideas. Innovative ability is key for engineers; this needs to be constantly mobilized and sharpened in the tech industry. Tech hobbyists valued creativity and always looked for opportunities to enhance their innovative skills. Similarly, brogrammers also highly valorized innovative ability. But like claimed above, their emphasis on any type of technological skills cannot be separated from the market. In other words, the motivation for brogrammers to participate in the innovation puzzle collection or any other type of training on creativity enhancement is to ensure their innovative competency is marketable all the time (Andrews, Lair and landry 2005: 69). Also, brogrammers participation in the “innovation puzzle” collection reflected their own distinct characteristics. For example, patent ideas generated by brogrammers are more market-facing. Also, brogrammers’ individual patent development processes can always be converted into collective team effort due to their successful mobilization of teammates to contribute to it.

Indeed, when brogrammers attempted to invest in the patent-badge collection, their hegemonic masculine traits and leadership ability allow them to mobilize the team to help or support their own badge-collections. For example, Charlie’s patent idea involves a transformation of a two dimensional Mandelbrot into a three dimensional solid mesh. The Mandelbrot fractal is basically a set of numbers that many artists have successfully visualized on two dimensional paintings to create beautiful abstract works. What Charlie wanted to do was to push it a step further by transforming the two dimensional Mandelbrot art print into three dimensional models using his 3D printer. Charlie’s achievement of transforming it into solid mesh wouldn’t happen without his

whole team's support. The initial factor that contributed to the formation of this patent idea was Charlie's purchase of a 3D printer from a famous 3D printer company "Printrbot" which specialized in providing home/beginner user 3D printers. After purchasing the Printrbot 3D printer, Charlie told his co-workers in the Assassin Team that he wanted use this printer to create something "cool and unique and no one has seen before". After a few days' consideration, he finally settled down for the idea of visualizing the two dimensional Mandelbrot fractal in three dimensions by using his 3D printer. After going through all the fun parts of his design (e.g. choosing the section of Mandelbrot fractal and visualizing it as a two dimensional image), Charlie reached the most challenging step - translating the two dimensional print into a three dimensional solid mesh - and was stuck for many days for calculating the Z axis. Then during Assassin team's sprint planning meetings, Charlie asked help from his whole team and put "help Charles figure out Z axis" on the list of action items of their team. His manager Logan really supported this and suggested Charlie organize a brown bag to attract other engineers from the whole Pipe org to contribute ideas. When I asked Logan why he pushed Charlie to pursue his project, he told me he always encouraged his team members to apply the puzzle icon:

> ...came up with something creative.....and really dig into it... So that's the advice I give my mentees...think about some patent ideas and pick the one that from your perspective is you know, like, the most creative...and see what you can do with it. And if you really get the icon by the end and the company starts to make a patent application file for your project... I think it's a very good confidence builder and you get at the end of saying like, 'yeah, I picked some of the most cutting-edge thing out there that I thought I could reasonably create and I did it.'...

Sometimes, brogrammers' excellent skill of presenting their patent ideas in an attractive way was also a valuable resource for managers to promote the "fun" culture for the

organization and thus to recruit more young talent. For example, the senior manager of the Pipe Org once invited Philip to present his patent project "The Real-life Button" on behalf of the whole Pipe Org for Trifecta's new hires to attract them to join the Pipe Org. "The Real-life Button" project designed by Philip was an extension of a April Fools' game "the button" on the social networking website Reddit which gathered lot of engineers. The Reddit game was built around a virtual online button and a 60 second countdown timer.[32] The game would stop if no one pressed the button before the timer reaches zero. What Philip invented is a concrete button which allowed people to press in real life that could result in a button press on Reddit, and a real life countdown timer which can display the time left in order to warn people to press the button before timer reaches to zero. This innovation of "The Real-life Button" earned Philip not only a patent puzzle but also countless compliments from his teams and other coworkers in the Pipe Org. In fact, during those days right after Philip earned the patent idea, Philip brought his "button" to the Assassin Team area for display, which attracted wave after wave of coworkers from other teams visiting his "button", which indeed largely increased Philip's visibility and popularity in the Pipe Org.

Based on the consideration of the popularity of "The Real-life Button", Jonathan (the senior manager of Pipe Org) invited Philip to present his "button" during the Pipe Org hiring event. The event organized for the new hires is one of the most important managerial tasks. Managers use every tool at their disposal to figure out a plan to attract

[32] If the button is pressed, it would reset to 60 seconds to continue counting down. And all the Reddit users can press the button.

the maximum number of new hires to join the Pipe Org.[33] When I talked with Philip about his presentation at such an important event, his reflection was a perfect explanation of why managers are willing to squeeze time for him to present a patent idea:

> ...there is a shortage of engineers. … everyone has to help. So the managers gathered together and talked about ideas on what to do .. So Jonathan, our senior knew that I have 'the button'…so he wanted me to show the button to these new kids...It just likes to say ...check it out … work here...you will have this continuation of the fun stuff you guys have in school... And 'the button' is definitely the same kind of theme where college students are expecting...the interesting cutting edge technology.

One can easily tell that Philip's interpretation of why Jonathan invited him to present this "button" project illustrated his keen intuition of the purpose of such activity, not as an engineer, but as a manager. For example, he pointed out that under the situation when most organizations were experiencing a shortage of engineers, the primary goal of this "button" presentation was to attract as many newcomers as possible. Realizing this showed Philip that the key audience for his presentation was not his colleagues but those young men who just graduated from college. Based on this understanding, Philip gave an accurate positioning of his presentation theme as to show the new hires that they will "have this continuation of the fun stuff you guys have in school…"

If brogrammers' leadership ability allows them to convert their own patent badge collection into a collective team effort, then their masculine traits that are cultivated in fraternities direct them to transform the patent collection into another "donut game" through which they present their quick wit and humor. Sometimes, through ridiculing the

[33] The high-tech field has always been characterized by labor shortage, especially for development department like Pipe Org whose expanding speed is so fast that the managers always need to fight against other organizations or company to ensure they have enough "head counts".

patent collection and proposing absurd patent ideas, brogrammers attempt to show their defiance to the corporation. However, although their ridiculing seems like defiance against the corporation at a superficial level, the fun that brogrammers generate through this behavior actually attracts more engineers to participate in the patent discussion, and thus essentially facilitates the corporation's promotion of patent badge collection. In fact, it's very common to see that managers exchange absurd patent ideas with brogrammers in the Pipe Org.

For example one conversation I observed between Logan (the Assassin Team manager) and Charles (the brogrammer in the Ranger Team) in a hiring event involved an exchange of one such absurd patent idea. It was started by Charles complaining that he just learnt earlier that day that his patent idea got rejected by the company and he thus failed to collect the patent badge. The patent idea that Charles submitted was inspired from the bathroom poster at Trifecta, which showed different colors of urine so that people could match their urine color to the closest color on the poster to understand their hydration situation. Charles' patent idea was an app that can let people scan their urine and help them figure out their hydration situation. And Charles told Logan that he was rejected the same day after he submitted the patent idea. In his rejection letter, the patent award team told him that this patent was rejected because it actually had been used in the retail department to encourage the sale and logistics team workers to drink more water and keep their bodies hydrated.

When I heard about Charles' idea in the hiring event, I thought it was just a childish joke and could not elicit Logan's interest to even continue the conversation. Surprisingly, Logan showed a great degree of interest of Charles' idea and was

sympathetic of his rejection. He kept asking for more detail about the patent idea, and also shared his own similar rejection experience. His rejection experience was indeed similar to Charles' in the way that his idea was also a rather absurd one and rejected by the company because of a similar one had been accepted before. Logan's idea was called "trade-in T-shirt". It's used to solve the problem that several of his team members (especially those hobbyists) faced -- they were always lacking a clean T-shirt they could wear to work. So Logan's patent idea was to create a service to allow people to give back their dirty t-shirts which only wore one or two times and trade for the same ones or similar ones for much lower prices.

To summarize, for brogrammers, the patent badge is their opportunity to present their leadership skills (e.g. organize all teammates to work collectively to contribute to their patent ideas in Charlie's case), their presenting and selling skills (e.g. present his patent project to attract newcomers in Philip's "real-life button" case), and their communication competence in terms of using tragic patent rejection as thread of conversation to bond with managers. Although patent award applications can bring fun, enhance visibility, and increase bonding for brogrammers, it brings much more benefit to the company as the company would retain all the intellectual property rights and the exclusive right to all the profit such an innovation can create. For non-work related patent ideas, they also play an important role in reinforcing and advertising the corporate culture. Specifically, the non-work related patent ideas apparently facilitate Trifecta to demonstrate that work and fun can be flawlessly blurred. In such a tight labor market that heavily demands skilled engineers, the patent badge also become Trifecta's showcase for

its fun, flexible, and cutting-edge working environment, which is one important attraction for new recruits.

Conclusion

In this chapter, I firstly offer a general portrait of the brogrammer group: unlike tech-hobbyists who were the nerds obsessed with technology and whose motivation to enter the high-tech industry is to get in touch with the most cutting-edge technology, brogrammers come from a very elite background, their leadership spirit and possession of hegemonic masculine traits make them always the popular group both in their past educational institutions and in their current workplaces. Their major goal for entering the industry is to conquer the technological market and become the new generation elites in the tech field. To attract more young graduates from elite universities to abandon finance jobs and join the tech industry, high-tech corporations cultivate a "cool bro" or "brogramming" culture and introduce a "frat" flavor of fun into the industry. Tech companies' valorization of frat-flavored brogramming culture ensures brogrammers' upward mobility in the high-tech world. This is of course ensured by the company's introduction of fraternity related games. In fact, these fraternity related games become key channels through which brogrammers convert the "bro" traits cultivated in college into competence desired by the high-tech industry.

After offering a general description of brogrammers, I present brogrammers' investment into labor games from two perspectives. On the one hand, I focus on a group of games that brogrammers developed and dominated, which is called "partying games", and concentrated on unpacking one genre of partying games -- the "donut email prank".

The donut email pranks can be roughly divided into two types: the team vs. team donut prank and the individual vs. Individual donut emails. The team vs. team donut teasing over deadlines and ticket-solving on the donut email platform not only reviews distinct features of high-tech workplace pranks (e.g. organized as a collective team efforts), but also shows brogrammers have partially replaced managers to perform surveillance and discipline over their coworkers. The individual vs. Individual donut emails can be either conducted between brogrammers in the format of mutual shaming, functioning to exposure peers' misbehavior, or conducted between managers and brogrammers in the format of mutual ridicule. This serves managers' interests by showing that they are so amiable that they can even take ridicule from workers while at the same time serving brogrammers' interests in continuing their heroic behavior of challenging superiors.

On the other hand, to echo Chapter Three's analysis of the company's gamification setup and tech hobbyists' reactions to it, I also present how brogrammers participate in and contribute to the company's gamification setup and discuss how their fraternity traits ensure their different approaches to these gamification practices in comparison to hobbyists. To present brogrammers' participation in the gamified scrum development process, I concentrated on one gambling game (i.e. Russian Roulette) that brogrammers developed to solve the labor division crisis. The proposal of inserting the Roulette game into the scrum process is a perfect demonstration of how brogrammers adopt partying/drinking games they learned from their fraternities to fulfill some managerial responsibilities (assigning tasks and deciding labor division methods). While brogrammers' participation in the scrum process relies heavily on their past fraternity experience, their participation in the ticket competition draws on practices they gained

from sporting events, namely trash talking. Through trash talking other teams' slowness in solving tickets, brogrammers successfully mobilize their own team's competitive spirit to beat other teams in the competition. Finally, brogrammers' participation in the badge collection game illustrates that their leadership spirit, personal charisma, and keen market-facing sense ensure that they will always choose the badges which are highly visible and that easily attract other people's (e.g. managers, peers, newcomers) attention, and that can mobilize the team's collective devotion to it.

One final thing worth reflecting on is whether the emergence and popularization of the ideal brogrammer is also a sign of fading meritocracy in Silicon Valley. During the period when tech hobbyists remained the only type of success story in the Valley, one can say that is the time when Silicon Valley values meritocracy more and emphasizes that anyone can be successful as long as they possess technological skills. The emergence of brogrammers and even the creation of this term shows that the tech industry has in fact has become more and more biased for a certain group of workers that embodied certain traits, characteristics and cultural capital that is associated with the class statuses that have been established a long time ago. Companies' promotion of games that allow brogrammers to more effectively draw on these traits, in a sense, facilitate brogrammers converting their social status into workplace power which reinforces these class and gender hierarchies on the work floor while deemphasizing skill-based capital.

CHAPTER IV

"HIGH IQ AND LOW EQ": CODING PEASANTS' INTERPRETATION OF HOBBYISTS AND HOBBYISTS' GAMES

Introduction

In previous chapters, I argue that the complex work nature and the increasing diversity of the labor force at high-tech firms begs for organizational and labor scholars to move beyond the assumptions that each workplace organizes a single game, with workers equally willing and able to participate into the game. To demonstrate the multiplicity of games and their articulation, I present two genres of games that are organized and operated in the high-tech firm, which attracts very different groups of engineers to invest in them. Specifically, brogrammers' habitus, which are largely elaborated in elite universities in general and fraternities in particular are characterized as dominating, tough, aggressive, and competitive. To certain extent, pranks that brogrammers conducted on the work floor are basically a polished version of the playground bully. Such traits of brogrammers guide them to invest heavily in workplace games that resemble the games they used to play in schools and fraternities, such as pranking, drinking, and games. On the contrary, unlike brogrammers, tech hobbyists represent another group of White workers, who are socially awkward, too shy to interact with coworkers, and lack of the type of cultural and masculine capital possessed by brogrammers. However, their interests in and devotion to video games, technology, and programming makes them stand out in the tech fields. Therefore, technology, coding, and gaming become the cornerstone of their life and the critical tools through which they achieve to demonstrate their ability and bond with each other. More importantly, their

obsession with video gaming and programming also become the key motivation for them to invest more heavily to video-gamified games developed in workplaces (e.g. virtual badge collection, ticket sprint).

I have detailed the nature of hobbyists' computer literate demanding games and brogrammers fraternity-associated games in Chapter 2 and Chapter 3 accordingly. What I intentionally deemphasize in these two chapters, however, is Asian engineers' reaction to these two genres of games, which will be the focus of the following two chapters. By presenting the different navigations Asian workers employ in these two games, we can further demonstrate the very opposite nature of these two games. Thus highlighting how high-tech workplace games are highly diversified and differentiated. In addition, by presenting the conditions under which Asian workers are victimized in these games and exploring Asian workers surviving strategies, the following two chapters can also demonstrate not all workers are equally willing to invest into workplace games, as most labor scholars assumed.

In this chapter, I will firstly discuss Asian engineers' navigation of White hobbyist's games. Then in Chapter 5, I will concentrate on Asian engineers' strategies of coping with Brogrammers' games. I begin with a brief portrayal of Asian engineers. Then I will investigate how Asian engineers mark their difference from tech hobbyists through highlighting age differences, contrasting work motivations, and presenting divergent interpretation of work ethic. The discussion of Asian engineers' image and their self-differentiation from tech hobbyists would lay down a foundation to understand Asian engineers' coping strategies to hobbyists' game. When discussing Asian workers' reactions to hobbyists' games, I will first concentrate on the gaming strategy adopted by

hobbyists to import video-gaming relationship to workplace. In this section, I will present Asian engineers' interpretation of this strategy, how they are largely victimized in the process of hobbyists investment of this strategy, and the coping strategy Asian workers develop. Second, I will switch attention to another genre of games that hobbyists heavily invested in (e.g. the badge collection game), and discuss methods Asian engineers adopt to survive the badge collection game and what are some situations under which they are remained victimized in this game. Through depicting Asian engineers' interpretation and reactions to hobbyists games, this chapter attempts to present how ethnicity is organizationally and interactively constructed through age differences and divergent work motivations, and how can hobbyists' game become a critical stage to reinforce these divides.

Portraits of "Coding Peasants"

First generation Asian immigrant engineers' identity play a critical role in guiding their coping strategies to the two genres of games (i.e. brogrammer-lead games and hobbyist-promoted games). Inspired by Chinese engineers, this study adopts a term "coding peasant (*Ma Nong*)" to depict the general image of first generation Asian migrants. Coding peasant (*Ma Nong*) is a term adopted by Asian engineers to label themselves. But in this study, I expand this term to represent all first generation Asian migrant engineers, as Chinese engineers' features depicted by this term are common ones shared by all first generation Asian engineers. Specifically, the term "coding peasant (*Ma Nong*)" is a compound word which consists of two characters. The meaning of the character *Ma* is straightforward, and can be directly translated into "codes". The

translation of the character Nong is complicated, as it is rich in cultural codes. First of all, the character *Nong* (peasant) sometimes can be replaced by *Gong* (worker) and used interchangeably by my informants and popular treatises or news articles, as both characters stand for an abbreviation for "peasant worker", which refers to a special group of migrant workers in China who originate from the farming families and used to be peasants farming in the countryside but later migrate to cities to become workers who sell their labor in factories, construction sites, or service workplace.

"Coding peasant" was originally used to describe Information Technology immigrants within China - young college-educated coders who migrated from their hometown to major Chinese cities such as Beijing, Shanghai, Guangzhou to work in the IT industry and earned salaries by selling their coding skills. Now the notion "coding peasant" has expanded and been adopted by engineers who emigrated from Chinese to work in multinational IT corporations in global cities such as San Francisco, Sydney, New York, and London. In spite of the apparently different socio-economic status, these three groups (peasant workers; coding peasants in China and international coding peasants) share many similarities. For example, because of their immigrant status, their connection to employment is more tenuous than workers with citizenship, and thus all work in a highly stressful environment -- working for longer hours to keep their jobs and minimize the risks of being fired by employers. In other words, this term precisely depicts these engineers' vulnerability associated with their migrant status, which is experienced not just by Chinese migrant engineers but all Asian migrant engineers. Such vulnerability plays a critical role in determining Asian engineers' over-cautiousness in

participating into these labor games such as brogrammers pranking games that involves teasing or challenging managers at the same time.

In comparison to White engineers and especially tech hobbyists, coding peasants' motivation to join the tech Industry is less about their own passion for technology and the inner joy produced through innovation. As expressed by many of my Asian interviewees (both Chinese and migrants from other Asian country such as India, Pakistan, Singapore), their motivation to enter the tech industry primarily relate to their concern for getting a stable full-time job, a working visa (i.e. H1-B), and a settling life. Asian engineers' de-emphasis of noble career pursuits, creativity, and potential contribution to technological breakthrough can also be reflected by another self-deprecating term they always cite when they introduce the nature of their work to me, which is "moving bricks".

By using the term "moving brick", my Asian informants draw parallels between their own work and the work done by construction workers. They told me that writing code was basically a task of moving bricks: the way they achieve moving codes is through "copying" and "pasting" certain commands, which is in parallel with construction workers' moving bricks from one side to another side. A very similar self-deprecating expression was brought up by one of my Indian interviewee Manjuf (Indian Male, Level 5 engineer, 31 years-old, H1-B holder). During a dinner when he learned that I also finished taking graduate level statistic courses, he suggested me to either change major or double majored in computer science and emphasized that it is much easier to get a working visa (H1B) for studying CS and working for tech. I told him that my understanding of statistics, and math more generally, cannot compare to that of engineers. Manjuf sniffed and said, "Who needs to be good at this? You think we have to be good at

Math to do coding? A monkey can code! This job does not require you to be good at math or smart or creative... What you need is to endure the boredom of doing trivia stuff". Like Manjuf, I also heard some other engineers use the term "code monkey" to do self-mockery. The term "code monkey" is drawn from a song written by Jonathan Coulton used to help coders express their alienated work life, and geeky personality. In the lyric of *Code Monkey*, it depicts an alienated and repetitive work life (e.g. "Code Monkey have long walk back to cubicle, He sit down pretend to work" "Code Monkey have boring meeting with boring manager Rob"). Interestingly, the very unattractive work life characterized by this term "code monkey" is parallel with the dull life manifested by the term "coding peasant" developed by Chinese engineers. This very self-deprecating portray as coding peasants or code monkey does shape a sharp contrast to the life described by tech hobbyists that is filled with appealing new technology, and dangerous yet thrilling security hacks.

What I want to emphasize is that, these terms that Asian engineers constantly adopted to describe themselves or their work, such as coding peasants, moving bricks, code monkeys, are indeed self-deprecating terms. Based on my closed observation of engineers work and constant conversation with this group, I find that engineering work is nothing like construction workers' job of moving bricks. Instead, programming involved high level of abstract knowledge, and request strict logical thinking ability. And most importantly, creativity is the core of programming. Or borrowing explanation that some brogrammers offered to me, programming is all about solving problems through a creative logical expression. The more creative one engineer can be, the more simplistic and elegant logical expression he/she can find to solve the problem. However, immigrant

status, working together with the modesty quality that highly valued in Asian, result in Asian engineers' understatement of the high demand of logic thinking ability and creativity in their job. Such de-emphasis directly results in Asian engineers' less demanding on doing more creative and challenging job and more willing to take periphery tasks (e.g. doing refractory/code reviews for other engineers instead of doing self-design) in the process of labor division, which also contribute to their disadvantaged position in the office.

Finally, Asian engineers' attitude on devaluing individual obsession of technology or personal pursuit innovative achievement not only marks a huge difference from tech hobbyists but also has decisive influence over Asian engineers' reaction to gamified mechanisms that either developed by the company or initiated by tech hobbyists. For example, as will be discussed later in more details, Asian engineers express skepticism over tech hobbyists strategies of importing gaming relationship to workplace to improve the collaboration of software development, and are cynical about hobbyists' devotion of large amount of personal time to collect phone-tool icon badges.

Coding Peasants' Self Distance from Hobbyists

Coding peasants develop an ethnic sensibility that allows them to mark their difference from tech hobbyists through drawing on factors such as age differences, divergent source of work motivation, and distinctive interpretation on the meaning of professionalism and work ethic. In general, these factors coalesce into a critique of White tech hobbyists, which also lay down a solid foundation for Asian engineers' different strategies of investing into computerized labor games that are led by hobbyists. Finally,

this establishment of a strong sense of difference from hobbyists also facilitates this group of first generation immigrants to develop a certain level of a collective sense of panethnic identity, based on shared trajectories in relation to immigration, education and family plans in spite of their divergent national origins (e.g. China, India, Pakistan, Singapore, Korea, etc.) (Espiritu 1993; Otis 2001).

Age as a Factor to Divide Coding Peasants from Hobbyists

First, age is a factor dividing white hobbyists from Indian and Chinese counterpart. Specifically, the age difference between white and immigrant engineers functions as not only the cornerstone of coding peasants' critique of these geeks as perpetual adolescents, but also the foundation of Asian workers divergent understanding of work motivation and discipline. For example, among my interviewees, while the average age for Asian engineers is 29, the average age for white engineers is 25. One reason contribute to such age difference is the different degrees obtained between Asian and white engineers. Among 46 interviewees, while more than 80% of Asian engineers obtained master's degrees, only 26% of white engineers obtained master's degrees.

With this general picture, one can easily comprehend Asian engineers' critique of hobbyists' "childish" ways to interact with coworkers. For example, the interview excerpt below illustrates an Indian engineer's interpretation of hobbyists' efforts of blurring gaming and working relationship as a "childish" way to improve coworker relationship and as a sign of hobbyists' low Emotional Quotient (EQ). This thread of Asian's interpretation can be clearly manifested in Umesh's quote:

> ...most engineers here are kids… they are smart...having high IQ... but they don't have high EQ ...so they don't know how to interact with each other… or they

> don't care...like when they argued with each other, they thought they were just sticking to the technical issues and did not take it personally... sometimes they actually offended other people without even realizing it… so normally people need to do something to ease the tension… or other times, there's no tension but people working on the same projects realize they need to know each other better… so what would to do? To ease the relationship or improve relationship? I would say normally people would go out eat or drink together, right? But for those kids, they use video games to do this … they played games together and they talked about games during break... to me, it's really childish… like I once brought one of my friend visiting our team… he worked in finance ... and after he saw the World of Warcraft posters hanging everywhere in my team and board game boxes scattered...he teased me like 'are you working for a high-tech firm or just babysitting kindergarten kids'…

Apparently, one key theme embedded in Umesh's narrative is the age gap, which can be clearly reflected by his naming hobbyists as "those kids" and interpretation of their gaming strategies from a "grownup" perspective. It will make more sense if I offer a brief description of Umesh's life journey before he joined Trifecta, which has both its own uniqueness and representativeness for Indian engineer migration trajectory in general. Like many other Indian interviewees, Umesh did not cultivate such an interest of playing with computer as those hobbyists did, since he did not have a chance to touch computers till college. After entering college, Umesh knew that learning computer was the most effective way to earn a decent salary to support his family, including his mother and another younger brother. However, Umesh told me his interest and strength was actually language-learning. He worked as tutor to teach Japanese and German to pay half of his college tuition. After finishing his graduate study, Umesh worked in three high-tech corporations in different regions, including India, Netherland, and U.S. In 2010, Umesh worked in an Indian outsourcing tech corporation, which Umesh described as very formal and hierarchical and employees had to address their manager as "sir". In 2012, Umesh

quit his Indian job, travelled to Europe, and worked in a tech firm in Amsterdam. While he worked for the Amsterdam firm, he also obtained his second master degree in Computer Science but specialized in Cloud Computing. Based on Umesh's description, his experience in Europe can also be considered as an intensive training of his communication skills -- he not only needed to work together with people with diverse backgrounds to accomplish projects at work, but also managed to live together with 12 people coming different countries such as Roumania and Spain. By 2014, he got an offer from the Cloud Computing department at Trifecta and moved to the U.S.

Although Umesh's experience has his own uniqueness like his detour to Europe, his experience is also very representative among the Indian interviewees. Specifically, before joining Trifecta, many of the Indian interviewees had the similar experience of self-funding their computer science study in college back in India, work experience in a rather formal structured Indian tech firm (or outsourcing firm), and travel abroad to obtain their first or second master degree in computer science or electronic engineer. Similar as Indian interviewees, my informants from other Asian countries have a very parallel trajectory before joining Trifecta.

It's plausible to speculate that the age difference between coding peasants and hobbyists can result in very different life experiences, friend circle, and maturity level between tech hobbyists and Asian engineers. Considering this, it's not surprised that the friend who Umesh brought to the team area came from a completely different work environment -- the finance. This very divergent working background guided Umesh's friend to interpret the gaming theme decoration in the team area as a kindergarten environment that can only work to attract kids. Umesh own evaluation also showed he

was skeptical of his teammates: first, he devalued some of his team members communication ability when he described how they failed to detect their technical dispute might lead to personal assault. Second, he thought that retreating to the gaming world and using game to rebuild team relationship further demonstrated their lack of "person skill" or using Umesh's term "don't have high EQ". Finally, Umesh also agreed with his friends and attributed his teammate's strategy of blurring work and gaming relationship as a childish behavior and claimed, "...for grownups, they would never need to use tools like video game to build up relationship."

Work to Live, not Live to Work

Age difference is not the only factor that conditions Asian engineers' different position, interpretation, and strategies to hobbyists' game. The very different and even opposed motivation to enter the industry between hobbyists and coding peasants function as an even more decisive factor in shaping the divergent approaches to computerized game. To put it simply, while coding peasants work to live, tech hobbyists live to work. In other words, for Asian engineers, no matter how passionate they are for programming/gaming or not, workplace is not the stage to express their passion. As will be shown below, coding peasants believe that workplace should be treated seriously and professionally and work should be understood as a means of livelihood.

Of course, under this basic shared understanding, there are more nuances within Asian engineers when they interpret their motivation to enter tech industry and its relationship to their work attitude. In the following section, I will present several typical interpretations, such as a completely repellent attitude to technology and computer and its

emphasis on entering tech is merely a means for livelihood and a strategy for migration; a similar passion to technology as tech hobbyists but with an alertness of not blurring passion to tech with tech work; finally a respect to hobbyists passion and interpretation of their passion as the cause to their work excellence.

I will start the analysis by presenting the first typical type of motivation of entering tech industry among my Asian interviewees, which highlights the pursuit of tech as a rational search of a way to earn a living in the receiving country. And this is also the group of interviewees who tend to dramatize the difference between their own pathway to IT as a career destination and tech hobbyists' career trajectory. Taking my interview with Guang (Chinese Male Engineer, Level 4, H1B holder, Master, 27 years old) for example, when I asked how he can understand the term hobbyists, he said:

> You know, there is a reason why they call themselves hobbyists, because they did take programming as a hobby. I remember back to college, it's actually very easy to tell who were the hobbyists...like whenever they started talking about coding, their eyes gleamed and danced [*Mei Fei Se Wu*]… they took all different types of programming courses, not for credits but just for fun….I mean you need to really take it as a hobby to be willing to devote such a lot of time and energy to dig into it...they just naturally found interest in it.. They don't need other people to tell them that they should learn this …you can say their motivation to study CS is more pure in comparison to us...
>
> For us or for me… I was actually more into the humanities (discipline) when I was young... but my parents told me that you are a guy ...you need to be a manly man… no real man studied the humanities…there is no future in studying humanity… and they warned me that it would be very difficult to get a job if studying humanity ...so I chose to major in science during my high school after that I majored in math and then computer science… then everything after that seemed very natural…

Guang's narrative was typical among the Asian engineers I interviewed, who tended to counter-pose their own deeply felt family pressures to sacrifice creative interests for earnings, security and success to the White programmers who pursued their career out of

a love of gaming and coding. Specifically, in his narrative, Guang's expressed his real passion was in the humanities discipline, such as philosophy, literature, religion, art, music, history. One can tell this was a completely different direction of interest from computer science. However, Guang emphasized that he eventually followed his parents' suggestions and chose to major in science after high school. In other words, by constantly comparing his own trajectory with tech hobbyists', Guang constructed himself as "good sons" (xiao) in relationship to the hobbyists, and prioritized consideration of parents' hope and occupational perspective over his personal interest.

Guang's experience was not an uncommon story among my Asian interviewees. For example, several of my Indian interviewees told me that the decision of studying computer was mostly a family decision based on weighing between biology and majoring in computer science. Taking Harini and Najif for example. Both chose computer science as a major following their parents' suggestion before entering college: Najif was his family's oldest son and his parent thought it important for their oldest son to enter the "most rewarded industry" to have a good income. And Harini's case was a little different. She was the second daughter in her family. And her oldest brother was a doctor and her big sister had already majored in biology before she entered college. Thus her parents encouraged her to pursue computer science. The shared features among Harini and Najif's narrative included their indifferent attitude of choosing computer science as career (indeed, in both of their narrative, choosing computer science was a natural outcome of their familial decision); and their obedient attitude towards their parents' suggestions. In summary, like Guang, several of my Indian interviewees also expressed

their prioritization of collective interests of their whole family and occupational and industrial perspective over their own individual interests.

Unlike the first group of coding peasants who showed indifferent attitude to computer science, the second group of Asian engineers presented below did show their passion to technology as well. However, in their narrative, one call tell a very cautious differentiation between their technological passion and their tech work. For example, another interviewee of mine, Liang (Chinese Male engineer, Level 5, H1B holder, Master), told me that he always had enthusiasm on science and technology, the more sophisticated the better. He had a master degree in computer science and continued his academic trip to more "theoretically sophisticated science" -- Mathematics -- for his Ph.D. study. However, he had to quit his Ph.D. study and found a job in the tech industry after his wife became pregnant, since he could not afford his family's living expenses by working as a teaching assistant. Although Liang's position was different from Asian engineers described in the first group as he admitted that he shared the similar passion to technology as tech hobbyists, his motivation to enter the tech industry was undifferentiated from Guang, Harini and Najif and remained located at realizing the responsibility of supporting families.

Like Liang, many Asian engineers that I interviewed that mostly share tech hobbyists' passion, not only for technology but also for gaming. Indeed, several of them even reveal to me that their dream was to become professional players (eSports players). However, this group of Asian engineers' immigrant status largely constrain them to pursue their dreams without concerning of the chance of getting jobs. In other words, no matter how passionate they are about gaming and programming, they proceed to enter the

IT industry driven by the practical concerns of financial security and future family support, what the portray as rational calculations. However, after some exposure to tech hobbyists' obsession with gaming, this group of Asian engineers actually have more opportunities to see through tech hobbyists' investment into games and technology is a compensation of strategies to make up their lack of social skills and hegemonic masculinity.

And the last group of coding peasants, who share both gaming and programming passion with hobbyists, most likely express their respect to hobbyists' technological competence. For these coding peasants, although they draw a clear line between themselves and hobbyists, they do think positively of hobbyists' unconditional and uncalculating passion to technology and gaming. As will be shown below, while some coding peasants emphasize on hobbyists strong interest of technology is the primary cause of the hobbyists' excellent technical competence, others express that hobbyists' passion is the driving force that pushes them to always explore the most challenging and cutting-edge technology.

Firstly, the interview excerpt below shows my Asian interviewees' discussion on how hobbyists' strong interest in computer science becomes an important precondition that determine they can actually stand out in the tech industry. In this excerpt, Seimar (Indian Male Engineer; Level 4; H1B holder; Master; 26 years old) points out that his American classmates not only work hard but are also very good at computing:

> ...I feel like there is a bias toward American students in most Asian societies. Like American students are only into having fun, and never want to study hard...my father was a little concerned this when he sent me to the U.S... He worried that I would goof around in college. But after I came here, what I saw was the opposite …. My American classmates, they worked like crazy… I saw many of

> them work together in the library until 3 AM in the morning… I heard sometimes they even stayed up whole night writing code…of course there are also a lot of them partying whole night... So I think what really divide them is... they liked their major or not… I mean the group who worked hard … they are also very good at [computer]… they are really smart ...like one of my TAs, I checked out his resume before, he interned at Google and Microsoft while he was still a undergrad..

Like Guang, Seimar contrasts his reluctant choice of major with the white students who seem passionate to embrace of the area. However, the group of American students that Seimar attempted to use to contrast with these hard-working American students, who were "partying whole night in the bars", in fact shared certain overlapped traits with brogrammers.

If Seimar represents one type of Asian engineer who attributes American students' excellence in this field to their concentration and motivation of studying computer science, then the interview excerpt below from Jacky Z (Chinese Male Engineer; Level 4; H1B holder; Bachelor; 24 years old) demonstrates another type of Asian engineers' interpretation of their white colleagues' success in the tech field, which concentrates on elaborating the relationship between the passion of gaming and the spirit of never afraid of taking challenges:

> JZ: I feel there is a pattern here… like for a lot of American engineers here, they just play games so much…There is one guy from my team. I was invited to his home once before, he had two whole shelves of game collections, like board games, XBox games, PS [Playstation] games...and they not only collect games...all things relate to games would make them excited… Like back in my college, the most popular course was game design...all of my American students tried to squeeze into this course. And most of them also chose game design as their graduate project… this is not the case for us… like for me and my Chinese friends, we didn't choose game design… it was the most difficult type of design
>
> TW: How difficult? The game design project?

> JZ: Normally for a game design project, when you wrote it up, it may be just 100 lines [of codes], seems like a very small chunk of codes. But in order to write these 100 lines, you probably need to spend a whole month thinking through...like the structure… it's all built up in your mind … and once you wrote it out, you need to keep testing and keep changing ..I have tried once before. It was very challenging...

From Jacky Z's discussion, one can see that there are fundamental difference between Asian game enthusiasts and tech hobbyists. On the one hand, in comparison to other groups of coding peasants, these group of Asian game enthusiasts seems have most resonance with tech hobbyists. For example, like the hobbyists, these Asian engineers, represented by Jacky, also believe that connection between games and computer science is so prominent that should be considered as an inevitable pattern ("all good engineers would love playing games and they should be able to be good at playing games…"). On the other hand, Jacky expresses that the enthusiasm about gaming shouldn't affect people's decision-making in non-game field, which departs from hobbyists' approach. Specifically, according to Jacky, tech hobbyists' enthusiasm about gaming apparently guided their decision-making in the context such as registering class, and choosing graduation project.

Obviously, these strategies and decisions adopted by tech hobbyists are not considered as very rational to Asian engineers. For example, Jacky shows that game design course is difficult to enroll in, and game project is the most challenging project that one can choose for graduation as it requires higher level of abstract thinking ability, more time and energy, and even more patience. For Asian engineers, the more rational choice is to choose less challenging courses and projects so that they can invest in much

less energy/time and reduce the risk but to obtain the same gains (i.e. pass the course and graduation).

Apparently, the same pattern of thinking continued to the workplace: tech hobbyists prioritize any project related to their gaming habits, and that challenges sometimes can make them choose certain projects. This can seem as an irrational choice for coding peasants if calculating the losses and gains or the energy or time that can be potentially consumed by the projects. So one can assume that these divergent calculations and strategies between Tech hobbyists and coding peasants are revealed in college and would be easily carried into the workplace and guide these two groups into different choice of projects, tasks, and even career paths.

To some extent, this group of coding peasants' similar educational background and video-gaming experience gave them an insight to understand why hobbyists' absorption into the gaming and tech world and are willing to invest heavily into it. However, like how Jacky interprets hobbyists' passion lead them to make an irrational choice, Asian engineers can also easily show their skepticism on why hobbyists blur leisure-time gaming activity and serious programing work. They can criticize how hobbyists' passion for game and technology render them to become highly exploitable in the work context.

Craftsmanship: Coding Peasants Self-interpretation of Work Meaning

As shown above, Asian engineers' attitudes towards hobbyists' obsession with technology and idealist motivation of entering varied -- while some speak more favorably of hobbyists' entering tech based on self-passion, others show more skepticism to such

blurring between personal interests and career pursuit. Despite the relatively varied interpretations of hobbyists' motivation, Asian engineers' self-analyze factors that determine their entrance to the tech industry rather consistent: it's less about passion and individual interests and more about to anchor a rather stable and promising job by choosing technology. Indeed, it is not the issue of passion (whether have it or not and to what extent they have it) that divide coding peasants and tech hobbyists, it is the interpretation of what is the meaning of work that differentiates coding peasants from tech hobbyists. For coding peasants, no matter if they are interested in technology or not, work is the means for living but not the stage to present their individual habits and passion. Indeed, as shown below, most Asian engineers I interviewed tend to draw on their hard-working spirit and professionalism to mark their distinction from hobbyists.

Specifically, Asian engineers prioritized work discipline over individual interest. Coding peasants emphasized that their personal-level indifference to the industry and its products are evidence to their professional dedication. They cast their ability to transcend individual-level, "self-fulfilling" and possible selfish drives as a sign of dedication, reliability and ultimately maturity. For example, an interviewee Fang once reported to me:

> I felt like white guys were more like, when they loved what they did, they devoted 100% or 150% of their energy to work, they worked during weekend… they did not sleep. But once they were in a bad mood, they asked for OOTO[34]straight for two days. You see the problem here? ...their productivity relied on their mood…but I just treated it professionally… I consider myself as a craftsman (*shou yi ren*)… I sell my craftsmanship to earn bread and feed my family...so I do what I am assigned, do my share, and do the best… but they [white guys] felt themselves as masters… they only wanted to be assigned the most creative task… (Fang, Chinese, Level 5 male engineer, H1-B holder, Master, 27 years old)

[34] OOTO means out of the office, which is a format of personal leave request]

The core theme underlie Fang's narrative is in fact a series of traditional Confucian value. Specifically, Confucian value educated male should take on familial responsibility as the major or the sole provider, which is expressed in Fang's narrative as "I sell my craftsmanship to earn bread and feed my family" in Fang's narrative time. Similarly, valorization of hard work is another core value in the Confucian value system, which was framed as a type of craftsmanship that directed Fang to fulfil his tasks no matter how he felt passionate about it or not.

The craftsmanship referred by Fang is also heavily embedded in the traditional Confucian social structure of China (Elman 1989). Defined by Confucianism, imperial China is a class society constituted of four ranks, in the order of literati, peasants, craftsmen, and merchant. Craftsmen in fact have a rather low social status and are ranked the third place, which is even lower than peasants. Normally, craftsmen would possess a special skill (e.g. carpentry skill). Craftsmen's skills are not difficult to acquire, and request minimum level of creativity and abstract knowledge. However, to master such skills asks craftsmen's long-standing hard work and repetitive practice. By labelling themselves as craftsmen, Chinese engineers like Fang depreciate their professional status. To certain extent, this self-identification is consistent with the label "coding peasant". Also, self-labeling as craftsmen is not merely a way through which Chinese engineers express their modesty. Chinese engineers indeed adopt the morality code shared in the craftsmanship to regulate themselves, which can be reflected at Fang's emphasis on hardworking and self-discipline and devalue of enjoyment and creativity.

Chinese engineers' self-positioning as craftsmen further widens their gap with tech hobbyists. Using Fang's language, if Chinese engineers consider their work close to craftsmen's work, then tech-hobbyists' career pursuits then this shows their efforts to become "masters", which can be reflected in their highly valorization of their professional esteem, pursuit of creativity, and aim of making technological contribution. However, as Fang points out, white engineers' valorization of professional esteem and technological creativity will become unstable factor to affect their productivity - once they lose the interests for their project, they will become slack in their work, and "asked for OOTO straight for two days". The problem is that, white engineers valorization of their own creativity sometimes remains to help them legitimize their opportunities to obtain more creative projects. On the contrary, Chinese engineers' unwittingly self-labeling as "coding peasants" and "craftsmen" and de-emphasis on requesting creative project result in higher possibility of being assigned to less creative and more periphery projects.

Coding Peasants: Victimized in Team-based Video Game Playing

Occasionally, few Asian engineers did attempt to join hobbyists' video game team. However, Asian gamers remained victimized when they participated into game team organized by hobbyists. Obviously, stereotypical traits associated with Asian engineers became an inevitable target that hobbyists can shoot even without realizing it for most of the time. For example, in the following section, I will present two ways through which Asian are victimized, including being laughed at for their "Asian Squat" while playing shooting games, and being criticized for self-centeredness as a result of the

"one-child" policy. And as shown from these incidences, stereotypical traits or behaviors associated with Asian engineers' stereotype became key factors in victimizing Asian engineers in their participation in hobbyists' work-team based video game.

Suo, a Chinese engineer in Knight Team, shared that he played CS:GO with him teammates for a while, but quit eventually:

> I actually don't really like playing CS:GO. I am more into games like LoL (League of Legends) or like WoW (World of Warcraft). But Fei [Suo's teammate] persuaded me that I need to try to play with my team together for CS:GO. You know, to be more social. So I just registered an account and I told Mike. Mike is more like the lead for our team. He seemed... very satisfied… and told me that I can just follow his lead… So I played several nights… and always followed Mike's lead.
>
> But there was one night… I played poorly...you know… I am so new to the game. And I [game character] almost died...so Mike told me to crouch to the room's corner to hide...and that's exactly what I did… but the thing is... I faced to the wall of that corner to crouch… then I heard Mike yell to me through microphone, "Suo, turn around … what the hell are you doing there?! Face to the enemy...shoot them!" Then I realized how stupid I was by … facing to the wall...and leaving my back to the enemy… But the thing is ...I don't think I am really stupid or something… It's just that I am new to the game… and I am trying to get used to all the stuff ...like the game setup…like how to use the shortcut key.
>
> The next day during lunch, Mike just broadcasted my mistake to almost half of the Pipe Org in the public kitchen...he was like, "Can you guys believe it? Suo just crouched/squatted (*dun*) there, facing to the wall, like he needed to do some serious thinking about his misdeed… so funny." So I quit [the game] after that day… it still bothers me a little bit whenever I remember Mike's cocky tone that day… I have to admit it affects my relationship with Mike a little bit...I just try to avoid talking with him if I can.

There were several very interesting themes emerging from Suo's narrative. First, before hearing this anecdote told by Suo in the first-person narrative point of view, I have heard it narrated by Danny in ATS team from an observer's perspective. When Danny told me

this story, he referred it as “Suo’s Asian Squat in CS:GO”. I was very surprised how Danny can straightforwardly use the term “Asian Squat” without any concern in front of me, an Asian woman. In fact, the term “Asian Squat” is a racially insensitive remark, as the term is associated with many racist assumptions for the Asian group, such as Asians have proportionately shorter legs which allow them to perform this deep squat easily, and less developed Asian societies normally use a squat toilet that is not as hygiene as the sitting down toilet used in the western society but effectively increase Asians’ ankle flexibility to allow them to squat. As other scholars have demonstrated, the term “Asian Squat” is used to stigmatize Asians and Asian Americans and to single them out (Zhang 2002: 32). However, being cloaked under such a joking tone and the casual atmosphere around the topic of video game, such a lightly veiled racism was able to be embedded in development teams’ daily conversations and get normalized in the workplace interaction.

When naming the whole incident that victimized Suo as “Suo’s Asian Squat in CS:GO”, white hobbyists like Danny did make it funnier -- it gave people an illusion that Asian’s stress response was to squat down. If Asian’s habit of squatting in general could be problematically interpreted as a result of their body feature (e.g. shorter legs) etc., Suo’s squat in the game became an annotation of his tangled mind at that moment, and his timid character.

More problematically, in comparison to other type of profession, the ability required in software development (e.g. quick reaction mistake; quick detect of dangers, risk, problem; and quick formalization of problem-solving strategies) sometimes can be overlapped largely with the ability needed for playing fast-paced video game. Although Suo attributed his chaotic reaction to his unfamiliarity with this game, Mike attributed his

chaotic reaction to his tangled mind. Therefore, this left space for other engineers to extend Suo's gaming performance to explain work behavior, Obviously, Suo realized the negative effect brought by his participation into the game and thus chose to quit the game eventually.

Finally, from Suo's narrative, one can tell that the purpose of Asian engineers to participate into hobbyists' game was clear -- it's not for off-work enjoyment but for the improvement of coworkers' relationship for work. Or as Suo illustrated, the factor that motivated him to join the CS:GO game was not his own interest. His own gaming interests did not land at the CS:GO game but at the *League of Legends* or *World of Warcraft* game. In other words, for Suo, the goal of playing CS:GO was to socialize with his work team. To some extent, playing games functioned almost the same as coworkers' happy hours for Suo.

In addition to be stigmatized by stereotype, Asian engineers' victimization in hobbyists blurring of game and work relationship was also reflected at their suffering of hobbyists' behavior of labelling them as bad team player and thus excluding them from games. Specifically, for Asian engineers who also had long time experience of playing video games, the aggressive, dominant, and competitive side of Asian engineers' personality could also be revealed while playing video games, which were cultivated due to their years of playing violent and combative video games. However, the aggressiveness and competitiveness embodied by these Asian gamers produced an enormous mismatch from the stereotypical traits perceived to be associated with Asian engineers' ethnic identity (e.g. humble, modest, and submissive). When Asian engineers unconsciously displayed their competitiveness and aggressiveness while playing video

games, they in fact produced dissonance challenging white hobbyists' common understanding and thus received intensive resistance from their white colleagues. As a result, hobbyists' resentment of Asian engineers' stereotype-challenging gaming traits urged them to label Asian engineers as bad team players and thus excluded them from participating in their work-team based video game playing.

This trend is clearly shown from Ranger team attempt to drumming Jammar out of CS game team firstly and then out of Ranger Team. When discussing hobbyists' strategy of importing gaming relationship to work in Chapter 2, I presented how hobbyists in the Wizard team organized to play CS:GO together on Wednesday and Thursday night. Mimicking Wizard team, hobbyists in Ranger team also started organizing "game night" twice a week to play CS together. The competitiveness and dominant displayed by Jammar (Indian, Male, Level 4) in CS were largely broadcasted by his teammates from Ranger team. Jammar's teammates took delight in spreading out Jammar's gaming behaviors that manifest his "self-centeredness", such as only playing leader roles but never played support roles, quitting in the middle of the game regardless of the whole team's lost; being banned from games because of constantly abusing teammates and opponents. Unsatisfied with Jammar's lack of spirit to teamwork, other players from Ranger team gradually excluded Jammar from their CS game and secretly asked Benjamin (White, Male, Level 4) from their neighbor team (i.e. Assassin team) to fill in and replace Jammar.

Even worse, the exclusive attitude to Jammar in off-work game-playing extended to the work activities. An unidentified assailant once used Ranger team manager Pualo's unlocked account to send out a donut email titled "Ranger is ready to trade Jammar with

Benjamin" to the whole Wallet Org. Although everyone knew this was a donut email and wouldn't take the "trading" seriously, Jammar's unpopularity in the Ranger team was still exposed to the whole organization. Also, even cloaked under joking tone, white programmers' hostile attitudes have still flowed out of their teasing with Jammar. In fact, Jammar was ultimately transferred to a newly established small team attached to Ranger team during the latest reorganization in Wallet Org.

Via a very rare opportunity when Assassin team had lunch together with Wizard team, Jammar's "self-centered" behavior was spread to Wizard team. After lunch when I followed Wizard team to walk back to their team area, Matt (While, Male, level 5) started to criticize Jammar's behavior, attempted to associate his self-centeredness with the "one-child policy", and commented, "Jammer is not the worst 'one-child' baby….I have seen more spoiled and bossy ones". I couldn't help but remind Matt that Jammar probably was not the only child in his family as he came from India where not implement "one-child policy". Matt seemed surprised and told me that he thought Jammer came from Pakistan and somehow he had a wrong understanding that Pakistan followed China and implemented "one-child policy". Even disregarding white hobbyists' confusion of different Asian countries' policies, Matt's association between Asian engineers' "bossy" with one-child policies remained very problematic as it largely tokenized Asian engineers.

Video Game Bonding within Ethnic Community

Unlike those very few Asian engineers who tried to fit themselves into hobbyists gaming group, a majority of Asian engineers would rather seek gaming partners within

their own ethnic community. In fact, based on above discussion, Asian engineers not only draw on the different age, motivation and interpretation of work to mark their boundaries to hobbyists but also highlight the sharp division between leisure time gaming fun and serious work activity. All these understandings would inevitably lead to Asian engineers' hesitation to blur the gaming and working team, activity, and relationship. Indeed, based on my own observation, the majority of Asian engineers choose to retreat to their own ethnic community to formulate gaming team.

Of course, in addition to the consideration of differentiating gaming fun and working seriousness, the concern of language deficiency became a key factor that directed Asian engineers' strategy of teaming up within ethnic community. For example, many Chinese interviewees expressed that they would rather team up with other Chinese players to play games. On the one hand, collaboration, communication and coordination were very important while playing such type of multiplayer video games. It's much more convenient and efficient for them to talk with each other using Chinese. On the other hand, some of my interviewees admitted that every player had the experience of verbally abusing other players (either teammates or opponent) in a moment of desperation or urgency. And it's more liberate when using their native language to curse. Or as Sun JW put it, "I am not proud about it… but it's always feel more bluntly when you burst out cursing words using your native language, right?" (Sun JW, Chinese male engineer, Level 4, Green card holder, 26 years-old).

However, Asian's self-organized game team is much more loose and unstable than hobbyists' game team. For one thing, while hobbyists' game team is largely organized based on work team, Asian engineers' game team is organized relying on

network formulated back in college. Obviously, it is much easier for hobbyists' game team to build rapport through day and night interaction either at work or during off-work leisure time. On the contrary, Asian engineers' effort of improving team cooperation is largely relied on interaction in the virtual community that only happened at night when they left work.

For another, due to the age difference, when Asian engineers finished obtaining their master's degree and entered the Tech Industry, many of them have reached the transition period of their lifecycle to get out of their single life, get married and start raising children. The new stage of lifecycle and the subsequent familial responsibilities caused some Asian engineers to withdraw from game playing and thus destabilized Asian engineers' gaming team. For example, the following interview excerpt depicted Liang's discussion on how he stopped from playing video game after getting married:

> Before my wife moved here, I played *Diablo* with Jialin all the time...I remember sometimes we walked back home together, and talked about battling strategies … but then my wife just finished her Master [degree] and moved here… so I moved out my old apartment and we bought a house on Capitol Hill… ever since then, I just got less and less time playing game together with Jialin …like for now, instead of devoting my whole weekend to play games, I would rather spending the time building fence for our house...or sometimes, I would rather go out hiking with my wife...I want to bring Jialin to go hiking together, but he is just ...such a homeboy (*zhai nan*) … he doesn't want to go outside and I can't play games with him very often… so he has to play with random players assigned by the [gaming] system now…sometimes he complained about this with me...but what can I do? (Liang, Chinese Male Engineer; H1-B holder; Level 5; 30 year-old)

There are several very interesting points emerging from Liang's narrative. Firstly, through my conversation with Liang, I realized that there were several preconditions determined that Liang would inevitably team up with Jialin to play Diablo. Jialin and Liang worked in the same team and lived in the same condominium located 20 minutes'

walk away from their workplace. As a result, Liang and Jialin basically had identical daily routines, leaving to work from a same building, arriving at team area at the same time to ensure they can do the morning daily stand up scrum meeting on time, leaving team area at the same time to walk back to their apartment, and then, they would sit in front of their home computers and logged in the *Diablo* accounts simultaneously to start their game. During my conversation with Liang, I learnt that Jialin and Liang can play for 3-4 hours and 4-5 rounds every night, and 5-6 nights each week. However, the new dynamic of Liang's life -- his wife moved in after graduate -- offered Liang enough motivation to move out of the condominium in the downtown area and move to a house. This change of Liang's life ended the situation that both Liang and Jialian shared the same life and schedule. However, Jialin's personal lifestyle (e.g. homeboy) also result in his disinterest in joining Liang to develop new habits such as hiking. As a result, the bonding formalized between Liang and Jianlin become more and more loose as the life trajectories moved to the opposite directions gradually.

Coding Peasants' Struggling over Badge-collection Games

In Chapter 2, I presented that one important mechanism that Trifecta adopted to attract hobbyists to devote extra efforts into work is to incorporate game design elements (e.g. badge collection, countdown timer, and leader board) into work process, which was called gamification of work process. And hobbyists' years of game playing led them to be more sensitive to game elements such as badges and timers, and primed them to invest more intensively into the gamified work process. Among all these gaming elements that were incorporated into work process, virtual "phone-tool icon" badges collection was one

of the most popular set up, which successfully attracted hobbyists to devote extra labor and time to collect as many badges as possible. Specifically, while most engineers had around 20-50 icons collection listed on their personal page, tech hobbyists' collections can easily reach to more than 200.

Unlike tech hobbyists who gleefully invested into these gamified work process and attempted to distinguish themselves in this territory where they did best, coding peasants held a prudential attitude towards Trifecta's promotion of gamification. If recalling Asian engineers' comments on hobbyists' choice of doing game design as graduate project in the previous discussion, Asian engineers read this decision of hobbyists as irrational, especially when calculating the losses and gains and the energy or time that can be potentially consumed by the projects. Tracing the similar thinking thread, for Asian engineers, it was irrational to unconditionally invest into collect badges and collect as many badges as possible at the cost of sacrificing leisure time and risking to be burnt out. Instead, Asian engineers attempted to rationalize this badge collecting activity and seek for a balance between investing too little time to risk to be stood out as indifferent to company's gamification and investing too much time to sacrifice off-work life. This strategy is clearly reflected from Sammir's comment on the "badge collection" game: "it's a typical corporation trick. Just make sure you collect some, like 20 or 30, then you won't be stand out for being a slacker."

As shown above, for most of the time, Asian engineers' were reluctant to participate into the badge-collection games, which partially derived from their rational calculation on the lost and gains. Occasionally, however, Asian engineers' withdraw from badge collection derived from their concern of exposing their cultural deficiency.

Interestingly, this situation occurred more often in badge collections that involved more public display of engagement. The collection of the "I play with the E-speaker" icon was one of the typical example. In previous chapters, I discussed that among all the phone-tool icons that engineers can collect, "I play with the E-speaker" icon was one of the most popular one. Both brogrammers and tech hobbyists show great interests in accepting the "E-speaker 5000 questions" challenge and helping the E-speaker Organization test its products. As described before, in the Wizard Org where I conducted my observation, after their manager Vikram accepted this 5000 questions challenge and brought back a E-speaker, all team members went to the "I play with the E-speaker" testing parties, brought back their own E-speakers and accepted the " E-speaker 5000 questions" challenge. During lunch break times and other the short breaks those days, Wizard team's conversations concentrated on E-speakers. While tech hobbyists conversation around E-speakers involved serious discussion on the artificial intelligence design behind the smart speaker, brogrammers interaction with E-speakers majorly involved turning this question-testing challenge into a prank through competing to come up humorous questions to test the E-speaker (e.g. "E-speaker, did you fart?").

Unlike these two groups of very public investment into the E-speaker testing activities, Asian engineers again chose to hide in the shadow to finish their "E-speaker 5000 questions" challenge. Specifically, I found all Asian engineers in the Wizard team (except for Kevin) stealthily brought their E-speakers back to home to finish their testing tasks. When I talked with these Asian engineers, I realized that, once again, the concern of language deficiency and cultural barrier contributed to their choice of turning this public activity into a private task which they would rather use their spare time to fulfil.

For example, LM (Chinese male, level 4), has expressed his fear that, if he asked his E-speaker questions publically in the team area, there was a high possibility that his E-Speaker probably wouldn't be able to recognize his questions due to his accent, which would make his investment into this question-challenge game nothing but a public humiliation.

Conclusion

To conclude, in this chapter, I firstly gave a very general portray of the first-generation Asian immigrant engineers and discussed several self-deprecating terms that Asian engineers adopted to label themselves, such as "coding peasant" and "code monkey". Such a general sketch of Asian engineers as "coding peasants" also provided an important foundation for later discussion on the greatest disagreement between Asian engineers and tech hobbyists, such as the motivation of entering tech industry, the interpretation of work nature. In the second section, I presented both the positive and negative attitudes that coding peasants held toward to tech hobbyists. On the positive side, coding hobbyists admired hobbyists' passion toward to technology and programming, and admitted that hobbyists' obsession with technology was critical to make them excellent at their study and jobs. On the negative side, coding peasants questioned tech hobbyists' social skills and criticized hobbyists' blurring between work and hobby. Therefore, coding peasants tried to distance themselves from hobbyists through portraying their own attitude toward work as professionalism and valorizing their own hard-working ethic by drawing on craftsmanship value.

The second half of this chapter concentrated on coding peasants' navigation in hobbyists promoted gaming strategies and games. Firstly, as discussed in previous chapters, facing scrum development system's high demand on collaboration, hobbyists utilized playing video games with teammates to build rapport and ensure smooth cooperation in the software development process. The majority of Asian engineers were very skeptical about such blurring between work and game relationship, and thus isolated their gaming life from their work life. One way they achieved this goal is through formulating video game battle team within their own ethnic group. Of course, language is another important reason that lead Asian engineers prefer to game within their ethnic communities for the convenience of communicating via native language. However, this section also demonstrated that there remain a small group Asian engineers who tried to participate in their own work team's video game plays. As a result, this group is largely victimized in hobbyists organized game playing. Stereotypical traits associated with Asian engineers became inexhaustible resource that hobbyists constantly drew on to stigmatize or tokenize their Asian teammates. The second game I concentrated on is the badge collection game, as it was another type of game that attracted hobbyists to heavily invest in it. Facing hobbyists enthusiastic embrace of badge collection games, Asian workers remained hold a rather rational, skeptical and practical attitudes toward this game. Even so, it was remain inevitable that Asian engineers sometimes were pressured to join their team's collection of certain badges (e.g. E-speaker), no matter how reluctant they were.

Specifically, I would present the distinct view that Asian engineers held toward to brogrammers in comparison to hobbyists, and the dramatically different reactions that

Asian engineers had to brogrammers' games than to hobbyists' ones. If we see the most prominent tension between coding peasants and tech hobbyists partially drives from coding peasants' different interpretation on the meanings of tech work (as means to earn living and should be treated professionally and seriously) from hobbyists, then we will see the tension between coding peasants and brogrammers largely stems from divergent personality --- Asian engineers' self-modesty and introverted personality that cultivated in the Asian society makes them can easily feel resentment to brogrammers' overconfidence and extrovert personality, especially when they are manifested on the party-game stages.

CHAPTER V

THE GAME OF SAVING AND LOSING FACE: CODING PEASANTS' NAVIGATION IN BROGRAMMERS' PRANKS

In Chapter 5, I offered a general portrayal of Asian engineers' image as "coding peasants", discussed coding peasants' interpretation of tech hobbyists and these hobbyists almost "irrational" obsession with technology, gaming and programming, and presented how Asian engineers reacted to tech hobbyists' computer literate demanding games. In order to further illustrate the contrasting nature of two groups of white engineers and the two very different types of games each group promoted, in this chapter I will unpack the relationship between Asian engineers, brogrammers, and games that brogrammers invested in, and demonstrate how this relationship is distinct from the one between Asians' and hobbyists'. Specifically, I will detail the distinct view that Asian engineers held toward to brogrammers in comparison to hobbyists, and the dramatically different reactions that Asian engineers had to brogrammers' games than to hobbyists' ones.

To start this chapter, I will examine those coding peasants' interpretation of brogrammers and brogrammers' workplace behavior in order to lay down a foundation for further analysis of Asian's navigation in brogrammer-initiated games. As will be shown later, Asian engineers express their respect for Brogrammers' organizing ability and individual charisma, and attempt to use a concept of "underground world big brothers" (*Jiang Hu Da Ge*) to highlight brogrammers' leadership and competence of solidifying their own circle. However, coding peasants' self-modesty that is cultivated and valorized in Asian society makes them easily feel resentment to brogrammers' self-

confidence, assertive argumentation, and aggressive expression of individuality once brogrammers push too far.

After laying down the foundation of Asian engineers' interpretation of brogrammers, I will spend the second section discussing coding peasants' attitudes to brogrammer-initiated pranks and strategies of navigating their own positions in these games. I will start by presenting Asian engineers victimization and navigation in one of the most systematically-organized prank -- the donut pranks. As will be shown below, coding peasants are very reluctant to participate into the donut email games, as donut pranks initiated or promoted by brogrammers became an important way to expose Asian workers' cultural naïveté in a western context and thus to victimize Asian workers. To navigate their own position in the donut pranks, Asian engineers develop two important coping strategies, which are shared by a majority Asian engineers and constructed relying heavily on Asian value system: one is never sending donut emails to people who ranked higher them themselves, and another one is always minimizing the exposure scale of donut emails. In addition to donut emails, I will also identify two other types of contextual pranks in which Asian engineers become the group that most easily to be targeted. One such contextual pranks are the series of highly ritualized "welcoming pranks" that used to tease newcomers. In this section, I argue Asian engineers' "double outsider" status always makes them the victim in the prank. Another type of contextual pranks are the spontaneous pranks which usually happen too quickly and too suddenly for Asian engineers to organize strategies to react.

Coding Peasants' Interpretation of Brogrammers

Although coding peasants have never used the term "brogrammer" for this group of white engineers, they did have a very clear understanding that there is a group of engineers in the high-tech corporation who were aggressive and cocky while at the same time good at convincing people, solidifying the team, and obviously distinct from hobbyists. To start with, when I discussed this with Asian interviewees and informants, I found that leadership ability, individual charisma, and athletic competence were key characteristics repetitively mentioned by Asian interviewees to describe this group of white engineers.

For example, I have interviewed two Asian engineers, Lei and Elijah, in the Credit Team. In their narrative, a MIT circle occupied an important place in their team and one white programmer named Teddy was the soul of this MIT circle. Sometimes, as Lei also mentioned, Teddy's leadership could extend to the whole Credit Teams. When I chit chatted with other engineers in addition to Lei and Elijah in the Credit Team what were some key personal quality and ability possessed by Teddy made him the core of the MIT circle and the leader of Credit Team, they all told me that Teddy's past athletic experience was the key factor that allowed him to have a physically intimidating body, and trained him to possess very good leadership ability. Similarly, during my conversation with Elijah, she offered me a vivid portrayal of Teddy:

> He used to play on the MIT football team. He is at least 1.9 meters [6 feet 2 inch] tall and all muscle. His body is robust. Like his shoulder, it must be at least this wide… But he is not fat… at least when he first joined the team… it's all muscle. But now…his belly grows out now…but anyway, when he got closer to you, it still created a sense of deterrence…(Indian female engineer; master degree; Northeastern University; Level 4; 30 years old; H1-B holder)

As a matter of fact, Asian societies tend to deemphasize sport and recreation in comparison to the United States (Habins 2005). It was interesting that when I discussed this with white interviewees who accustomed themselves too well in the western society, they tended to associate brogrammers' athleticism with many other cultural meanings, such as toughness, hyper-sexuality, aggressiveness, and even "party animals". On the contrary, Asian engineers' interpretation of Teddy's sport background is majorly concerned with sport itself. This might be due to Asian engineers' unfamiliarity with the cultural symbols associated with brogrammers athleticism. As a consequence of this lack of knowledge Asian engineers' were constantly absent from conversations that brogrammers organized which concentrated on sports and things associated with sports, such as drinking, joking, and even topics on sexuality. The only extension that Elijah made relevant to Teddy's sporty body is a "sense of deterrence" brought to Asian engineers while saying a guy "1.9 meters [6 feet 2 inch] tall and all muscle".

Lei, another interviewee of Credit Team, drew on a Chinese cultural concept "*Jiang Hu Da Ge*" (i.e. Big bro of the underworld)[35] to describe the authoritative position Teddy holds in the bro circle which he organized:

> Lei: He has that type of quality, like the boss quality… or let me put in this way, he looks really like a "*Jiang Hu Da Ge*" (Big Bro of the underworld) for his own gang…
>
> TW: What do you mean his own gang?
>
> Lei: You knew, just like Chinese gangsters, they have their own circle…they do their own stuff that other people have no way to understand what's going on… Teddy recruited three other MIT graduates after he joined our team...so naturally he became the big brother of that MIT circle… He organized them to watch football during weekends, go to bars after work… like in the afternoon when he's

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> ready to get off work, he always walked to the MIT guy who sit next to me, knocked his desk and said "let's go". And all the MIT guys just followed him and left…
>
> TW: And you said he has a boss quality? Can you elaborate a little?
>
> Lei: Sure. Like he is really confident. And this type of confidence can be reflected from the way he talked, like really slow and in a very deep voice but very assertive. And he has never been hesitated to argue with other people...it's more like a common thing for his circle. They love to argue with each other. Or you can say attack each other...And he argued with people higher [level] too...Like he always sings a different tune from our SDE 3 during design meetings. There is nothing wrong with singing a different tune. The problem is that his opinions are always very strong and he expresses them in the most aggressive way…leave no space for others to convince him.

Lei's interview touched on many important themes. Firstly, based on Lei's description, Teddy has significant leadership and organizational abilities, reflected by his ability to constantly recruit from his own circle (MIT graduates). Besides, Teddy also effectively increased the solidarity of his own "gang" through regularly organizing group activities. In addition, Teddy also offered an example of an activity that Teddy chose to organize for his gang do it together: watching football. Indeed, brogrammers' self-organized, off-work activities like watching football or drinking together marked the distinct leisure hobby and interest of the bro group, which was divergent from the hobbyists leisure time activity (e.g. team up to play video game or watching sci-fi films), and thus further reinforced the exclusiveness of the bro circle. In addition, Lei claimed that the way that Teddy talked made him always seem very confident. As will be shown later in this section, other Asian engineers also touched upon the assertive voice of brogrammer and associated it with not only confidence embodied by brogrammers but also convincing ability. Finally, through Lei's final description, it became clear that Lei

attributed Teddy's rare hesitation of arguing with his own gangsters, teammates, and higher level people as evidence of his leadership. What is implicit in Lei's narrative was that it's actually a very common phenomenon for Teddy to argue with his bros in his circle. Indeed, mutual ridicule was a popular "game" among brogrammers, as already shown in chapter 3.

One final thing standing out in Lei's excerpt was how he used the Chinese concept "*Jiang Hu Da Ge"* (i.e. the big bro in the underworld) to depict Teddy. *Jiang Hu* (i.e. Underworld), which implied the outlaw space in China, became the critical field where the martial arts emerge (Louie 2002). For people who attempted to survive in this outlaw space of *Jiang Hu*, the horizontal bond of brotherhood was the most fundamental condition. "Da Ge" can be roughly translated to "big brother". Combining together, "Jianghu Da Ge" in fact was normally used to depict the patriarch of certain underground organization. If borrowing an image in the western context to compare to this Chinese image of "underworld big bro" image, Michael Corleone in the American crime film The Godfather would be appropriate, as both Michael Corleone and the underworld big bro portrayed in China's literature share the rather similar image as ruthless killers when facing enemies but are the respectful patriarch and loyal brothers when facing their own organization/family. In this sense, by using this term to depict Teddy, Lei in fact admitted Teddy's dominating position and influence in his brogrammer circle and even the whole team.

What I found interesting was that, although Lei used this brotherhood bond in *Jianghu* to interpret Teddy's fraternity bond, there were fundamental differences between these two types of bonds. The bond of brotherhood required lifelong loyalty to their

brothers (or family members), self-sacrifice to protect their brothers, prioritization of brothers' life/interests over their own or their families. Unlike brotherhood that emerged from *Jianghu*, the fraternity bond did not emphasize the role of loyalty or self-sacrifice in sustaining this type of bonding. Instead, drinking alcohol, talking about sports, and conducting mutual ridicule were key factors that define the fraternity bond. The result is that Chinese guys ignored the importance of the "blokey" nature of bonding among these brogrammers (Habbin 2004). Instead, they did show their respect to these bonding based on their own illusion which equalized the fraternity bonding with the *Jiang Hu* (i.e. underground) brotherhood bonding. The problem is that a majority of the Asian engineers were not aware that participation in the brogrammers' circle did not demonstrate loyalty or self-scarifice, but that the brogrammers needed to prove they were strong and enjoyed "tough" fun, which involved being able to tease or even attack others through pranks and resilient enough to take other's ridicule.

One thing needs to be pointed out, however, is that brogrammers' self-confidence, assertive argumentation, and aggressive expression of individuality can frequently be interpreted as a sign of cockiness by Asian engineers, once being pushed too far. In fact, many of my Asian interviewees show their resentment of brogrammers' self-promoting behaviors. This strong resentment has close relationship with Asian engineers' characteristically humble disposition.

Specifically, if Chinese modesty can be shown as self-labeling as "coding peasant", then Indian engineers' modesty can be reflected by their self-mockery as "code monkey". For example, during my interview with Manjuf (Indian Male, Level 5 engineer, 31 years-old, H1-B holder), he asked me about what were some courses that I need to

take to get a sociology degree. And after hearing that I have taken statistics for my first two years, he suggested that I should change my major to computer science since it was much easier to find a job and get a H1-B visa if I switched to computer science. I told him I might not be good at math or writing codes as they were. And Manjuf's response was, "Who need to be good at this? You think we have to be good at math to do coding? Monkey can code! This job does not require you to be good at math or smart or whatever thing you imagine. What you need is to endure the boredom of doing trivia stuff". In fact, not only limited to Indian and Chinese engineers, during my interviews with other Asian engineers (e.g. Singaporean, Korean, Pakistani) , I found that most of them tended to hide their prestige derived from their familial background, educational institutions, and occupations, which shaped sharp contrast to brogrammers aggressive highlighting of their professional esteem, and consumption and financial ability.

The conflict between Asian engineers' modesty and brogrammers' publicized temperament determined Asian engineers' resentment of brogrammers. For example, one Chinese interviewee, Chun (Chinese Male, Level 4 engineer, master degree, Columbia U, 25 years-old, H1-B holder), has expressed that he felt really uncomfortable interacting with one bro on his team:

> ...you know when another guy in our team consulted with him [the bro] on how he got promoted so quickly, that guy said 'Cuz I am awesome'. I felt he is a little bit too cocky (拽), don't you think? And it's not a one-time thing… he is such a poser…always being so *zhuangbi* (i.e. flaunty)… and his bluffing can always shut other people down…at least to me...

In fact, the term "*zhuangbi*" (i.e. flaunty) is used by several Chinese informants to describe brogrammers in their off-work casual conversations. And it is listed as one important reason that Asians attempted to maintain the distance and mark the difference

from those bros. It's tricky to translate *"zhuangbi"* into English. If the term *"zhuangbi"* is rendered into English with great precision with words, that is, "pretend to be a pussy". But it actually is a term used by Chinese to criticize people who are considered as ostentatious and pretend to possess more wealth, competence, and merit than what they really have.

Through my interviews, I found a majority of Chinese interviewees tried to distance themselves from brogrammers due to their dislike of such *"zhuangbi"* trait embodied by brogrammers. When I asked my interviewees how to avoid being a poser, some told me: "let's say you need to report a project design plan, even you are 90% sure your plan is the best, say it like you are only 50% sure. Leave some wriggle room for yourself". This Chinese guy's attitude is a sharp contrast to the brogrammer Charles that I interviewed, who was a level 4 engineer at Ranger Team. We discussed a very similar issue on how to report to managers in terms of their project plan and their estimation of progress. Charles told me his secret is to push himself by making big promise. Specifically, if he felt it would take normal people 2 weeks to finish a project, he would promise his manager he could finish within one week to show he is smarter than other guys. He told me his motto was "fake it till you make it". This divergence can be observably reflected from Chinese discomfort from brogrammers' promotion of pranks and from the aggressiveness and arrogance displayed in pranks they pulled on.

Coding Peasants' Victimization in Donut Email Pranks

In chapter 3, I discussed how donut email pranks became a critical platform where brogrammers displayed their leadership ability through leading their own teams to attack

other teams' slowness at meeting deadline or slackness of participating in donut pranks, while at the same time reinforcing their bonding with other brogrammers and managers through mutual teasing each other via donut emails. Unlike brogrammers, Asian workers hesitate to participate in donut pranks. And as will be shown below, pranks initiated or promoted by brogrammers became an important way to expose Asian workers' cultural naïveté in a western context and thus to victimize Asian workers. In addition to the fear of exposing cultural naïveté, there were several other reasons that code peasants themselves identified which contribute to their hesitation of participating into donut emails, such as Asian society's dogmatism education; coding peasants' shy and introverted personality, and their lack of language sophistication. In fact, Asian's absence from donut emails was not just a passive decision due to their cultural and language deficiency, but also an active choice after balancing the gain and loss of participation into these pranks. For example, several of my interviewees emphasized that it was a very "time consuming" and "counter-productive" to construct an appropriate joke or respond to one.

As described in Chapter 3, the collaboration of the development team is the cornerstone of the software development process. Rapport among team members decides whether the team can move forward together at the same pace in the scrum development process. One function of donut emails is to increase the collaborative ability within the development team, either in the format as the whole team working together to come up with a donut prank to attack their sister team, or the whole team coordinating to carry out a donut prank targeting one member of their team. Brogrammers, as discussed in chapter 3, always play the leader role in such type of team-based prank to organize the team to

design pranks, regardless of whether they are targeting a sister team or a member within their own team.

More often than not, Asian engineers are chosen to become the "butt" of this type of team-based pranks. For one thing, coding peasants are normally the least powerful and most marginalized in the team, which makes them the ideal group to be ridiculed (Chen 1999). For another, Asian engineers' lack of cultural understanding of subtle rules while pulling pranks makes them the group that is most easily to be mocked.

Among pranks that brogrammers organize their teams to conduct, pranks embedded with heavy cultural symbols are the most popular. For example, "dress down" is one of the cultural symbols that engineers highly valorize, as it helps engineers express the individualism, informality, and their pursuit of freedom. Lack of such understanding of the cultural meaning behind the dress code, Asian engineers poor dress style is always one thing that brogrammers tirelessly tease about.

The suit-up prank was designed collectively by the Wizard team to trick Aamir to wear a suit to work when Aamir had gone back to Pakistan for his three-week vacation. His colleagues conjured "suit-up Friday", convincing him that all employees would be wearing suits that day. To make this prank seemed more realistic, Vikram sent an email to the whole team announcing the start of the "Suit-up Friday" tradition in the Wizard team. Of course everyone in the team who participated in planning the scheme knew that this email was a bait that was written for Aamir to swallow. During the first week when Aamir came back to work, every engineer in Aamir's team tried to ensure Aamir had already checked out their manager's "suit-up friday" announcement. Despite of a slight scepticism, Aamir wore his suit to come to work the Friday of that week. The moment

when Aamir entered his team area, he realized that he was tricked - no one else had worn a suit and everyone on the team was getting their cellphone ready to take a picture of him. Afterwards, this episode was referred so many times - in stories to the new intern who joined their team, to other team's engineers, and to me.

Just after a month when the prank almost faded from people's conversation, Aamir was caught for not locking his computer. Taking this chance, one guy in the Wizard team used Aamir's computer to send out the donut email titled "I'm the Sharpest Developer at Huli" along with his suit-up picture. Peter firstly replied to this email and provided a vivid description of Aamir's suit-up day for those who were not able to witness the prank that day:

> Aamir was wearing a Karagar jacket, tie by Calvin Klein, shirt by Blue Harbor, and a pair of distinguished designer dress shoes from by Lark & Finch. Complemented with a sharp pair of Gucci glasses, a contemporary yet traditional hair style (product by American Crew) and an attitude that says, "Let Me Code," this developer is sure to turn heads come Q4. His look may be copied by many this fall season, but this trend-setter won't settle for uninspired redundancy. Aamir only accepts the highest fashion and the latest looks.

Following Peter, many engineers contributed to this conversation. Engineers from other teams thanked the sender who shared this picture so that they "get a chance to see Aamir 2.0 launch". An engineer from Aamir's team replied the email by saying "Aamir would be more than happy to give you fashion advice!" Jonathan's (Pipe Org Senior Manager) show-up in the Wizard team area brought in an unanticipated tension: after Jonathan saw Aamir's suit-up picture and read a response email joking that Aamir wore the suit for an interview with another tech corp, Jonathan took it seriously, went into Wizard's team, and blamed Vikram's incompetence of attracting and retaining the talent engineers but losing them to their competitors. Jonathan also threatened Aamir, although in a joking

tone, if Aamir decided to become a "traitor" to the Pipe Org, he would lose his trust once forever and never be able to go back to work at Trifecta. Guys in the Wizard team laughed and explained the whole suit-up prank to Jonathan.

Aamir's failure of receiving the message "that suit-up Friday is a prank" marks his outsider status. This outsider status needs to be analyzed in two levels. At one level, the major reason that resulted in Aamir's belief in this new "Suit-up Friday" tradition is that he was absent when the whole groups discussed this trick. In other words, the pre-condition of Aamir being chosen as the target is his "temporary outsider" status as he left team three weeks for vacation. Pranks conducted towards these "temporary outsider" are so popular at Huli that have become a ritual to celebrate vacationers' return. In other words, pranks have become an important "rite of passage" to transform vacationers' identity back to team players (Van Gennep 2013).

At another level, Aamir's failure of seeing through this prank marks his status as cultural outsider. Jokes always play an important role in reinforcing group culture by temporarily suspending the culture. Some cultural elements, which are so common that almost being taken as routine unconsciously, can only be highlighted again when they are suspended and overturned. Therefore, by designing a prank through overturning the engineering tradition of dressing down into a ritual of dressing up Friday, pranksters actually presented their awareness of the dressing-down culture in the engineering community. If the prank-receiver can see through this prank, they can also show their shared insider status in the engineering communities. To a certain extent, the Suit-up Friday prank was a mockery of "casual Friday" adopted in the mainstream business world. For engineers, their causal dressing code was their ways to demonstrate their

individualist values that went against the values of control, and being serious or formalized. Many white engineers that I interviewed mentioned Mikey Dickerson, a former Google employer who was hired by the White House, and how he kept dressing casually after joining the White House staff. Others have also told me that they took pride in having no rules laid out by their managers in terms of dress code.

However, by discussing the issue of dress codes with Asian engineers, I realized, while the casual dress code demonstrated great symbolic value to the white guys, it brought lot of troubles for Asian engineers. Few of the Asian engineers knew the stories of the White House guy and his "dressing casual" action. Many of them expressed that they struggled over how to dress in different occasions. After joining Huli and observing what their colleagues wore, Asian engineers knew they could just wear T-shirt and jeans on daily basis. But what should they wear when they have an interview with other companies? What is the dress code for conferences? And are there any different dress codes between junior and senior engineers or between managers and engineers? It was these confusions that partially contributed to Aamir's failed recognition of the suit-up Friday plan as a prank. In general, the lack of cultural knowledge has trapped Asian immigrants like Aamir in an awkward situation when they fail to figure out what is considered as a joke/prank and why, and thus contributes to Asian workers' outsider status.

Fearful of exposing their outsider status, Asian workers usually are more hesitant to participate in the pranks in comparison to their white colleagues. Asian workers' hesitation makes them more easily to be labelled as bad team players, who are not committed enough to activities (pranks) organized in the team. On the contrary, the white

guys like Peter and Mike who actively contribute to the suit up pranks are treated as good team players. In other words, the free-play of pranks allows for a thinly veiled racism to circulate, and largely exclude Asian groups from being candidates for "team player."

A final thing necessary to discuss is Peter's teasing with Aamir about his "fashion taste", by sending out a sarcastic message about Aamir's obsession with luxury clothes. A subtext of Peter's comments about Aamir's wearing luxury items from head to foot implies his own cultural confidence - although he (Peter) also has enough knowledge to identify all the brands, he would never try to dress this way. On the contrary, as study has shown, Asian immigrants' emphasis on consumption of luxury goods actually demonstrates their insecure and unconfident mentality about their cultural taste as nouveau riche (Ong 1999). The tension in terms of consumption tastes between brogrammers (e.g. Peter) and Asian workers (e.g. Aamir) were always reflected in the format of jokes as brogrammers "complimented" Asian engineers' "fashion taste". As a result, by teasing about Asian engineers' "fashion taste", brogrammers also manage to locate themselves at a higher status in the cultural system.

Asian engineers are not always willing to accept their cultural inferiority and being victimized by brogrammers' pranks. A desire to overthrow negative stereotypes of Asian as not aggressive has drove some Asian engineers to socialize themselves to brogrammers' circle and conform the hegemonic ideals embodied by brogrammers-initiated pranks. The result, however, is that this group of Asian workers are more likely to become targets of brogrammers' pranks and victims of surveillance. As discussed in Chapter 3, donut emails sent out by brogrammers can play important roles on developing a Foucauldian type of panoptic supervision system and redistributing the power of

surveillance from managers to brogrammers. One set of brogrammers' monitoring emails involved sharing engineers' "funny pictures" that documented either abnormal or inappropriate behaviors of engineers.

For example, brogrammer Peter snapped a picture of Kevin Lin taking a nap in the conference room, and used Kevin Lin's unlocked computer to send out a donut email titled "this is how engineer works" to snitch on Kevin's sleeping on the job. Although Kevin is a first-generation Chinese immigrant who emigrated from Guangzhou to pursue his undergraduate degree, he does not possess many typical traits usually embodied by other first-generation immigrants (e.g. having heavy accent, being shy and quiet most of the time, and having reputation as working too hard). Instead, Kevin is fluent in English with a very light accent. And unlike other Chinese engineers who prioritize being hardworking, self-discipline and responsibilities over personal interests towards their tech work, Kevin places large emphasis on pursuing projects which he can devote personal enthusiasm. When he was assigned some projects that he felt were not challenging enough, he aggressively displayed his slacking off on the job site, such as publicly watching Twitch (a game live stream) on his screen and making brief absences from the workplace to take a nap.

Like his white colleagues, Kevin emphasizes the freedom and autonomy of the engineering work in terms of choosing his own favorite working schedule - he always stayed up late working at home and became really sleepy during day time. His team manager, Vikram, seemed understand that a brief nap could make those late-nighters' afternoon work more productive. So Vikram was always lenient enough to turn a blind eye toward such type of behavior. However, Kevin's teammate Danny recently learnt

that, even though Kevin always stayed up late at night, he did not always do work-related tasks. Instead, he spent whole night playing video games. All of his gaming hours were revealed by the exposed face of his teammates on a gamers' platform "STEAM". Several days later after Peter learnt about Kevin's sham from Danny, Peter sent out the donut email that contained Kevin's nap picture, and made his sabotage exposed to all the teams under Pipe Org. After Kevin's nap picture was sent out, Vikram told Kevin, if he really needed to take a nap from now on, he had to write a "one-pager" to him to justify his reasons/behaviors. And everyone in the Wizard team knew that asking people to write a "one-pager" was Vikram's way of saying that they had done something really inappropriate. By requesting a "one-pager", Vikram attempted to deploy an indirect discipline that makes it seem like offering space for engineers to make a choice at doing something as long as they can justify their reasons.

Kevin represents one group of Asian engineers who are well aware of the negative stereotypes coded as "Asian" and have a stronger desire to "cut against" it by moving closer to the dominant group (i.e. brogrammers). Anthony Chen (1999) identified strategies these Asian American adopt as "compensation strategy", which is meant to undermine the negative masculine traits associated with Asians (e.g. less sensually attractive, less aggressive, and more docile) by meeting the ideal of hegemonic masculinity. This type of compensation strategy can be reflected in one group of Asian engineers - the group that emigrated to US in their early years - in the engineering workplace.

According to my interview and observation of 31 Asian engineers, while the majority of them got their bachelor degree in their home country firstly and then

emigrated to the US for graduate school (25 in total), there are 6 Asian engineers who got their undergraduate degrees in the U.S. Four years of undergraduate study in U.S. made these engineers blend in the American culture much better than other Asian engineers who emigrated later in the life course. Based on my observations, I found this group always tried harder to get along with white guys (especially brogrammers). For example, Kevin has very good personal relationship with his mentor Peter - these two joined the same gym and went to work out together several times a week. Like Kevin, most of this group of engineers chose brogrammers as their mentors and managed to bond with their mentors using both work time and off-work time. Just as Anthony Chen described, to compensate their disadvantaged Asian masculine traits, these Asian engineers not only participated in activities initiated by brogrammers, but also excelled at most of these activities to show they can be as manly as these brogrammers - they followed college football games with them, drank as much as the white guys did, went to gym sometimes even more often than their white colleagues.

However, there are some things this group of Asian engineers felt keenly that their ability fell short of their wishes. That is, the ability to display masculinity (e.g. aggressive and toughness) in humor. Even though Kevin has been learning his way to display aggression in meetings and negotiating work schedules, he still hasn't been able to present his aggressiveness through initiating attacking jokes and to display their toughness by taking the ridicule while abusing back. Humor, especially deprecating humor, has not been appreciated in Chinese culture due to Confucian emphasis on keeping proper manners - humor and satire were regarded as inferior forms of aesthetic expression for centuries in China (Feinberg 1971, Yue 2010). After the 1980s, a type of

“jerk humor’ has become popular in China, which is characterized by cynical and sarcastic (Liao 2001). However, the targets of the cynical and sarcastic deprecation from “jerk humor” are usually the joke-initiators themselves. In other words, even though young people in China started to adopt jerk humor to express aggression and irony, they always need to point the figure at themselves due to communist restriction of using humor to satirize or express hostility.

Similar reflections are also reported by my Indian and Pakistani interviewees. Some have told me that the orthodox teaching and thinking styles back to their home country do not appreciate humor and they are always inclined to take humor as an act of improper manners, especially in a working environment. During my interview with Uma, who is an Indian engineer, he told me that, after he had been caught by donut email on one occasion, he responded to the email and told his teammates that he would bring the team vanilla glazed donuts topped with sprinkles since it’s his favorite. Following his email, other people replied by teasing him that he basically liked “Beavers Butt scent” since vanilla flavor is distilled from anal secretion beavers use to mark their territories. Uma told me that he did not respond this teasing email since he thought it was “low taste”, “improper” and “a little bit childish” by discussing this matter in a public working email system.

Therefore, if these Asian engineers’ compensation strategies buy them a ticket to the brogrammers’ circle, their powerlessness in carrying out or resisting an aggressive donut prank makes them more vulnerable to brogrammers’ domination and surveillance in comparison to other engineers. As discussed in the section on brogrammers, the bond among brogrammers is a joking relationship which is partially reinforced through the

ritual exchange of insults on the donut email platform. By welcoming Asian engineers like Kevin to become an "insider", brogrammers like Kevin's mentor Peter would accomplish the ritual insult to him by sending donut emails. The closer relationship these Asian engineers formalized with brogrammers, the more frequent donut email attacks they would receive.

Coding Peasants' Strategies to Cope with Donut Emails

To cope with the donut emails, coding peasants develop their own strategies of participating into the game. When Asian engineers send out donut emails, they give more thought to every detail involved in their donut email pranks, such as whom should be chosen as their target, which email list should they choose to send to, and how should they handle other people's response to the donut emails they send out. It needs to be emphasized that Asian cultural/value systems plays a key role in shaping coding peasants' coping strategies toward donut emails. Specifically, one standard developed and shared by many of my Asian interviewees is actually a self-regulation, which involves an implicit consent of never sending donut emails by using computers of co-workers whose ranks are higher than themselves. This self-proposed rule indeed reflects the persistence of a traditional value in most Asian societies, which involves the respect for senior people and hierarchy (Hibbins 2014). As Seimar (Indian Male Engineer, Level 5, H1B holder, 26 years old) explained to me, "I rarely sent out donut emails. When I have to, I always tried to write on people's [screen] who share same level as me. I have never tried to write on people's [screen] who ranked higher than me."

Similarly, another Chinese engineer, Zhang SH, shared a very similar strategies of only pulling donut email pranks on coworkers who have same or lower ranks. In addition, he also offered a very detailed explanation how he learnt this implicit rule through observing his bosses playing donut pranks with each other during the first few weeks when he came to work:

> During the first few weeks I worked here, I learnt about this donut email. Whenever you forgot to lock your computer, others will use your computer to send out the donut email, normally with a funny title like "I stink" or "I smell"... at first, I thought those catches [of unlocked computers] were just random...but later I realized there was an authority thing going on among all these donut emails… Like when a Level-6 manager got caught, only the level -6 or 7 manager dared to reply his donut email …and all level 4 or level 5 [engineers] were quiet. It's pretty obvious…not everyone dare to reply it...so I figured that there is at least one rule..it's that [I should] not pull the donut email pranks on managers.. And later I felt it may be safer for me to not pull the donut pranks with all people having higher ranks than me…(Zhang SH, Chinese Male Engineer, Master degree, U Penn, Level 4, H1B holder, 25 years old)

Only if an individual possess an "authoritarian" mind, can he/she be able to intuitively interpret other people's behavior from an authoritarian perspective. Indeed, Asian programmer's years of immersion in authoritarian systems resulted their unconscious interpretation that "there was an authority thing going on among all these donut emails". For Asian engineers, managers, as the authoritative figure in the team or in the organizations, should be respected and shouldn't be challenged. This understanding results in SH's inference that "I should not do the donut email pranks with managers." Indeed, respecting management is a major theme shared by most Asian engineers. And in comparison to Chinese engineers, my Indian informants self-imposed an equally strict rule of respecting upstream power figures. After all, growing up in a caste system, Indian interviewees are well aware that members of higher castes have a greater social status,

privilege, and power than individuals of lower castes. And as discussed in the previous chapter, for many of my Indian interviewees, they in fact usually have a short period of work experience in the outsourcing tech company back in India before migrating to US. Under their description, tech corporations in India shape a sharp contrast to the US Tech Company. While US companies emphasize flexibility and a flattened hierarchy, Indian tech companies have a rigidly defined and very complicated hierarchy. As my Indian interviewee Umesh explained, in the Indian tech firm where he works, employees really have to "obey" managers and address their manager as "sir". Based on this understanding, it is not be surprising that Asian engineers' cultural system leads them to an authoritarian interpretation of the operation of donut emails.

Finally, what is equally interesting is that, when generalizing the playing rules of donut emails, Zhang SH expands the rule of not pulling donut emails on managers based on his observation to an even stricter rule of "not pull the donut pranks with all people having higher ranks". It implies that not only managers, but also engineers who are more senior and thus have higher rank would be in the attacking range in donut prank conducted by SH. Again, it reflected that Confucian value, which emphasized that elderly were considered as the locus of knowledge, power and seniority is the key in determining a person's authority, has subtly influenced Chinese engineers' behavior and coping strategies towards the donut email system.

The problem is, however, that Asian engineer's self-imposed standard of only sending donuts emails using lower-ranked engineers' computer *contradicts with* one major intention of donut email, which is to demonstrate that high-tech firms are meritocratic workplaces. Indeed, as stated in Chapter 3, brogrammers are the group who always

attempt to show their fearlessness through challenging superiors. Similarly, for these superiors who can be either senior engineers or managers, teasing with brogrammers illustrates they are approachable and open-minded. The consequence of this ritual exchange of insults between brogrammers and their seniors is that brogrammers' status is enhanced through bonding with managers and that high-tech workplaces create an illusion of an environment where there is open contempt for authority. More importantly, there is also a wide belief that the vitality of the innovation in the high-tech industry starts with this contempt for authority. In other words, innovation is built upon the courage of breaking the rules, challenging the authority in the field, and exploring the field that has never been explored before.

On the contrary, Asian engineers' consciousness of hierarchy and respect of power are then considered as a key resistance of innovation potential. That's why several of my interviewees admitted that there won't be Edward Snowden, Mark Zuckerberg, and Aaron Swartz in Asian societies who shared common qualities as being too young to reach the top of tech world and make influence. One of my Chinese informants, Ricky, even joked about that if it were in China, Snowden wouldn't have been able to leak any information from National Security Agency (NSA) since he was too young and too junior to even get an access to such high level classified information.[36] For Asian engineers, this standard of respecting power and seniority is perfectly consistent with their value system and identity as "coding peasants" (i.e. writing codes basically equalizes moving bricks). When they let this standard direct their participation in donut games and develop the

[36] This statement was paraphrased from one of my casual conversation with Ricky while we were taking a lunch break together.

standard of "not sending to superiors", it largely contradicts the original intention of this game while at the same time reinforcing their image as afraid of breaking rules and challenging authority, and thus being not creative or brave enough.

As shown above, the standard of not attacking superiors via donut emails contributes to Asian engineers' less frequent participation in the donut game overall. In fact, there are other similar factors that contribute to Asian engineers' hesitation of participating in the game as well. To elaborate, another standard developed by Asian engineers in general and Chinese engineers in particular is to send donut emails to the email list that involve as few recipients as possible. Specifically, many Chinese engineers interpret their attempts to select the smallest audience as a way to "save face" for their victims by reducing their exposure. For example, Qifan, who is a Chinese male engineer in the Tablet Application team, told me he always restricted his donut emails to be sent to the smallest US-location based team email list which only included 8 engineers rather than sending to the complete Tablet team email list which also included several outsourcing teams in India:

> QF: ...when I sent out the donut emails, I always chose to send to the central@ list...but very occasionally, I also sent it to the team email list… you know…. to make it more threatening to the guy I caught...
> TW: Why sending to the team list more threatening than central@ list?
> QF: Oh it just means that I exposed the guy to more people. So the central@ list only included 8 members… so it's all people working in the US. But the team email list included two additional Indian teams...they are the tech support teams helped us handling maintenance tasks. So normally, if we wanted to discuss issues that we don't need to involve the two Indian teams, we just share through the central@list….So when I sent donut emails, I normally just sent to the central@list… to us 8 people here...after all, getting caught by donut email is still a quite *diu lian* (losing face) thing .... You know...so I always try to liu *mianzi* (save some face) for others when I do this...so once they caught me, they would also save some face (*mianzi*) for me. Does this make sense to you? (Qifan, Level

4 engineer, H1-B holder, Master degree, Carmegie Mellon University, 23 years old)

To understand Chinese engineers' strategies of selecting an audience, I have to first explain two important terms that Qifan used at the very end of this conversation: *diu lian* (losing face) and *liu mianzi* (saving some face). Although I translated *lian* and *mianzi* into the same term "face", the interviewee actually used different Chinese characters -- *lian* and *mianzi* -- when he explained his thoughts. Indeed, *mianzi* and *lian* had distinct connotations in Qifan's narrative and were used in very different situations. When Qifan said that "getting caught by donut email is still a quite *diu lian* (losing face) thing", he illustrated his acute sense of the nature of this game, which concentrated on shaming and humiliating people. Therefore, face meant *lian* and was used together with lose (丢), which could be translated to "being ashamed or humiliated" and thus implied the damage (i.e. shaming) had already been made once being caught, which was not negotiable.

What can be negotiated, however, was the degree of the shaming: by sending to the smaller groups, Chinese engineers managed to minimize the level of shaming, which is an effort of *liu mianzi* (saving some face), hence the second connotation of face (i.e. *mianzi*). What need to be emphasized is that, for Chinese engineers like Qifan, their effort to minimize the degree of the shaming always needs to be reciprocated, which sets up another condition of this self-imposed rule. This condition is very clearly explained in Qifan's statement "I always try to liu *mianzi* (save some face) for others when I do this...so once they caught me, they would also save some face (*mianzi*) for me." Here, the term face is used together with "saving" and can be translated into save some level of dignity. It is done as a result of exchange: if you save me some dignity this time, then I

will reciprocate by saving you some dignity next time when I catch you. In other word, the moral code of reciprocity is the key here to play this face-saving game. When Chinese engineers sent out donut emails, they always took into consideration that they are also likely to be caught by this victim in the future. Therefore, it would be wise to save the victim "some face" this time so that he/she can reciprocate later to save him some face if he's caught. This understanding is widely presented to me by many interviewees and expressed in various ways. For example, another Chinese engineer Tao, who is a level 4 engineer in the Launcher team, using a Chinese old saying to express his understanding of only sending donut emails to the minimum range as a strategy of "saving some room [for your enemy] today while you are the winner, [just in case] encountering again tomorrow when you become a loser" [**今日留一物，他日好相**见].

The problem is that this moral code of "face" reciprocity is only enacted among Chinese engineers. In other words, white engineers do not understand this moral code at all. No matter how considerate Chinese engineers are and how hard they attempt to minimize their donut pranks' exposure, they cannot guarantee that their mercy of saving face for the white engineers will be reciprocated in the same way. In fact, as I discussed in Chapter Three, brogrammers' public persona always directs them to take advantage of donut emails to increase their own and sometimes their team's positive exposure to their organization, department, or even the whole platform. So it is not difficult to infer that brogrammers would not be grateful or even aware of Chinese engineers' "face-giving" effort. Instead, they attempt to attract as wide an audience as possible when they caught Chinese engineers. Therefore, I speculate that there must be a tendency that Chinese

engineers are more likely to choose their Chinese coworkers as a target when they try to fit themselves into the donut games. And this speculation is verified by many of my interviewees. In fact, in addition to Qifan and Tao, there are 8 other Chinese engineers who straightforwardly point out that if they have to pull the donut emails, their Chinese friends would always be their first choice for victimization.

The consequence is that Chinese engineers not only lose the opportunity to use donut emails to publicize themselves beyond the team level, but also potentially formalize a certain level of resistance to the donut emails' function of surveillance and discipline. As unpacked in Chapter 3, donut emails monitor and discipline engineers by allowing peers to expose each other's misbehaviors on the donut platform, such as how Charles misbehavior of drinking while solving tickets was exposed by his teammates via sending out a donut email with a line "I will bring donuts for the team tomorrow ….because I was drunk when solving tickets". For misbehavior like this, the more public place it was displayed, the more humiliation it achieved and thus a more severe level of punishment was the result. Again, when we draw a parallel between a high-tech firm and factory discipline, if exposing engineers' misbehavior and asking that engineer to bring donuts on the team-based donut email list equalize docking wages while lecturing factory workers in the human resource office, then exposing engineers' misbehavior on the organization-based list corresponds to docking wages while making a public self-criticism in front of all factory workers. Therefore, when Chinese engineers attempt to minimize the exposure and only send their donut emails within the team list, they actually reduce the disciplinary function of donut emails and lower the level of

punishment for their coworkers, which would not be a very popular strategy in the eyes of managers.

Coding Peasants' Victimization in "Welcome Pranks"

The category of pranks I will discuss in this section are conducted as a "welcome ritual" for newcomers. Asian engineers manage to develop certain coping strategies for donut pranks based on their months of observation in the workplace. However, they don't have any space to prepare themselves and to develop reaction strategies for the "welcome pranks" at the onset of their employment. In other words, Asian engineers appear to be blind, helpless, and mindless when facing this type of welcome pranks in comparison to donut emails. While all newcomers, no matter white or Asian, are all very likely caught off guard by these welcome pranks, Asian engineers are apparently more easily to be tricked and therefore more severely victimized due to their doubled outsider status -- as both the outsider of this work organization and outsider of American culture in general, as will be shown below.

The first type of this type of highly ritualized welcome prank I will introduced is called the "checklist" prank, which has been conducted in many teams in the Pipe Org several times during my fieldwork. I will describe Wizard team's checklist prank as an example. The idea of the "welcome prank" was initiated by the level-7 manager Aanandit, who tried to promote Assassin team and Wizard team to organize some fake work rules to scare the newcomers. The brogrammer in Wizard team, Peter, built on this initial idea and developed the "the checklist" prank, which aimed at overthrowing newcomers' imagination of a "fun and cool" workplace and creating an image for the

team as a despotic prison-like space. The interview transcript below was Vicky's narrative and interpretation of "the checklist" prank:

> Vicky: you know YR right? He joined the team three weeks after me. I remember that we had a weekly meeting the day before he came. So Aanandit suggested that we should pull a prank on him. And Peter, you know Peter, right? So he said we can print a "checklist" and ask the newcomer to fill the list whenever he left his desk. Like if you want to go to the bathroom, you need to write on the list exactly what time you leave your desk and where you leave for. And when you come back, you will check the box next to this line you fill earlier.
>
> TW: So what is the purpose of this prank?
>
> Vicky: Peter said it'd make him feel that this company is a total control freak...
>
> TW: So you actually carried out this prank?
>
> Vicky: Yes. So Peter printed out the check list. Actually he printed two copies, one was put on YR's desk and another copy on mine. So I also needed to fill the form too. My desk is right next to YR... so me filling out the form would make the prank more real... And Mark, who was assigned to be YR's mentor at that time, helped with the prank too. What I heard was that Mark … when he introduced the daily routines to YR, he especially emphasized that it's important for YR to fill the list and track his daily activities. Mark also added that our manager would do random inspection to make sure YR did fill the list.
>
> TW: So did your manager really checked on him? Or did he do anything help you with the prank?
>
> Vicky: He didn't do much...but I remember he was always there, nodding his head to Mark when Mark explained the checklist to YR...so he was like, offer an authoritative confirmation...to me...later when I became close to YR, he told me that it was exactly Mark's warning on Vikram would inspect him for the list made him feel this was very serious. He told me he actually felt very anxious about it...
>
> TW: ...so when did he find out this was a prank?
>
> Vicky: Take him a whole day actually… he called his Chinese friend working at cloud that night...and asked him about this checklist… I guess that when the guy told him there's no such thing. So he figured it out...

If leaving aside the part that this was a "welcome" prank pulled particular on newcomers, this "checklist" prank actually functioned very similar as the "suit-up" Friday pranks that

Wizard team pulled on another Asian engineer, Ammir. While the conduction of suit-up Friday prank effectively highlighted the informality of tech workplace through mocking the "casual Friday" adopted in business world, the operation of "checklist" strongly demonstrated extreme autonomy that engineers enjoyed at high-tech through completely overthrowing the "autonomy" and implementing the very despotic and almost militarized disciplinary method -- the checklist -- on newcomers. Specifically, by asking the newcomers to document every time when they left their desk, the "checklist" painted a work environment that allowed minimum freedom -- every move engineers took was closely monitored. But newcomers would learn every soon that their workplace was exactly the opposite to what the checklist prank pictured. In other words, engineers enjoyed maximum freedom to determine their schedule and activities: if they wanted, they could ask for "work from home" for 3-4 days to work on their own projects. While in the team areas, they also had very high-level autonomy to determine their schedule. For example, some engineers at Wizard team were morning person and they chose to come to work at 6 am in the morning and left at 3 pm. For those who were night owls, they would come to work at around 11:30 am but wouldn't leave work till 6 pm or 7 pm. Similarly, instead of being asked to even record their bathroom time on the checklist, engineers' activities and absence from team place were rarely tracked by managers, no matter they left for work activities like meeting or left for private activities like walking dogs or taking naps.

Apparently, brogrammer Peter's design of this prank showed that he was not only familiar with the org culture characterized with flexibility and freedom but also good at utilizing pranks to valorize such culture. In addition, via Vicky's narrative, it also showed

that Peter's checklist prank was very well planned. When carrying out the prank, Peter also demonstrated his extraordinary leadership ability by assigning teammates with different roles. As another brogrammer in the team and the newcomer's mentor, Mark naturally played the role of instructing YR on how to fill the form. Vicky, an Asian engineer but an old member of this team, served as an "accomplice" in this prank who filled out a checklist together with YR to set a model for YR and thus make the prank seem more real. One can argue one reason for Peter to assign this "accomplice" role to Vicky was based on the consideration that Vicky sits very close to YR. But what also cannot be denied was that Vicky, as a Chinese engineer who joined the team only few months earlier than YR, was desperate to prove that he had already become an insider in this team through helping with other pranks and separating himself from the outsider YR. According to Vicky's narrative, two managers' roles in this pranks were very important but subtle. Aanandit, as the senior managers who watched over two teams (Wizard and Assassin), played an initiator role in this prank. In other words, Peter's operation of this "checklist" prank was exactly a response to his call that pushed Wizard team to pull a prank on the newcomer. Unlike Aanandit, Vikram's support of this prank was not reflected at initiating this prank but in the format of providing a strong authoritative backup for Mark's claim that the "manager would do random inspection to make sure YR did fill the list." And from Vicky's narrative, one can tell that Vikram's confirmation of Mark's claim (through nodding) did play a very important role in intimidating YR and further reinforcing his belief that the checklist was real.

A final issue that worth considering is why YR can be so convinced this "checklist" is real? And were other newcomers equally convinced and tricked by such

"welcome pranks"? In fact, while I was conducting fieldwork in the Pipe Org, I observed this checklist prank has been played on other newcomers like Phil and Zack the North. It was quickly seen that neither of these two newcomers wrote anything on their lists. However, it took YR a whole day to figure out it was a joke.

While all newcomers were considered ideal victims due to their outsider status and lack of knowledge of the new environment, Asian engineers were still more easily tricked compared to their white counterparts. Specially, for most Asian engineers at Pipe Org that I interviewed (e.g. 23 out of 31 Asian interviewees), Trifecta's jobs were their first work experience in the U.S., which implies a "doubled" outsider status -- both as outsiders to American professional workplace culture in general and as outsiders to tech firm's team culture in particular. It was exactly this double outsider status that caused YR to completely walk into the prank trap without any suspicion. During my interaction with my informants, I found most white engineers had a general understanding of the tech culture before entering this industry. Indeed, it is not a stretch to conclude that many white engineers were enticed by Trifecta's fun and flexible tech culture in the workplace. So it should not be surprising that these white engineers were very likely to boost their alertness when they were guided to fill the checklist. On the contrary, the culture of the tech industry was never the major concern of Asian immigrants when they chose their major and their future employers, which resulted in Asian engineers' utter ignorance of the tech work environment and tech culture. In addition, as discussed earlier, for most Asian engineers, they grew up in an authoritarian regime and cultivated the authoritarian mindset, which allowed them to justify and normalize the implementation of checklist very easily in contrast to their white brogrammer colleagues.

Indeed, teasing with newcomers was so popular that it had become a tradition at Pipe Org as part of the welcome package. All managers and brogrammers were passionate about pulling pranks on newcomers, as joking practices can show the newcomers that existing team/org members enjoy each other, have enough rapport to be able to pull pranks together, and that "creative fun" is embedded within the organization's culture. Similar to the checklist prank, there is another "welcome prank" which has been repetitively pulled in nearly every team at Pipe org, the "phone-tool page enrollment prank". However, in comparison to the checklist, this prank was even more systematically organized and can also more effectively psych the newcomer out.

The idea is simple: when engineers came to work their first day, managers or their mentors would tell the newcomer that they need to update their basic information (e.g. university they graduated, team they belong to, start work date) on their own "phone-tool icon" page (i.e. the personal page where engineers list their basic information and display all phone-tool badges they collect). However, they couldn't update this information themselves. Instead, they needed to be enrolled into the "phone-tool page email list" and the team responsible for this "phone-tool icon email list" would update their information on the phone-tool icon page for them. When newcomers sent emails to this "phone-tool icon email list", they would receive a response email asking them to take a test. Only after applicants passed the test, could they be enrolled into the email lists. Newcomers would be told that if failed the test, they wouldn't be able to update their personal information on the icon page. It was threatening for most newcomers, as it basically implied that they wouldn't be publicized and accepted by the Trifecta online community.

The truth was that this so-called phone-tool page enrollment was a prank. Normally the enrollment test questions were ridiculous. For example, a typical test was to ask applicants to take a typing speed test --- applicants needed to type as fast as they can to meet the minimum requirement. If they failed to meet the minimum, they wouldn't be able to be enrolled. After receiving the "test question", many newcomers would dive into the question as quickly as possible, and tried very hard to pass the test. This was how they were tricked. What is more interesting was that, even after newcomers recognized this email list was a prank, they still subscribed and enrolled to the list. However, what they enrolled in was not a "phone-tool page enrollment" group but the "phone-tool prank" group. After being enrolled into "phone-tool prank", engineers could observe other newcomers being tricked, contribute their test ideas, and play the "organizer" role to communicate with newcomers who sent emails to the list and to "guide" them to take the test.

While all engineers were told to take the test to this email list, not all of them were successfully tricked. Brogrammers, who knew the pattern of prank too well, could easily tell this was a prank and were rarely tricked by it. Instead, they were part of the group who always enthusiastically joined this email prank group to become the pranksters who come up with new testing ideas to tease fellow newcomers. For example, during my interviews with Peter, Philip, and Charles, they all mentioned briefly how they were smart enough to conclude this was a prank while at the same time trying to join the group and offering to test to the later newcomers. As Charles commented,

> "Ok sometime I just use the test question they trick me to trick others...you know the most famous 'typing speed question'.... I was not tricked ... saw through their trick like immediately...but I took that prank and now I give it to (the newcomer)..

> And sometimes I make up my own prank... I really enjoy doing this… it's like ok, you're cool. You're at least as smart as I am... so welcome aboard"

In sharp contrast, I constantly heard Asian engineers' stories of being teased during their first day of work. For example, when I asked WZH, who is a Chinese engineer in the Assassin team, to tell me what was the most memorable thing his first day at work, he told me it was this "phone-tool" prank:

> WZH: I have to tell you that I learnt a lot the first day. Not necessary about work, but more like the people working here. What I found was that the people here are naturally good at lying. They can just lie without drafting...without even thinking... you will never know which part they said should be taken seriously and which part is just lying...just for tricking you
>
> TW: Can you be more specific? Like how did they lie or trick you?
>
> WZH: Sure. The one trick I remember very vividly is when I was introduced to my team... My mentor, Charlie, told me that I needed to send an email to a phone-tool management team and told them that I wanted to update my information. So I just sent them an email. And they told me that I needed to bring my laptop to the 12th floor in another building...they said that there was an IT center in the building. I have to bring my laptop to the IT center and people there will install a chip into my computer. Only after that can I register for the phone-tool page. But the building is really far away from our building….but the IT center ... it's like located on the opposite side on the campus. And I didn't know where to take the company shuttle...So I had to carry my laptop walking like 30 minutes… more like running 30 minutes .. to that building...after I arrived. All sweaty…they told me I was tricked...so I walked back to my team area, feeling so embarrassed … my brain like turned into blank after this ...I can't remember any other thing I did that day after this … all I can remember was that my team was celebrating for their big success of pulling this prank on me ...apparently, it was rare how a people can totally buy in this prank...not a lot of people as stupid as I was... go out for an hour hoping get a chip installed… (WZH, Chinese male engineer, Level 4 engineer, Master degree, U Penn, 25 years old, changed company after 8 months work at Trifecta)

Another Asian engineer, Samir, chatted with me about very similar experience of being tricked to go to the IT center building. And Samir admitted to me that after he was tricked, he actually really wanted to join the list to see how many other people were

teased by this email group. However, he told me he held every instinct of himself and did not join because he worried that when he saw people being sent or responding to these prank emails, it would remind him of the terrible memory of his first day.

When comparing these phone-tool icon enrollment pranks with the previous newcomer welcome prank (i.e. the checklist prank), there are both similarities and differences that are worth considering. In terms of difference, while the checklist prank is much more team-based, the phone-tool icon enrollment prank is operated at the company level, which implies that all the new engineers would face this "test" of sending emails to the phone-tool management department/group. It then becomes a common memory shared by all engineers. Furthermore, for engineers who choose to participate in the phone-tool prank email groups, they also share a group membership in the email list. And based on the several anecdotes told above, it should be reasonable to speculate that brogrammers would be the major players in this prank list. To some extent, this becomes another type of "frat boy club" which allows them to social network and increase exposure at the company level.

On the contrary, the similarities between these two pranks are even more obvious. Firstly, the function of these two pranks is similar as both of them are set up to tease the newcomers and such teasing also plays a key role in presenting the "fun and exciting" work culture for newcomers. Secondly, both managers and brogrammers play the leading roles in organizing these pranks: managers also play the "silent partner" role in both pranks as all they need to do is to confirm what the pranksters say to trick the newcomers. Brogrammers seize every opportunity to sit on the driver seats for both pranks, either through dominating the whole prank in the checklist prank or through joining as core

members and becoming the examiners in the "phone-tool enrolment pranks". Finally, Asian engineers are always more likely to be tricked than their white counterparts due to their doubled outsider status (as outsiders to Trifecta in particular and as outsiders to American professional workplace culture and especially tech workplace culture in general) in both types of pranks. As I conclude from my data, Asian engineers' narratives for both pranks indicate that they do not feel any amusement from these pranks, even long after they have been tricked. All they remember is their negative emotional response: anxiety and embarrassment.

Coding Peasants' Victimization in Spontaneous Pranks

For jokes and pranks that we discussed in previous chapters and sections in this chapter, they can all be characterized as systematic pranks, although some are more systematic and scripted at the corporate level and others are systematically organized at the org or team level. The pranks or jokes that will be discussed later, in comparison, should be labelled as spontaneous ones, as they are much less systematic and more casual. However, for white engineers, spontaneous humor is very popular as well. While white engineers enjoy the very well-planned and collaboratively carried out systematic pranks, they also love pulling spontaneous jokes as they are less scripted and thus seen as more authentic. As a result, spontaneous jokes are also conducted very frequently while bringing constant frustration to Asian engineers. Like the newcomers' "welcome pranks", Asian engineers always find that they do not have enough time and preparation to come up with some navigating strategies for these types of jokes due to their causality and spontaneity. In addition, the frequent outburst of spontaneous jokes also creates constant

frustration for Asian engineers. The constant frustration derived from these joking practices obviously had a profound effect on increasing the general frustration and pressure for Asian workers.

> Lei: … Oh, I remember there's one time that I felt extremely *Diu Lian* (losing face).. There is a service in my team that requested entering service owner's name to login. And this service owner left [the team] long time ago...but his name has been keeping in the file ... Later when I upgraded this project, I need to delete his name. So the Ukrainian guy (one team member in Lei's team) suggested me to replace his name with a funny term as login command. I tried finding some term funny but just can't until the end of the day … extremely losing face [*lian*] right? ...think about it, I did nothing else but searching funny terms that whole afternoon...how counterproductive I was…until now, I still can remember how frustrated and embarrassed I was that day...
>
> TW: Wow so you really felt that frustrated!
>
> Lei: Yeah...I mean sometimes I tried to find excuse for myself like... I was very new to the team when this happened. But now I think, if he asks me again, now, I still cannot come up anything….The thing is that you saw other people come up something funny every day. You saw it and you tried to learn it. But once it's your turn, you just still can't. Frustrated. After seeing other people make a good joke, you just ask yourself, how can they react so fast but you can't? How can they come up such a clever joke but you can't?? (Lei, Chinese male engineer, Master's degree, Oregon State University, Level 4, H1-B holder)

Lei's review of his frustration of not being able to meet his teammate's expectation of adding a fun term to replace the old login command in fact had a certain representativeness among Asian interviewees, as many of them also shared similar experience of not being able to respond to spontaneous joking sequences in a timely and appropriate manner. Two important features seemed embedded through all of these interviewees' stories: one is the high level of spontaneity and another is the very high-level frustration created while these engineers cope with this type of request. Firstly, the spontaneous nature of this type of joking was discussed repetitively among Asian

interviewees. According to them, the spontaneity can be reflected at their teammates made request on funny comments like what Lei described, their teammates suddenly teased them without any warning, or they themselves were pushed to contribute funny comments in a very collaboratively constructed humor sequences developed in their teams.

Then the question became, why did Asian engineers feel so frustrated with their own reactions to spontaneous humor? Based on Lei's narrative, there were at least three factors that contributed to his frustration. Firstly, as Lei brought up twice, he felt "extremely losing face" (*lian*) for not being able to react quickly and appropriately to his teammate's request to come up with a funny login term. As discussed earlier, when "face (*lian*)" was used together with "lose", it could be translated to "being ashamed or humiliated". His remark implies that when Lei used this term, he had already interpreted his incompetence as a humiliating behavior. Such self-interpretation undoubtedly increased Lei's anxiety and frustration. In addition, for Chinese workers, once people felt that they lost their faces, they would do whatever they can to "earn back" their face. In other words, using "lose face" to interpret the situation also pushed Lei to put huge pressure on himself to find opportunity to "earn back" his face. Secondly, Lei's frustration came from his constant comparison between himself and his white teammates. So in Lei's analysis, after comparing himself to his colleagues, he attributed his failure to develop funny comments to his slower reflexes than his white colleagues (i.e. "they react so fast but you can't") and his lack of humor (they come up such a clever joke but you can't). However, as I discussed earlier, Asian engineers' difficulties participating in jokes had nothing to do with their slower reflexes and humorlessness. Instead, it is closely

associated with cultural differences, educational experience, and their foreignness of the American society, the language system, and joke-making strategies embedded in all these domains. The problem was that, without realizing the social and cultural factors, Lei's attributed his failure to the issue of intelligence (e.g. cleverness, and quick reaction), which would profoundly destroy his confidence in his work performance and severely increase his frustration level, as programming work itself requested high level of intelligence. Finally, another factor contributed to Lei's frustration can be reflected by his discussion on his waste of a whole afternoon on searching funny comments and how it was completely "counterproductive". As we have discussed earlier, in comparison to white engineers, Asian engineers interpreted themselves as "professional" and "rational" -- they would always work hard to fulfill managers' requirement because this is what they were paid for. However, a complete waste time of finding funny terms instead of working on coding was neither "rational" nor "professional". And such a behavior conflicted largely with Asian value systems and thus further increased Asian engineers' frustrations at work.

Among many other Asian interviewees who also expressed the similar struggling over living up their colleagues expectations to react and fit into collaboratively constructed humor sequences, some did go beyond self-blame like what Lei expressed but offered some more profound reflections on factors that contribute to their incompetence of fitting into these spontaneous teasing and joking regimes among team members. For example, in my interview with Tao, he detailed how the traditional education model in China, which emphasized students passively accepting knowledge

and the teacher's authority without challenging it became a key factor that resulted in Chinese weakness in quickly reacting to others' comments.

> I have given lot of thought on why I can't come up a good joke on the spot, jump in their joking… does that mean I am just not quick enough? Not quick enough? But later I realized it has nothing to do with IQ but more with my experience back in high school... I don't know if you remember it, when we were in school, we have never been allowed to jump into teacher's speech, to offer our own thought…not even mention joking...but I used to be a kid who liked to joke around, interact with teachers or offer funny comments to teachers' question. But maybe it was too much… so I remember there is one time, my homeroom teacher (*ban zhu ren*) even called my parents to go to her office ...and she warned me in front of my parents to not to cut off teachers' lectures… she told my parents that I sometimes acted like a clown… I felt very aggrieved that time ...and after that, I did become quieter and quieter in classroom… (Chinese male; level 4; Master's degree, U Penn, H1-B holder)

Although Tao's experience might seem very unique at the first glance, it can easily elicit recognition from many Asian engineers when recalling their educational experience back in their home countries. In Tao's narrative, his "misbehavior" of cutting off teachers' lecture and joking with teachers was interpreted as "disrespectful" to his teacher and was punished in the format of calling his parents to come to school and lecturing him in front of his parents. As a result, he became less willing to speak up and more and more reticent in the classroom.

Tao's reflection is very insightful as it offers us a new perspective of thinking why Asian engineers tend to be reticent and reluctant of participating into brogrammers' joking games. Specifically, when we discuss how linguistic competence and cultural barriers contribute to Asian's absence in joking practices in the earlier sections, we in fact concentrate on the difficulties created in the receiving countries that lead to Asian workers reluctance. Lei's narrative, however, shifts our attention to the sending countries

to discuss how the education system in Asian cultivated these workers reticent, passive, and obedient personalities.

Indeed, education systems in China and many other Asian societies are considered as an authoritarian educational system, which demand conformity to teachers, and respect for the knowledge of their teachers. It would undoubtedly train Asian students to be generally less spontaneous, more likely to conform to their teachers as the authority figure and therefore less likely to express his/her opinion, unless being asked. Consequently, their reticence and passiveness cultivated in the classrooms are later transformed to other contexts such as working places. If the work sites are places where there is also a respected hierarchical order, authority, and seniority, then Asian workers quiet and passive personality might not be labelled as a weakness that constrains their work ability. However, the work sites where these Asian engineers are located is the high-tech firm in the United States, which heavily emphasizes contempt for authority and valorization of spontaneity, creativity, and freedom. In such a context, Asian worker's traits such as being passive knowledge absorbers, lacking independent thinking and originality, and incompetence of spontaneity make them stand out and these traits become fatal weaknesses. Asian engineers' incompetence in such spontaneous joking practices apparently magnifies these traits, which they have been cultivated a long time ago and are therefore difficult to quickly shed.

Conclusion

In sum, this chapter presents a completely different type of interaction between coding peasants and brogrammers, in comparison to the coding peasants-tech hobbyists

interaction discussed in the previous chapter. Asian engineers' dramatically different reactions to brogrammers start with their clear understanding of brogrammers' very distinct traits from hobbyists. As shown in the first section of this chapter, coding peasants clearly show their respect to brogrammers' leadership spirit, individual charisma, and social networking ability. However, Asian engineers' self-valorization of modesty also makes them question and resent another set of brogrammers traits, such as the "zhuangbi" (i.e. ostentatious) trait embodied by them.

After laying down this foundation, I spent the rest of this chapter illustrating coding peasants' interpretation, reactions, navigation, and victimization in three major groups of pranking games that usually initiated and organized by brogrammers: donut pranks, welcome pranks, and spontaneous pranks.

First, for the donut email pranks, I started with how coding peasants were always more likely victimized by this prank, no matter whether they tried to be absent from this prank to hide their cultural outsider status or if they tried to cut against stereotpes of Asian engineers' and be as aggressive as brogrammers in the pranks. Following the general description of Asian engineers' victimization in the game, the later section argued that Asian engineers did develop two very useful strategies to navigate the donut game: one was to never target engineers who had higher levels than themselves as victims, and another is to minimize the degree of exposure of the prank's victims. Finally, this section concluded with how these two strategies disadvantaged Asian engineers. Specifically, coding peasants' consciousness with regards to hierarchy and seniority reflected in the first strategies was considered as evidence of lower innovation potential. Asian engineers strategies of lowering the level of exposure of the donut email victims not only made

themselves lose the opportunity to use donut emails to publicize themselves beyond the team level, but also formalized a certain level of resistance to donut emails' surveillance and discipline.

In addition to the classic donut email pranks, I also reviewed another two types of pranks that were heavily invested in by brogrammers. Firstly, I illustrated how Asian engineers were apparently more easily tricked and more severely victimized in the "welcome pranks" which were normally initiated by managers and executed by brogrammers to tease newcomers. In one sense, unlike the donut emails, Asian engineers would not have any space to prepare themselves and to develop reaction strategies to navigate the "welcome pranks". Thus many of my Asian interviewees expressed that going through a "welcome prank" in their first day work was one of the most embarrassing and anxious memories of their work experience. In another sense, in comparison to their white counterparts who also faced to danger of being tricked by the "welcome pranks" on their first day work, Asian engineers were apparently more easily tricked and more severely victimized due to their doubled outsider status -- as both the outsider of this high-tech work organization in particular and outsider of American professional workplace culture in general.

In the last section of this chapter, I presented a final type of prank -- the spontaneous pranks, which were less systematic and ritualized than welcome pranks and normally conducted in a more authentic way. This spontaneous prank shares one similarity with "welcome pranks" when considering how they brought about anxiety and frustration for the coding peasants. They all happened without any warning and left no space for Asian engineers to develop coping strategies like they did for donut emails.

Through discussions with many coding peasants, I identified three factors that contributed to the high level of frustration brought about by spontaneous pranks, which includes Asian workers' constant comparison between their own slowness at reacting the pranks with their white colleges, their interpretation of personal failure in pranks as sign of low intelligence (e.g. humorlessness and slow reactions), and their self-blame of wasting time to search and construct jokes as being extremely "counterproductive".

CHAPTER VI

BROGRAMMERS, TECH HOBBYISTS, AND CODING PEASANTS: MASCULINIZED AND ETHNICIZED GAMES IN HIGH TECH

Varied Labor Games on the High-tech Work floor

Construction Work Fun as the Foundation of Tech Management

Is there a possibility that varied labor games exist within one work organization? If so, how can these games vary? What are the roles of workers' identity and habitus in shaping these games? And how can varied games affect workers' experience? These are the central questions that I addressed in this study.

The answers to these questions have been detailed throughout previous chapters. Here I will offer a brief reviewed of them. To begin with, party-related and computer-intermediary/computerized labor games emerge as a result of the changing labor characteristics and the transformation of the nature of work in high-tech industries. As discussed in the introduction, the dominance of young employees in high-tech industries is one major trend. This new generation of labor is "born digital, born computer-literate, ubiquitously connected, and device-empowered" (Rangaswami 2015:459). All of these characteristics of this new generation of workers makes the adoption of computerized gaming elements (i.e. elements based on video games or the operation of game requests via the computer as the intermediary component) as labor games more valuable and effective in increasing workers' commitments to their jobs.

In the meantime, the transformation of the nature of work under Post-Fordism requires corporations to shift the workplace culture from serious to fun, which lays down the foundation for the tech-industry's construction and promotion of a party-like, fun

work environment. Indeed, the Post-Fordist managerial philosophy and corporate culture marks a stark contrast to the Fordism era. Fordism is used to describe the model of mass production in the early 20th century, which emphasized a high level of productivity achieved by standardization of both products and the labor process. Therefore, under Fordism, workers are largely de-skilled, tasks are standardized, and therefore workplace culture becomes serious and rigid (Harvey 1989). In other words, under Fordism, work and fun are completely distinguished and belong to separate spaces – the workplace is understood as space to perform serious tasks while home is defined as the place to have fun (Fleming 2005). The emergence of Post Fordism represents a reorganization of the capitalist mode of production. This transformation aims to alleviate the tension created by the Fordist regime of rigidified accumulation while transforming production and consumption into a flexible format (Harvey 1989). Post-Fordism reorganization directly leads to the change in workplace culture, which purposively transforms workspaces into environments that celebrate fun and flexibility. As a result, boundaries between work and non-work are also gradually blurred under Post Fordist regimes.

Under this historical background, when analyzing employers' promotion of corporatized fun -- the play ethic or the gameful spirit -- scholars on the one hand remind us that such a managerial incorporation of fun poses damaging threat to workers' authentic self; however, on the other hand these theorists demonstrate that workers are in fact wise enough to see through such corporate-constructed kindergarten type of fun. In other word, scholars believe that employees under Post-Fordism remain able to hold a skeptical attitude toward corporate-constructed fun, and are capable of keeping a cynical distance to such culture (Fleming 2005; Donzelot 1991; Boltanski and Chiapello 2005).

These scholars' hopeful analysis is very reasonable when the employees examined by them are the middle-age employees who grew up in the traditional value system. However, as the evidence from this project shows, when facing the younger, new generation of engineers who just came out of college, the introduction of games, parties, joking and college party-like environments may become an effective way for high-tech corporations to loosen up this cohort, facilitating workers finding more pleasure in their work, and appropriating much non-alienated work to achieve the capitalist goal of wealth accumulation. And yet, the relevant literature regarding this is very limited.

To address this gap in the literature, this study offers a comprehensive analysis of the construction of such a type of fun culture in the high-tech industry, and provides a discussion of how this fun culture contributes to engineering management strategies and shapes engineers' work life. As shown throughout empirical chapters, management in the tech industry invests considerable energy in promoting this culture and letting it become embedded in everyday life and interactions in the organization. Specifically, senior managers have created a systematic and full-blown image of a "fun" culture. These top level management efforts are analyzed in many chapters of this dissertation, such as the systematic donut email prank game which is played at every team in the company; the ritualized "welcome" pranks pulled on every newcomer and the subtle administrative permission and support that facilitates the pranks (e.g. the fake company email list used to trick newcomers to take quizzes/tests before registering their company ID); and diverse types of badge-challenges and icon-collection games. All of these top management efforts, which I analyze in detail in Chapters 2-5, aim to construct the company as a fun, exciting and causal community and maximally mimick the youthful fun created in the

college environment and the cyber fun created in different online communities in which these workers participate. In the meantime, through playing games together with their engineers, middle level managers (e.g. team-level or organizational level) demonstrate their own shared engineering background and interests (e.g. discussing cardboard games such as Dungeons and Dragons and playing Texas poker with engineers in Chapter 2), and that they are approachable and open enough to be teased by engineers (e.g. exchanging donut email insults with brogrammers in Chapter 3).

In addition to the elaborate mechanisms through which different level of managers promote gameful fun, this study also investigates the controlling functions and consequences of the creation of such gameful fun. For example, in both Chapter 2 and Chapter 3 I describe how such elaboration of fun in fact effectively facilitates managers' surveillance and control over engineers' work behavior (e.g. encouraging brogrammers to send insulting donut emails to expose others' misbehavior in Chapter 3), and promotes competitions between engineers or development teams which increases productivity and thus the company's profitability (e.g. encouraging hobbyists to pull ticket sprint to enhance team ranks on ticket dashboard in Chapter 2).

Finally, this study also demonstrates that engineers themselves are the most important players within this fun-orientated management system. As displayed in Chapter 2 and Chapter 3, each gaming occasion functions as a stage which allows engineers to perform on it, drawing on their own strength (e.g. donut email stage, badge collection stage, Russian Roulette stage, etc.). By performing on these gaming stages, engineers demonstrate their belonging in teams/organizations, while consenting to the fun culture, and demonstrating commitment to their work. However, the high visibility of these

gaming stages also make engineers who perform on them under close scrutiny not only by managers but by any other member in the team. In a sense, this fun-initiated type of control is very pervasive, as everyone can be each other's supervisor, monitor each other's' performance and evaluate each other's commitment to their teams or work under the guise of leisurely fun without the coercive nature of Fordist management strategies. When engineers are reluctant to perform on different gaming stages as discussed in the last two chapters on coding peasants, they will encounter a subtle form of group pressure such as in the format of labeling them as "bad team players".

In brief, such promotion of gameful fun on the engineering work floor is indeed a type of pervasive control over engineers, which effectively encourages extensive engineer involvement at work, generates their commitment to their teams and organizations, contributes to long work hours and extra labor, while at the same time removing formal and explicit control from managers' hand and redistributing to every engineer, which makes them become the agent of self-control. In comparison to previous organizational studies of corporate fun, this study does identify some new dynamics of the construction of fun in high-tech industries. For example, instead of resembling familial fun, the tech fun culture in presents a type of youth fun consented to by new college graduates; instead of existing in a singular format, the fun at work is multifaceted and achieved via many types of games, each of which has its own different stakes and participants. And finally, unlike most fun games studied by scholars that appear as neutral, the games constructed in the tech workplace also help reveal the ethnicized and masculinized hierarchies among engineers.

Multifaceted Labor Games on the Work Floor

By presenting two very different groups of labor games -- the party games and computerized games, this study problematizes classic labor game studies which are usually built upon a description of a homogeneous work environment. As established in the introduction, most statements in classical labor game studies (e.g. Burawoy's making-out game analysis) are made based on two problematic assumptions: for one thing, labor game scholars normally tend to picture a homogenous workplace and assume every worker is equally willing to and able to invest into labor games that they study. For another, labor scholars tend to assume that there can be only *one* dominating labor game that exists in the workplace. What manifests in this study, however, is that workplaces rarely have a homogenous workforce. And the heterogeneity of workers and their identities result in the variance of labor games. Specifically, this study attempts to show the possibility that in the high tech engineering workplace, games can be diversified. And different games are constructed to engage different groups of workers' embodied and distinct personal traits and identities.

So in Chapter one, factors that contribute to the heterogeneity of the workforce are identified. To start with, this chapter lays out three major dynamics in the high-tech industry (i.e. brogrammers' intrusion into the industry, rejuvenation of labor force, and influx of Asians) and the consequent production of different groups of employees, including brogrammers, tech-hobbyists, and coding peasants. Three groups of engineers, who come from very different backgrounds, react to management's gamified practices differently through drawing on their distinct capitals/resources that they cultivated in their past life experience. Using Bourdieu's analysis of habitus, this study analyzes the

variance between three groups of engineers through analyzing very different habitus due to their distinct origins, familial experiences, and educational training. Adopting Bourdieu's game metaphor as a theoretical tool, this project demonstrates that distinct habitus embodied by three groups of engineers plays the most critical role in helping them figure out which game field they should enter, which type of resources that they can draw on to help them advance positions through playing games, and what are some playing strategies they can use when competing with each other in the game.

To elaborate, Chapter 2 presents computerized (video-gamified) labor games and relevant gamification mechanisms, and discusses how the computer gaming habitus possessed by tech hobbyists directs this group of engineers to intensively invest in these games. Game hobbyists not only enthusiastically participate into computerized (video gamified) labor games that the company organizes (e.g. speaker-icon challenge; ticket-solving competition), but also mobilizes their gaming capacity to further develop their own video-gamified mechanisms. For example, game hobbyists use video games as a tool to socialize with their workmates during off-work time, which largely blurs the work team and the video game team. The problem is, as emphasized in Chapter 2, when mobilizing their gaming habitus to invest into video gamified work processes, tech hobbyist can easily blur the feeling of game achievement (e.g. spending countless hours grinding/killing monster) and the feeling of work achievement (e.g. long hours testing to tackle down bugs). Such blurring of work and non-work activity and rewards exposes tech hobbyists to the risk of unconsciously investing long work hours and eventually becoming burntout.

Party games are described and examined in Chapter 3 to capture the cultural matching between brogrammers' habitus and cultural and social capital and corporation's promotion of party-like work environment. For example, by mobilizing their "bro" habitus and fraternity experience, brogrammers become energetic supporters of the company's construction of a party-like culture and the organization of party-like games that incentivize competitions and collaboration. These "bros" have never been satisfied with just following the company's instruction to participate in the party-like games. Instead, they also actively reform games promoted by managers and push them a step further. For example, although brogrammers always are the most active participants to the "donut email prank" game, they have never been satisfied with just using donut emails to expose their teammates' lack of security consciousness. The aggressive, competitive, and even cruel traits that brogrammers cultivated through their fraternity practices make them keener to insult other engineers whenever they seize an opportunity to write on an unlocked computer.

Finally, the last two empirical chapters (chapter 4 and 5) switch attention to the outsiders of these labor games -- the first generation Asian immigrant engineers (i.e. coding peasants). In these chapters, I discuss that, although the presence of game projects shows that high-tech organizations do reform and update their labor games to make them match with the new generation of workers, it still cannot eliminate the fact that these newly developed games are still white guys' games and are very exclusive to "coding peasants".

On the one hand, as illustrated in Chapter 5, the lack of brogrammer-type habitus makes coding peasants incapable of joining the party-like games. Abundant cultural

codes embedded in party-like games organized by brogrammers are too foreign for coding peasants to crack. On the other hand, although coding peasants sometimes can be as skillful and passionate as tech-hobbyists while playing video games, their distinct cultural frame that valorizes professionalism and craftsmanship makes them uncomfortable with combining serious work activity with the fun associated with gaming activities. Thus, they can only halfheartedly invest in video-gamified labor practices that are enthusiastically embraced by tech hobbyists, which has been discussed in Chapter 4.

Indeed, Asian immigrants cultural frame makes them pursue a strictly defined type of success that has nothing to do with having fun but has everything to do with hard work and economic incentives. This value system causes the coding peasant to clearly mark the distinction between work and game activity and leads to mostly skepticism of the video-gamified labor practices. As a result, coding peasants' "non-ability" to fit into brogrammers' games and their uncooperative attitude towards tech-hobbyists' video gamified practices contributes to their marginalized and disadvantaged position in the high-tech corporation.

Consequence of Gameful Control

Despite the variations among different types of games which draw attention to different groups of audiences, the functions of all these games remain the same, that is, to increase control and facilitate productivity of all workers. As shown in Chapters 2 and 3, no matter if engineers try to enhance status through computerized games or party-like games, they are all increasingly subjected to a soft format control. For example, as reviewed in Chapter 3, through promoting Team vs. Team competition to meet deadlines

or solve tickets on the donut email platform, brogrammers themselves also internalize the highly competitive culture promoted by pranking games and become very self-motivated in work process. In comparison, tech hobbyists' sink into the process of subjectification is even more severe. As discussed in Chapter 2, the subjectification process works through the implementation of video game roles in the workplace. By drawing on parallels between work process and gaming process (e.g. equalized the role of project owners at work with the role of the blind oracle in D&D board games) and blurring coding and gaming activities (e.g. sharing work tips is the same as sharing game tips), hobbyists are subjectified into an ideal type of worker desired on the work floor: the highly self-promoted fighters who are willing to march together with their teammates either in the virtual video game world or in the tech world. The reason why hobbyists' subjectification process is more damaging than brogrammers is that as tech hobbyists play along with computerized games their off-work gaming self is largely blurred with their work-self. If brogrammers remain able to reply on the private realm to rebuild their authentic self and thus keep certain distance with work, tech hobbyists completely lose the ability to reproduce the authentic self that allows them to see through the company's attempt of soft control.

Games as a Way to Reinforce Organizational Hierarchy

Another important theme throughout all chapters' discussion is: games described in this study are also an important way through which inequality is structured into the workplace. Indeed, divergent gaming projects are vehicles of labor sorting into different place on the organizational hierarchy. In other words, although games appear as neutral,

their operations in fact reveal the gendered and ethnicized structure of the workplace while at the same time reinforcing and reproducing the gender, class, and ethnic hierarchy. As discussed in the introduction, although a decent amount of literature has examined the reproduction of inequality between male and female workers via workplace interactions, few have examined the reproduction of racial or ethnic inequality throughout workplace interactions (Acker 1990, 2006; Martin 2001; Ridgeway 1997; Vallas 2003). What this study attempts to illustrate is how ethnicity and masculinity are intertwined together to affect engineers' interaction in labor games, and how such gaming interactions reproduce masculinized and ethnicized inequalities in the high-tech workplace.

Brogrammers at the Top: Playing Party Games and Maintaining Class Privilege

Specifically, from discussion of brogrammers' participation in party-like games in Chapter 3, one can make a reasonable inference, that is, what essentially ensures brogrammers' top status in the games is their class and masculine privilege. In addition, their top status in the game also facilitates the reproduction of class and masculine privilege within the work organization. Indeed, the existence of the party-like stage allows brogrammers to smoothly transform their top status cultivated from one type of peer culture (e.g. fraternity culture) (see Elizabeth Armstrong's related discussion) to another type (brogramming culture). The social and culture capital that brogrammers obtain from fraternities, such as interactional skills, appearance, social networks, becomes an important resource that they draw on to extend their influence from their

small bro circle to a larger-scale circle (e.g. development teams, organizations, the whole E-platform).

In addition, through playing party-like games, brogrammers are able to present the cultural similarities between themselves and managers, and lay down a foundation for their career track to be promoted to managerial positions. In fact, scholars have already done research to show cultural similarities play critical roles in organization's hiring process. For example, drawing on 120 interviews with employers of elite professional service firms, Rivera (2012) has already persuasively illustrated how "cultural similarities", which he defined as shared tastes, experiences, leisure pursuits, and self-presentation styles, are used to differentiate between job candidates and thus impact employers' hiring decisions (Rivera 2012). However, if and how cultural similarities affect individual workers career paths/trajectories after they are hired are remain unexamined. In Chapter 3, this study reveals party-related labor games magnify similarities between brogrammers and managers, increase their chance to move to the fast career track, and establish their top status in the workplace. In short, to brogrammers, party-like games become a critical stage where they display their habitus and cultural capital cultivated in previous peer circles in higher ed institutions, extending such privilege into the work organization, consolidating and reproducing their privileged status in wider society. After being promoted to a managerial position, their top status in the organization will become consolidated (the administrative level of managers is always

half to one level higher than corresponding technical position[37]) and will also start to be congruent with their class status in the wider society.

Hobbyists Stuck in the Middle: Playing Computerized Games to Compensate Masculinity

On the contrary, hobbyists' lack of ability to join the party game exposes another factor that is embedded in organizational processes which facilitate the establishment of hierarchy--masculinity. For hobbyists, investment in video-gamified labor practices becomes a vital mechanism for them to compensate for their masculine incompetence. In other words, their geek masculinity ensures their incentive to invest intensively in computerized games at work. Indeed, as many scholars have already demonstrated, geeks are considered less masculine, and thus always need to develop their technological skills to buy back a sense of masculine power. This practice is called "compensatory strategy" (Chen 1999; Faulkner 2012; Turkle 1994, 2005). It is exactly this type of masculinity embodied by hobbyists that requires "aggressive displays of technical self-confidence and hands-on ability for success" (Wright 1996: 86).

As reviewed in Chapter 2, computerized labor games and video gamified work process become the critical stage where tech hobbyists manage to aggressively display their technical obsessions. However, due to the nature of this type of labor game that aims at appropriating more labor time and creativity, game hobbyists are at the risk of burnout, being knocked out of the game, or thrown into a dead-end career path. The

[37] For example, at the team level, the team managers are level 6 while the team tech lead can be either level 4 or level 5 engineers. Similarly, the organizational managers are normally level 7-8 manager and their corresponding technical position (e.g. principal engineer and senior engineers) are normally 6-7 level.

personal characteristics of tech hobbyists (e.g. antisocial, poor communication skills) not only lead them to avoid party games, but also results in their video gamified investment in work process which are less visible in the team and less exposed to top managers. Combining all these factors, game hobbyists are therefore more likely to be stuck in the middle-level engineering positions and have a slower career path in comparison to the brogrammers. For hobbyists, their most effective strategy to accelerate their career track is through technological input since this is the only thing they are good at and interested in. The problem is that everyone on this track is bound to compete and invest intensively in computerized games. However, as illustrated above, these games are more risky because employees tend to burn out quickly. Finally, tech hobbyists' eventual settling at a lower rank than brogrammers once again demonstrates that masculine hierarchy in the engineering organizations in fact is largely congruent with the masculine hierarchy in the wider society.

Coding Peasants at the Bottom of Organizational Hierarchy

Asian immigrants' less advanced position in workplace has been repetitively proved in many quantitative studies, such as the analysis of consistent differences between Asian and non-Asian engineers in achieving managerial positions (Tang 1993), and the investigation of how Asian engineers rely on their ethnic network and constant job-hopping to circumvent the glass ceiling and advance their career (Shih 2006; Saxenian 1994). However, there are very few qualitative studies concentrated on the organizational mechanisms or processes through which Asian immigrants become disadvantaged (Vallas 2003). To address this issue, the discussions of coding peasants in

Chapter 4 and Chapter 5 aim at reviewing how two labor games become vital mechanisms through which Asian immigrants become marginalized.

Chapter 4 explains that coding peasants' half-hearted devotion to video-gamified labor games has a close relationship with their orientation to the industry, which emphasizes pursuing a high-status professional job rather than pursuing the enjoyment of technological challenges and breakthroughs. Although the avoidance of requesting more challenging tasks makes the coding peasant avoid burnout like the hobbyists, it also makes them more tolerant of peripheral and less-challenging tasks (e.g. doing refractory/code reviews for other engineers instead of doing self-design). In addition, coding peasants' skeptical attitude towards computerized games reinforces their image as "coding peasant". This reinforced identity is used by management to justify the assignment of periphery tasks to this group, which in fact results in internal segregation within the same project and team, as Asian engineers do more marginalized, less esteemed tasks while the white engineers do more technologically-challenging, higher-status work (Acker 1991).

In Chapter 5, I present coding peasants' hesitation in participating in the brogrammers party-like games, which makes them at risk to be labelled as "bad team players" who are not keen to strike for team victory in various types of competition. The "bad team player" label can be used as perfect justification by managers to assign coding peasants to supportive, marginalized roles in the team rather than leadership roles. Equally important is the analysis of the small group of coding peasants who are the stereotype-challengers and attempt to overthrow negative stereotypes of Asian as not aggressive. These stereotype-challengers bitter experiences of receiving more severe

teasing from brogrammers illustrate white engineers' antagonism toward these types of stereotype-challenging efforts. This confrontation further demonstrates that ethnic and masculine stereotypes or assumptions underlie everyday work routines in the engineering organization.

In summary, the analysis in Chapter 4 and Chapter 5 contributes to the scholarly literature on racialized/ethnicized workplace inequality, with an emphasis on how organizational processes and interactions reinforce inequality. Specifically, Asian engineers' absence in two games is a key reason they move more and more towards marginalized positions in the team, and move farther away from the two promotion tracks (one is the track to be promoted to managers occupied by brogrammers and another track is to become the tech lead in the team that is taken by tech hobbyists). This phenomenon also demonstrates that, even within the high-tech firms which are considered as places where Asian immigrants have more opportunity, there exists a ethnicized and masculinized hierarchy where white males who have the common leadership image (e.g. aggressive, competitive, and tough) just as in any other workplaces are located at the top (Acker 2006). Indeed, the contrast between Asian engineers' persistent occupation of subordinate positions and white engineers' advancement to tech leads or managerial positions illustrates how masculinized and ethnicized interactions formalized in gaming participation further reinforce the organizations' class relationship/hierarchy.

In addition, the recruitment of immigrant engineers itself is a way to preserve ethnicized inequality. As discussed in chapter 4, one most important strategy adopted in the tech industry to ensure labor supply is the massive recruitment of immigrant engineers who are H1-B holders who need the employers' sponsorship to maintain legal

migrant status in the United States. Due to their immigrant identity as defined by holidng a H1-B visa, coding peasants have always faced more risks from possible termination in the tech organization. They can legally be deported out of the country in a very short time after losing their jobs. As a result, Asian engineers' strategies to navigate their position in labor games have to be more utilitarian: their primary decision on whether to participate or not, and how to participate, is largely based on the consideration whether or not they would lose their job and legal status in the US.

As a result, employers in the tech industry have more leeway to ignore the cultural discomfort of Asian engineers when they participate in white engineers' games. For employers, the targets of their labor games are the two groups of white engineers. On the contrary, managers are less concerned about whether Asian immigrants' commitment can be elicited through these games. For managers, the immigrant identity of Asian engineers has already determined their compliance and obedience. In other words, the management of obedient and compliant immigrant labor is ensured by government migration policies and the ethnicized inequality and assumptions in the wider society. Similarly, coding peasants' ethnicized identity leads to their difficulties in participating in the two work games. These games essentially are white people's games. In other words, ethnically-based inequality forms another axis of engineering organizational inequality.

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