

**THE LOCAL LIVES OF GLOBAL SCIENCE:
FOREIGN SCIENTISTS IN JAPAN'S RESEARCH INSTITUTIONS**

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Based on an examination of the experiences of foreign scientists in Japan's academic research institutions, this dissertation investigates the mobility of highly skilled workers in the context of scientific production. In recent decades, the Japanese government has embraced the rhetoric of research excellence and listed the recruitment of international researchers as one of the means of achieving this goal. Through these measures, Japan participates in the transnational circulation of science workers who, in turn, have come to share a tacit understanding that transnational movements constitute an increasingly indispensable aspect of the scientific practice world-wide. Considering the extent to which mobility has come to be discursively ingrained in scientific production, my project inquires into the strategies young foreign scientists in Japan's research organizations employ to make sense of their own mobility and immobility, as well as the socio-economic uncertainties enveloping these experiences.

In the dissertation, I analyze data collected during 18 months of ethnographic fieldwork, conducted in 2012-14. While based in Osaka, I carried out semi-structured and unstructured interviews, as well as extensive participant observation with foreign life scientists working at various public research institutions in Japan's Kansai and Kantō regions. Focusing on the experiences of early career researchers (PhD students and postdoctoral researchers), I argue that that my interlocutors rely on localized and localizing explanations in order to make sense of the socio-economic uncertainties they experience as participants in global scientific labor regimes. Focusing on the ways young scientists conceptualize employment, foreignness, and gender, as

well as the national and individual level ambivalences surrounding their presence in the country, I show how my interlocutors discursively employ Japan for active production of certainty. Highlighting the young foreign scientists' hope for immobility, I suggest that Japan emerges as a space where global patterns of scientific labor are, ironically, both intensified and rendered invisible. My project thus captures the lived and embodied tensions that emerge at moments when the local and the transnational in scientific production meet, as well as the multitude of sense-making practices science workers employ to navigate the uncertainties such ambivalences entail.

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1.0 INTRODUCTION

1.1 SITUATING THE PROJECT

Growing awareness of socio-economic and environmental risks has exacerbated a sense of insecurity and uncertainty about the future sustainability of Japan. As a result, both in political and popular rhetoric scientists are increasingly called to the task to ensure the continuity of the country. Since the development of the First Science and Technology Basic Plan in 1996, scientists are charged with the responsibility to offer innovative technological solutions to the social, economic and demographic problems Japan is facing in the wake of its prolonged economic recession and, more recently, the environmental crisis following the Fukushima nuclear disaster.

Importantly, the recent science and technology policies in Japan also posit development of “excellent human resources” as the basis of scientific innovation. Responsibility for the production of a secure and safe future has shifted from bureaucrats and corporate leaders to scientists. That is, as Japanese government aims to promote “drastic enhancement of basic research” (Council for Science and Technology Policy 2010), it also calls for greater participation in transnationally oriented scientific processes. Among the government's efforts to “*aggressively* support relevant activities in order to form a group of research-focused universities that conduct research [...] at an internationally high level,” the acceptance of “*quality* foreign

researchers and students at universities and public research institutions” is explicitly stated as one of the measures to implement the goal of establishing Japan as a global center for scientific research (Council for Science and Technology Policy 2010: 26, 27; emphases added).

By promoting the employment of foreign scientists in its research institutions, Japan is participating in the increasingly transnational circulation of academic knowledge workers (Geuna 2015; Huang et al. 2014; OECD 2008). The past two decades have witnessed a shift in academic mobility around the world. As education scholar Terri Kim (2010: 578) suggests, “previously sporadic, thin, limited and inter-national academic links and mobility have become systematic, dense, multiple and transnational.” This process is taking place due to transnational circulation and borrowing of neoliberal-minded policies that encourage the notion of research capabilities as easily transferable skills and researchers as inherently mobile experts (Kim 2009, 2010). Throughout the dissertation, I refer to these trends as the global regime of scientific production; by that, I mean that the practices and processes of scientific production around the world are characterized by increasing and accelerated circulation of research policies, research ideas, and research workers. When referring to the transnational mobility of scientists, I call this trend the global scientific labor regime, highlighting the implications the focus on mobility – both geographical and engendered by the dwindling numbers of permanent positions – has on the labor conditions, as well as the personal lives of science workers.

Japan's science and technology policies and institutional practices also have to be examined in the context of “global borrowing” of research policies. Both the government and scientific organizations themselves attempt to partake in the transnational circulation of researchers (Huang 2014; Murakami 2010). According to the statistics issued by Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT), there has been a slow yet

steady increase in the number of foreign researchers in the country since year 2000. Foreign-born researchers now constitute around 5% of the scientific community in Japan. For instance, in 2013, around 12,000 international scientists were residing in Japan for longer than one month and working in the country's public and private research institutions (MEXT 2015).¹ In comparison, in the same year there were only around 4,300 Japanese researchers who spent more than one month conducting research in scientific institutions outside Japan.² Also, the 4300 number refers to researchers with institutional affiliation in Japan; unlike, for instance, postdoctoral researchers, these scientists tend to be funded by Japanese government grants and have relative job security in Japan upon completion of their research stint abroad. Surveying the global trends, of the sixteen “core” countries, Japanese researchers are the least likely to work in foreign countries: only 3.1% of scientists born and raised in Japan live abroad (Franzoni et al 2012).³

While the presence, movements and experiences of foreign researchers in Japan cannot be reduced to numbers, these statistics do offer a glimpse into the overall trends. That is, on the one hand, Japan is not particularly keen on “infusing” its own researchers into the transnational flows of scientific migrants. This reluctance corresponds to global trends, as countries tend to see

¹ MEXT statistics' definition of “foreign researchers” includes postdoctoral researchers (*posudoku*) and specially appointed research fellows (*tokubetsu kenkyūin*), but does not include international students. Even though the year 2011 witnessed a decline in the number of international researchers due to the flight of Japan's foreign residents in the immediate aftermath of the nuclear disaster in Fukushima, the number increased again in 2012. While the number of foreign researchers on both short-term (less than 30 days) and medium- and long-term (more than 30 days) contracts surpassed 35,000 altogether (MEXT 2015), for the purposes of this paper I focus on medium- and long-term researchers.

² While the overall number of what the MEXT report refers to as “dispatch researchers” (*haken kenkyūsha*) reached more than 172,000 people in 2013, most of them left Japan for short-term visits, that is, less than 30 days at a time (MEXT 2015).

³ In Franzoni et al. study (2012), the sixteen core countries are constituted by Australia, Belgium, Brazil, Canada, Denmark, France, Germany, India, Italy, Japan, Netherlands, Spain, Sweden, Switzerland, UK, U.S

the departure of knowledge workers as “brain drain” (Gaillard & Gaillard 1997; Gaillard et al 2015; OECD 2008). On the other hand, Japan has become increasingly focused on hiring and extracting the talent of foreign-educated researchers. According to the OECD data (2008: 122), Japan has one of the most highly formalized mobility strategies in the world; the Japanese state in particular has allocated various programs and financial resources for the purpose of temporarily attracting scientists from other countries. The MEXT scholarship for graduate students, as well as the Japan Society for the Promotion of Science (JSPS) fellowship programs for postdoctoral researchers are two prominent funding schemes that are employed to attract foreign scholars for research work in Japan.

My project inquires into the lived experiences of the foreign scientists who are recruited, through various state incentives, for work in Japan’s academic research institutions to boost Japan’s global profile in the sphere of scientific production. How is transnational mobility conceptualized in the minds and enlivened in the bodies of scientific workers themselves? How do foreign scientists in Japan make sense of the narratives of transnational scientific mobility through their work lives in Japan’s scientific institutions? And, vice versa, how does the lens of global trends in scientific production shape the ways young researchers conceptualize both Japan and their presence in the country? Considering the extent to which mobility has come to be discursively ingrained in scientific production, what are the strategies young scientists employ to make sense of their own mobility and immobility, as well as the socio-economic uncertainties enveloping these experiences? To highlight the necessity of asking these questions and examining the lived experiences of transnational scientific mobility, I, first, discuss the methodological aspects and considerations of my dissertation research and, second, situate my project theoretically.

1.2 SITUATING THE INTERLOCUTORS

It is crucial to note here that I operationalize the concept of “foreign scientist” (used interchangeably with “international researcher” in the dissertation) in a specific way, following the form of self-identification my interlocutors employed and the networks of sociality this self-identification produced. Even though around half of the 5% of international researchers in Japan come from countries in Asia, predominantly China (MEXT 2015), my project focuses on the experiences of scientists who form loose communities of young professionals based on their preference for communicating in English. Mobility scholars Glick Schiller and Salazar (2013: 192) have noted that studies of transnational migration tend to rely on a national, ethnic or ethno-religious community as a unit of analysis, as such communities are thought to share history, language and culture. My project, following Traweek (1988), assumes that life scientists as a community of practice share culture – or, more precisely, several cultures – as well. It is useful to think of my interlocutors as belonging to what cultural geographers Heike Jöns, Elizabeth Mavroudi, and Michael Heffernan (2015) call an “elective diaspora.” The concept shifts the focus away from biologically and territorially grounded categories and emphasizes the importance of choice and emotional attachments. As the authors define it, “the elective diaspora of knowledge workers” is “a practice-based, flexible association of highly diverse professionals and other talent who might not be in contact with each other, but who have formed emotional ties with a particular place or culture and chosen to participate in the construction of diasporic knowledge networks” (Jöns et al 2015: 117). In the “foreign scientist” groups of my study, English language skills mark one as a “foreigner” and, therefore, as someone who does not quite belong in Japan, and, by proxy, belongs in the fluid community of “foreigners.” This naming, however, as I further elaborate in the fourth chapter of the dissertation, is exclusionary. For various reasons, very often it fails to include researchers from China

and South Korea and, by doing so, constructs the West-Asia binary in the context of scientific production. Thus, even though, for instance, the existing anthropological research on Chinese students in Japan (Coates 2015; Liu-Farrer 2011) suggests that examinations of communities of Chinese researchers in the country would yield fascinating research projects, the discourses and sense-making practices of Chinese scientists as a community lie outside the scope of my study.

The data discussed and analyzed in the dissertation were collected during the eighteen months of my ethnographic fieldwork, conducted from the fall of 2012 until the spring of 2014. While based in Osaka, I carried out semi-structured and unstructured interviews with foreign PhD students, postdoctoral researchers, specially appointed researchers, assistant professors, associate professors and full professors in various public research institutions in Japan's Kansai and Kanto areas. I also carried open-ended interviews with people who had left academic work or research in general, yet remained in Japan and maintained ties with friends they had made during their studies or work, or their former research institutions. Through participant observation at events that my interlocutors organized and attended, I engaged in informal conversations with their friends and colleagues. Some of these events were formal or semi-formal (such as talks, workshops, and seminars), but most were informal. I joined conversations over lunch in campus canteens and coffee at Starbucks or any other chain shop, went for dinner with my interlocutors (with an occasional stopover at a bar), attended my research participants' house parties, as well as celebrated holidays and organized sightseeing trips with them. I also conducted open-ended interviews (in Japanese) with several Japanese scientists at various public research institutions; their voices, even though they do not explicitly appear in the dissertation, influenced the way I analyzed the narratives of foreign researchers. In the dissertation text, I use pseudonyms to refer to my interlocutors, and I have also changed some of their details.

My project, even though deeply focused on science workers, does not constitute a laboratory study (Knorr-Cetina 1995; Latour & Woolgar 1979) in the traditional sense. Instead of examining research practices at one specific unit or organization of scientific production, I engage with my interlocutors at spaces and moments that are seemingly outside the realm of work, science, and the work of science. In his ethnography of arbitrators in Japan, Hirokazu Miyazaki states that his “goal has been to observe each trader’s thinking in the vicinity of his professional trading practices, where his professional and personal lives converge and diverge” (2013: 7). It is precisely this “thinking in the vicinity” of a scientist’s work life that methodologically is at the center of my project. It opens up a space – or, rather, spaces – for reflection on one’s composite existence that urges the ethnographer to avoid conceiving of her interlocutors as belonging to any single category, be it the box of the “scientist,” “highly skilled migrant,” “foreigner in Japan,” “female researcher,” or any other grouping that seems intuitive at first. Conversations in the margins of one’s professional life prompt the questioning and merging of these categories, and it is precisely what I have aimed to accomplish in my dissertation. That is, encounters in the vicinity of one’s work life and research structures are crucial for examining how various aspects of my interlocutors’ “compositeness” come together and shape the way scientists conceive of their professional life experiences through the prism of both transnational and national macro-processes as well as personal life considerations – and, importantly, vice versa. Acknowledging that the professional and personal lives of science workers are deeply interconnected highlight previously under-explored aspects of scientific production and the transnational mobility of researchers.

Through snowball sampling, I relied on this interconnectedness, as well as on the networks of sociality that foreign scientists in Japan build – or, equally importantly, do not establish, as the comparative lack of Chinese scientists in these networks attests – with one another, with their

Japanese colleagues, and with other migrants in the country in order to reach new research participants. Thus, even though I was based in Osaka, a large city in the Western part of Japan, I was introduced to and visited scientists in other cities, mainly Tokyo and Kyoto, as well. While these visits usually yielded more semi-structured interviews than occasions for participant observation, they attest to the complex ways foreign researchers build and manage their social networks. Some were nationality-based, others relied on past or present experience working, studying or attending a mandatory Japanese language course together, or living in the same dormitory. Some others reflected the attempts of foreign researchers to find like-minded people in their vicinity, and this like-mindedness was often associated with visible or audible “foreignness.” Thus, for instance, one of my interlocutors once laughingly confessed that, while having lunch at the university canteen, she would sometimes look around for “foreign faces” to start a conversation and chat about any topic she was interested in at the moment.

The diversity of the ways through which foreign scientists in Japan establish networks of sociality also accounts for my choice to discuss the experiences not only of postdoctoral researchers and other PhD holders higher up the academic ladder, but also doctoral students in Japanese laboratories. Even though social scientific literature tends to treat the transnational mobility of PhD students and PhD holders as that of separate groups, I suggest that, at least in the context of Japan, they need to be considered as part of the same flows of academic labor for three reasons. First, to a great extent, through scholarship and fellowship programs the Japanese government enables and facilitates the presence of both groups of young scholars in the country. Second, young foreign scientists often tend to build networks with each other based more on their shared status as “foreigners” in the country than their academic degree and position; among my interlocutors, doctoral students and postdoctoral researchers in particular often found each other in the same circle

of friends. Third, as early career researchers, young scholars – or aspiring academics, as in the case of PhD students – constitute a loose community of scientific workers who have been most affected by the increasing competition and transformations in scientific labor regimes around the world (Kim 2010) that encourage them to keep moving (Muller 2014; Carrozza & Minucci 2014).

There were both men and women among my interlocutors, most of them in their mid-20s to late 30s. Even though some of my research participants had arrived in the country several years by the time we were introduced and others were comparatively new to the country, most of them had lived in Japan for at least six months by the time we met and intended to remain in the country for at least a similar amount of time. I did meet and converse with scholars who had arrived in Japan for shorter research periods varying from a few weeks to a couple of months, but did not interview them for the purposes of my project.

The category of “scientist” that I operationalize in the context of the dissertation refers to natural scientists and, unless specified, those who were conducting research in various fields of life sciences. With a few exceptions of academics who also held administrative positions and were thus “in the know” about the workings of the institutions with which they were affiliated, there were no social scientists or humanities scholars among my interlocutors. Apart from the necessity to narrow the scope of my project, there is one main reason for this choice. While not everyone, most researchers in social sciences and humanities who are present in Japan know Japanese language and are in the country for the specific purpose of studying or researching Japan-related subjects; in many way, they are there to study the difference and, importantly, are also funded to do precisely that. (My own presence in Japan for dissertation fieldwork being just the case.) Natural scientists, however, while expecting differences in the social and cultural life of the country, do not necessarily arrive with Japanese language skills and prepared for major discrepancies from what they are used to in the

sphere of scientific production; that is, they do not anticipate “the culture” affecting “the science” or, at least, the visibility of such processes. Of course, such a division does not account for the variety of experiences within each group, and by no means do I claim that humanities or social science researchers are somehow more “enlightened.” Rather, my decision to focus on the experiences and narratives of natural scientists in general and life science researchers in particular is guided by the fact that these scholars are recruited and funded to work on seemingly universal issues in highly specific local contexts. For instance, young researchers who have been told by their potential supervisors that there is no need to learn the language to successfully work in Japan may later observe the same professors participating in a prayer ceremony for the souls of the rats killed during experiments or their colleagues regularly spending extremely long hours at work. How does one, then, make sense of this experience?

Within the larger group of natural scientists, the choice to focus my attention on researchers in life sciences was driven by the importance the Japanese government has placed on this area of research in recent science and technology policies. For instance, Japan's Science and Technology Basic Policy Report, issued in 2010 (Council for Science and Technology Policy 2010), as well as the 4th Science and Technology Basic Plan, devised in 2011 after the Great East Japan Earthquake (MEXT 2011), manifest “life innovation” as one of the “major pillars of growth” in Japan’s future. As both documents attest, the focus on “life innovation” is directly triggered by the aging of Japanese society and attempts to deal with this socio-economic issue. That the well-being of the Japanese nation was at the basis for highlighting the importance of life innovation is expressed in a line that appears in the Science and Technology Basic Policy Report of 2010 which states that “[u]nder such circumstances [of population aging], the government will powerfully promote Life Innovation in order to realize a society where people are healthy in body and mind and can feel happily [sic]”

(Council for Science and Technology Policy 2010: 9). Thus, my decision to concentrate on the experiences of life scientists was triggered by a wish to understand how the Japanese government's focus on “life innovation” is lived and enlivened by its practitioners.

The slight irony in this focus is the fact that the work conditions of those who are recruited to produce health and happiness for the nation are becoming increasingly insecure. That is, until the mid-1990s, similar to other white-collar workers, scientists in public and private research institutions were recruited into a system similar to the “salaryman” model of lifetime employment; it centered on seniority, teamwork, and cooperation, as well as belonging to one institution throughout one’s graduate education and research career. In the midst of a prolonged economic recession and in the spirit of globally circulating neoliberal reforms, however, the Japanese government has actively promoted the emergence of performance-based research institutions, increased university–industry cooperation, short-term research projects, fierce competition-based funding distribution, and flexible employment. Research institutions call for more individual initiative, flexibility and productive creativity in their employees. For instance, it is important to note that not one of the researchers I interviewed was on a contract longer than five years or had a permanent position, thus highlighting both the conditions under which foreign researchers are hired, and the transformations in Japan's scientific labor regimes.

To sum up my methodological considerations that also provide an insight into the theoretical questions I wish to address, it is crucial to note that, while partially “studying up” (Nader 1971), I focus on those in the margins: as foreigners in a country where ideas and ideals of the homogeneity of the nation are still strong; and as young researchers in the global and local regimes of scientific production that treat them as easily substitutable labor. I examine their practices of sense-making during a period of changes: first, transformations in the global regimes of scientific production and,

second, a transition period in Japan, characterized by the co-presence of various types of public research institutions, employment systems, and funding schemes.

1.3 THEORETICAL CONSIDERATIONS

Throughout the dissertation, I consider scientific production as work and the young scientists of my study as, even if comparatively privileged, workers. Speaking of his employment, one of my very first interlocutors suggested that what he was doing lied in-between “cutting edge science” and “a totally boring job.” Having spent his late teenage years as a squatter in a large West Coast city, he was now a well-liked associate professor and a leader of a large team at a prestigious institution; he knew what he was talking about. Most of my interlocutors occupied precisely this positionality of residing and working in a space and circumstances that did not quite qualify as “cutting edge science” and “groundbreaking work” but did not constitute a completely body and soul-crushing predicament either. They are what Philip Mirowski (2004: 122-123) in his discussion on transformations in scientific credit puts in the category of “the employee”:

These are the people who uncover rationally anticipated natural laws and regularities by following uncontroversial routinized procedures and build incrementally upon widely accepted doctrines. These are people who often work in large structured teams, who dependably meet the expectations of their supervisors, and who follow career paths up bureaucratic structures. [...] They perform assays, obey laboratory protocols, monitor error attributions, conduct literature searches, negotiate with other researchers over access to materials, draft papers, submit grant applications, revise where instructed, and cooperate to get their team’s work published. They are Kuhn’s despised ‘normal scientists,’ the post-docs, and lab technicians and grad students and bottle washers of the world.

While Mirowski's concern lies in the question of authorship in the context of the economics of science and the attribution of scientific credit, I want to emphasize the necessity to think of researchers as science workers. Treating scientists as *workers* highlights the uncertainties and insecurities built in the contemporary structures of scientific production. Importantly, considering them as *transnationally mobile* workers, as I also aim to show throughout the dissertation, is crucial for addressing the question of how exactly the seemingly smooth global connections are enacted and experienced by those who, as "brain drain," "brain gain" and, more recently, "brain circulation" discourses tend to suggest, are often assumed to benefit from such networks, along with the large and economically powerful centers of scientific production.

Focusing on the strategies of sense-making that my interlocutors employ to account for their experiences achieves three closely related goals that show how macro-processes of policy-making at a global and local scale shape individual practices. First, at an individual level, it renders visible the importance of personal relationships and emotional attachments in decisions and choices that science workers make in their professional life. Second, at an institutional and national level, it extrapolates the uneasy place of Japan's research institutions in the global hierarchies of scientific production. Third, at a supranational level, it highlights the interconnectedness of science, mobility and labor, allowing for conceptualizations of contemporary scientific production as an increasingly mobile enterprise, reliant on the work of large numbers of young researchers.

To bring to the fore all these inherently interconnected levels, each dissertation chapter engages with its own set of theoretical and ethnographic literature. Chapter 2 addresses the question of the geography of science. Chapter 3 brings together the questions of dependency,

care, and labor. Chapter 4 analyzes the category of “the foreign,” and Chapter 5 focuses on the analytical lens of gender. Chapter 6 turns to the question of science and the state, as well as engages with mobility literature.

It is crucial to note here, however, that social scientists have long argued that scientific production is deeply embedded in and shaped by social processes. Scholars have shown how social organization (Bourdieu 1975; Latour & Woolgar 1979; Latour 1993), political and economic structures (Bijker & Law 1992; Downey 1998; Mirowski 2004; Mukerji 1990; Strathern 2000), national contexts (Rabinow 1996,1999; Taussig 2009; Traweek 1988), geographical and geopolitical divisions (Graham 2013; Livingstone 2003), transnational processes (Hayden 2003), changing political ideologies (Gusterson 1998; Masco 2006), knowledge systems (Knorr-Cetina 1999; Nader 1996), gender (Haraway 1989; Keller 1985), and networks of human and non-human agents (Latour 1999) affect the processes of scientific production. Equally importantly, researchers have shown scientific innovation to be a collaborative and material process. Scholars have examined how scientific production is dependent on the “invisible work” of support personnel, machines, and infrastructures (Star 1995a; Star & Strauss 1999) and articulation work (Fujimura 1987); how it is facilitated by tools (Clarke & Fujimura 1997); and how scientific uncertainties are alleviated by standardization of scientific practices (Lampland & Star 2009; Star 1985, 1995b).

While inspired by this literature, my project aims to reveal a more personal side of scientific work and scientific production. It renders visible the thoughts and practices of research workers when they are outside their work spaces and places, when they are asked to reflect not only on epistemic questions but social and personal issues as well. This focus is driven by my

conviction that Dominic Boyer's call to treat experts as "desiring, relating, doubting, anxious, contentious, affective" human subjects (2008: 38) has never been more timely.

That is, on the one hand, the policy focus on quantifiable and measurable "research excellence" around the world has never been stronger (Sorensen et al 2015). On the other hand, recent years have witnessed a proliferation of popular articles on inequalities and uncertainties embedded in academic work. No week passes by without another – admittedly, usually US-focused – story of the socio-economic vulnerabilities experienced by academic workers. At times, articles appear linking the pressures scientists experience with research misconduct and calling into question the very system of scientific production and publishing. The career sections of such prestige journals like *Nature* and *Science* publish articles on the difficulties early career researchers face finding and maintaining employment. Services like *The Professor Is In* and *The Cheeky Scientist* promise to provide young scholars with tools to find jobs – either in academia or outside it.

It can no longer be assumed that studying experts (or experts-in-the-making), including scientists, is unequivocally a project of "studying up." Rather, focusing on scientific work as a process that only takes place within the confined walls of research institutions or conference centers disguises the inequalities and differences within the structures of scientific production. As recent trends in the science and technology studies scholarship suggests, it is necessary to think of epistemic and social uncertainties that science workers encounter as interconnected (Sigl 2015) and to untangle the discursive patterns and practices that render invisible the labor researchers invest in securing and retaining employment (Holden 2014; Lorenz-Meyer 2012; Peacock 2016). My project joins this conversation by examining the practices and strategies of sense-making among a group that is doubly marginal in the global and national structures of

scientific production and lacks access to power due to their status as both comparatively young researchers and foreigners.

To consider the local context, it is necessary to note that scholars have traced the history of scientific research institutions in Japan (Bartholomew 1989; Dearing 1995; Low 2005; Low, Nakayama & Yoshioka 1999), and examined the technoscientific dimension of Japan's nation state building project throughout the twentieth century (Mizuno 2009; Samuels 1994). They have also examined the role of foreign scientists in transferring “Western” scientific knowledge to Japanese institutions (Beauchamp & Iriye 1990; Checkland 1989; Kikuchi 2013; Kim 2014) during the Meiji period (1868-1912). It was a time when Japan – guided by the slogan “Japanese spirit, Western technology” (*wakon yōsai*) – embarked on fast-track learning to catch up with European and American knowledge systems in order to build and maintain its position on the geopolitical world map. Sending select Japanese students to Europe and the United States to study, as well as inviting foreign advisors (*oyatoi gaikokujin*) to Japan were important measures to achieve this goal. The attitudes towards their presence in the country may have at times been ambivalent, but, as historian James Bartholomew dryly suggests, “[t]he larger group of 8,000 or so foreigners employed by the government over time did include some incompetents and troublemakers, but this was not true of the university contingent. A few were cantankerous, but nearly all came from distinguished institutions and continued their careers after leaving Japan, a few to the summit” (1989: 64).

Fast forwarding to late 20th century, anthropologists have provided insights into the system of scientific production in postwar Japan. Sharon Traweek's (1988, 1992) compelling and detailed ethnography on high energy physics community-making and maintaining, as well as Samuel Coleman's (1999; see also Collins 2004) account on the effects of the “chair” (*kōza*)

system on scientific production in bioscience labs provide an insight into scientific practices during this time. More recent accounts by Sharon Traweek (1996, 2005, 2012) focus on the moments of change and individual determination, as well as the importance of multiplicity of origin stories when discussing the development and work of Japan's research organizations. Gregory Poole (2009, 2010; see also Cummings & Amano 1977; Goodman 2009) has provided a portrait of the "Japanese professor"; even though his ethnography focuses on a teaching-oriented college, he suggests there is much greater internal diversity behind the image of sternness and inflexibility that Japanese scholars seem to have. Poole also points out (2016; see also Bradley 2009) the intricate and stagnant practices through which the administrative apparatus may hinder changes in academic institutions, and Jeremy Breaden (2012, 2013) describes the organizational practices and dynamics of "internationalization" (*kokusaika*) that Japanese universities undertake as educational institutions.

The underlying theme of the neoliberalization of the Japanese university in these recent accounts (Poole & Chen 2009), however, is one that strikes a chord in all capitalist economies. Since Marilyn Strathern's (2000) volume on university "audit cultures," cases of market-oriented and market-driven changes in the management of education and research, as well as the subject-formation within such frameworks are increasingly well documented (Shear, Hyatt & Wright 2015; Shore & Wright 2015). My focus on foreign researchers in Japan adds a slightly different angle to this line of analysis. It inquires into the strategies of sense-making that early career scientists employ when moving from one location that promotes individual responsibility, flexibility, accelerated productivity, and measurable excellence to another. My project examines the ways young researchers attempt to account for similarities and differences in the patterns of scientific production that they encounter as they engage in transnational mobility practices.

Against the larger background of global shifts in scientific labor regimes, I suggest, my interlocutors strive to discern practices they consider local – that is, “Japanese.” On the one hand, the “Japanese” lens allows young foreign researchers in the country to analyze the uncertainties and, at times, certainties they experience as local phenomena. On the other hand, references to “Japanese” practices as highly local forms of scientific production permit these scientists to fashion themselves as globally situated and informed experts. Thus, as I show in the dissertation, Japan, while locating an ambivalent position in the global hierarchies of scientific production, emerges as a national space where global patterns are, ironically, both intensified and rendered invisible.

1.4 CHAPTER OUTLINE

I extrapolate and expand on this argument in five separate, yet closely related dissertation chapters that each engages with its own conceptual and empirical question. Earlier in the introduction, I outlined the theoretical considerations I address in each section. Here, I sketch out the main conceptual themes on which I focus in the dissertation. The second chapter analyzes my interlocutors’ views of the global hierarchies of scientific production. Even though there is a variety of types of public research organizations and funding schemes in Japan, created over years as a result of the bureaucrats’ attempts to capture the “right” structure that would lead to global visibility and importance of the country’s scientific institutions, my interlocutors conceived of the practices and processes in all these institutions as “Japanese” – that is, highly local. Even more, my research participants positioned Japanese institutions and practices of scientific production in opposition to Western European and North American ones and rendered

them discursively inadequate by comparison. Positioning themselves as globally informed experts and associating themselves with Western European or North American traditions, my interlocutors thus expressed ambivalence about their presence in the country. The ambivalence, I suggest, is twofold. On the one hand, it questions the extent to which Japanese policymakers and institutions are actually devoted to welcoming foreign researchers in their midst beyond the slogans of “internationalization.” On the other hand, however, claims of “true” belonging to a different, somehow more “universal” scientific tradition reflects both the researchers’ assumptions about Japan’s place in the global hierarchies of scientific production and also their own attempts to redefine successful employment.

Redefining and navigating employment is a theme that emerges in Chapter 3 as well, where I examine it through the lens of dependency, and labor. I analyze how the category of youth is expanded in order to include postdoctoral researchers and other scientists on temporary contracts, suggesting that contract-based work that researchers do is conceptualized as preparation for future employment. A parallel process, as I highlight, is constituted by the attempts of both young foreign scientists and their superiors to construct a community of care under the circumstances of institutional lack of care. I suggest that in the context of institutional dismantling of social ties, the need for support networks has intensified and the interpersonal relationships that have been built become increasingly crucial for maintaining one’s survival in the job market. Thus, I argue, young researchers invest a configuration of emotional, affective, and interpretive labor in order to build and maintain positive dependency relationships with their supervisors and thus work toward producing more security in their present and future employment. Importantly, young foreign scientists tend to situate this practice in the framework

of specifically Japanese forms of care, thus discursively separating Japan's institutions and practitioners of scientific production from the global networks in which they are enmeshed.

The fourth chapter focuses on the discursive categories of the "foreigner" and "foreign." In the first part of the chapter, I examine the "foreigner" category in juxtaposition to the more conventional category of "expats"; I argue that the young scientists' self-identification as "foreigners" in the country, as well as their attempts to build networks of sociality based on this grouping reflects a conscious shift away from the privilege associated with the "expat" category. It reveals the complex ways in which transnationally mobile knowledge workers engage with the uncertainties of their working lives. In the second half of the chapter, I show how "foreignness" emerges as a category that stands in opposition to "Japanese" people and materialities, erasing complexities within, as well as the messy continuum betwixt and between. Ironically, even though appearing as a response to what my interlocutors see as isolating and isolated "Japanese" research processes and, by proxy, restrictive Japanese society, discourses and practices of the "foreign" are equally exclusionary, rendering only some foreigners and experiences "foreign" enough. The boundaries of the "foreign" thus once again pinpoint the young scientists' conceptualizations of global hierarchies of scientific production as discourses that almost indiscriminately conceive of Western European and North American practices as superior.

The analytical lens of gender in Chapter 5 adds another dimension to the foreign scientists' engagement with Japan's research institutions and, by proxy, the gendering and gendered practices prevalent in the country. I argue that employment in Japan's institutions of scientific production has quite different implications for male and female researchers. Female scientists, I suggest, tend to construct and portray themselves as mostly unaffected by their gender, while at the same time deeply reflecting on the low numbers of Japanese women

scientists around them, especially in positions of relative power. Foreign women claim to be unaffected by the gendered inequalities and insecurities that permeate the structures of scientific production around them. Due to their foreignness, partially they indeed are outside the structures that put Japanese women at disadvantage and are allowed more than their Japanese counterparts. At the same time, foreign women invest work in very consciously – and more so than my male interlocutors – positioning themselves as productive workers.

For foreign male scientists, however, work in Japan allows to develop and embrace alternative models of scientific masculinity. This form of masculinity is constructed with reference and in opposition to the prevalent practices they observe at their workplaces: absent husbands and fathers staying at work for long hours in the name of science and their future careers. By claiming to be different from this model and highlighting the importance of family life, foreign male scientists make sense of their position within the structure of scientific production to which, in many cases, they belong only temporarily.

Chapter 6 concludes the dissertation through an examination of the mobility-oriented, as well as immobility-focused hopes and aspirations of foreign scientists in contemporary Japan. Returning to the themes discussed in Chapter 2, I consider these practices against the background of scientists' structural dependency on the state and, in turn, the state's participation in the global circulation of research policies and practices. I show that, despite my interlocutors' attempts to conceive of their experiences as highly local and position themselves as a globally-cultivated living critique of Japan's research institutions, foreign scientists in Japan are deeply entrenched in both national and transnational scientific labor regimes. Importantly, however, the chapter also highlights how the lived experiences of on-the-move scientists reveal the importance not only of the practices and imaginaries of mobility, but also those of immobility. Complicating the

tendency to conceptualize mobility as inherently positive and indicative of power, hopes for immobility among foreign researchers in Japan reflect aspirations toward stability, and provide a critique of transnational scientific mobility as an unquestionable good.

2.0 SITUATING JAPAN, SITUATING SCIENCE: THE GLOBAL ASPIRATIONS OF LOCAL LIVES

In the dissertation introduction, I highlighted several national and transnational processes that form the background for the mobility of science workers in contemporary world and shape the work lives of foreign researchers in Japan: over the past few decades, transnational circulation of academic knowledge workers has accelerated, and countries around the world, including Japan, actively participate in this circulation. The Japanese state, concerned both with ensuring the sustainability of the country as well as Japan's standing in the global regime of scientific production, has been deeply engaged in the process through the management of various funding schemes for PhD students (such as the MEXT scholarship) and postdoctoral researchers (such as JSPS grants). Even though inviting foreign students and researchers to work in the country's research institutions is not a new practice for Japan, the recent years have witnessed a steady increase in the numbers of foreign scientists in Japan, reflecting both global trends in academic mobility, as well as the active participation of the Japanese state in this process.

In light of these trends, this chapter addresses two closely related questions: How do foreign scientists in Japan experience and explain their work lives in Japan's scientific institutions? And what do the international researchers' sense-making practices reveal about the ways they construe Japan's positionality within the global geography of science?

While these questions permeate the dissertation as a whole, in this chapter I address them by highlighting the argument that the presence of foreign researchers in the country is fraught with twofold tensions and ambivalence. One of the tensions is experienced by Japan, represented by its government and research institutions: while the country aims to attract foreign scientists to boost the prestige of its institutions and innovation capacity, it remains wary about the presence – especially long-term residence – of foreign workforce in the country. The other tension lies on the side of the scientific workforce in question. Foreign researchers feel ambivalent about their work in Japan because, on the one hand, they are employed and comparatively well remunerated by Japanese institutions; for many of them, research work in Japan provides an opportunity for social mobility as well. On the other hand, the young foreign scientists’ notions about where and how “good” science is done posit Japan outside global centers of scientific production and are exacerbated by the socio-economic uncertainties they experience as participants in global scientific labor regimes.

2.1 THE CHANGING LANDSCAPE OF SCIENTIFIC PRODUCTION IN JAPAN

Before I turn to the narratives of my interlocutors, it is crucial to illustrate some of the recent shifts in Japan’s structures of scientific production that have transformed the possible career paths of both Japanese and foreign scientists in the country, and affected early career researchers in particular.

First, it needs to be stated that Japan is a country in which a variety of academic and research institutions are co-present. Elite national institutions with history going back to the Meiji period (1868-1912) and more recently founded public institutions coexist with both equally

old and revered private universities as well as smaller private colleges and junior colleges that sprang up in large numbers following World War II (Cummings & Amano 1977). Public and private research institutions are affiliated both with research universities and research and development departments of private corporations. Flows of resources circulate between public and private institutions as well. Most of the government research funding goes to the academic and public research sector, often managed by the quasi-governmental institution of the Japan Society for the Promotion of Science, with a small percentage left for the industry (Yarime 2015). Industry, in turn, is encouraged to financially support research taking place in public institutions; university – industry cooperation is highly promoted, and industry representatives are often enrolled in the graduate programs of public research institutions that their companies fund through financing various research projects.

New, at times experimental types of research institutions are being established every decade: from Tsukuba Science City, described in Sharon Traweek's work (1988, 1992, 2005, 2012) and similar institutions, such as Kansai Science City (*Keihanna*) in the Western part of Japan, to institutions like the Graduate University for Advanced Studies (*Sōkendai*) which, established in 1988, offers only graduate study programs and fixed-term research opportunities; to the National Institutes of Natural Sciences and the National Institutes for the Humanities, both established in 2004, which incorporate various research organizations and focus on interdisciplinary projects and fixed-term employment structures; to smaller but no less significant scientific institutions built in the framework of the World Premier International Research Center Initiative, launched in 2007. Importantly, as I describe in greater detail in Chapter 6, the emergence of such institutions has been devised, guided and facilitated by the Japanese state.

Second, rather than international mobility of Japanese scientists, the Japanese government has attempted to increase their movements between institutions within the country. Since the 1990s, MEXT has initiated various policies aimed at dismantling the highly institutionalized practice of “inbreeding.” Inbreeding, that is, employment in the same university from which one has graduated has historically been prevalent in Japanese research universities, particularly the elite ones. Up to this day, it affects career paths of young scientists (Lawson & Shibayama 2015). Ironically, as the government aimed to promote the mobility of researchers between various locations of scientific production within Japan, it also rendered their work conditions less secure. As Lawson and Shibayama (2015) suggest, “national universities were allowed to employ faculty members on fixed-term contracts from 1997; in particular, permanent employment for entry positions was gradually replaced by fixed-term contracts with the intention to increase mobility” (see also Kikuchi 2010). That is, policies that were at least partially designed to counteract the inbreeding practice in Japan’s elite institutions – such as the University of Tokyo or Kyoto University – resulted in the introduction of temporary contracts for young researchers who had historically been enjoying a quite high level of job security.

Third, along with new types of institutions of scientific production, restructuration of research structures and hierarchies also took place. Until well into the 1990s, the academic labor market was characterized by the so called *kōza* or “chair” structure. It meant that the positions of the department chair and the professor were occupied by the same person, with all associate and assistant professors under him. (Female professors were and still are a rarity in Japanese research institutions.) As anthropologist Samuel Coleman (1999: 20-21) has noted, the subordinates were “under” the professor in every sense of the word: the professor was in charge of allocating funding the department received from the government, and therefore those below him in the

hierarchy had to cultivate similar research interests and congenial relationships with the boss; in addition, the chair usually received credit for all publications coming out of his department. In the chair structure, promotion was only possible if the chair resigned; in most cases, it meant that promotion was based on seniority. The system began to change in the 1990s. Then, new public research structures, some of which I list above, and fixed-term appointments were gradually introduced. While the *kōza* system – or a version of it – still remains one of the ways to structure the work and hierarchy in a university research department, other structures are equally co-present. Importantly, my interlocutors belonged to various types of institutions – both those that still organized work along the lines of the *kōza* structure, even if slightly updated, and those that at least attempted to structure research, funding and credit cycles differently.

Last but not the least, the structure of university research funding also changed, with new competitive research grants being introduced (Yamamoto 2012: 109). One of them was *Kakenhi*, which is now the largest competitive funding program in Japan; most of Japanese researchers I talked to, as well as those of foreign scientists who felt more established in Japan applied for this Grant-in-Aid on regular basis. *Sakigake*, a much more competitive grant, was introduced in the new millennium and specifically aimed at young scientists to pursue high-level research responding to a theme provided by the government; the grant aims to provide ambitious and promising young scholars with generous funding for three to five years to work on their research projects without being enmeshed in their previous academic networks (personal communication with one of the *Sakigake* grant administrators). As one can apply for *Sakigake* only in Japanese (unlike, for instance, for *Kakenhi*), it prohibits those foreign researchers who are not highly proficient in Japanese from applying for the grant.

What the co-presence of all the diverse types of scientific institutions and ways of organizing work and funding distribution highlights, is the Japanese government's attempts to capture the key to global scientific success. Following the oil supply crises in the 1970s, Japan's "[s]cience and technology policy gradually shifted from promoting technological capacity in well-established sectors to encouraging basic research that was expected to create radically new innovations in emerging fields such as electrical and communication equipment and the electronics industry" (Yarime 2015: 216). This shift coincided with the emergence of policy initiatives that positioned accelerated computation and advanced technological knowledge oriented "information society" (*jōhō shakai*) or, as Tessa Morris-Suzuki refers to it, "information capitalism," as the new basis for Japan's socio-economic development (Morris-Suzuki 1988). In the more recent decades the emphasis has increasingly been placed on advanced research and discoveries that might enhance economic growth, respond to pressing social issues (such as the aging population and environmental concerns), and increase international competitiveness in what has come to be perceived as global knowledge-based economy.

At the same time, shifts in the socio-economic imaginaries of science and technology policies, as well as the accompanying transformations in research structures shape the professional and personal lives of science workers as well. As witnessed by the increasing amount of published volumes decrying the living conditions of researchers with advanced degrees (Mizuki 2007, 2010; Nakano 2011), today young Japanese scientists face many problems, brought about by structural reforms in Japan's scientific production. Among others, as elaborated by Kikuchi Tashirō, a longtime employee of the Japan Science and Technology Agency, these issues include: the dramatic rise in the number of graduate students and postdoctoral researchers since the mid-1990s as a result of one of the tenants of the First Science and Technology Basic Plan that aimed to increase the number of

researchers in hopes to combat the economic recession; the expected decrease in academic positions at Japanese universities due to declining student numbers, caused by Japan's low birth rate; the restructuring of government funding distribution since the early 2000s; the decrease in the number of permanent positions; the fierce competition for research grants; and the increasing reliance on work done by postdoctoral researchers on short-term contracts (Kikuchi 2010: 17–36). The bottom line is that the number of young researchers who are stuck in underpaid or unpaid research positions for years is growing, as the scientists are forced to accept several postdoctoral research appointments before – if ever – finding a permanent position. Thus, ironically, while scientists have come to be seen as crucial to the country's socio-economic and environmental preservation, their work conditions are becoming increasingly insecure.

2.2 AMBIVALENT PRESENCE: RECRUITMENT OF FOREIGN SCIENTISTS

It is these two parallel contexts that form the background for the presence of foreign scientists in the country and inform the two-sided state and personal ambivalence regarding this presence. That international competitiveness and success – or, rather, the global perception of it – are of importance to Japan's policy-makers and institutions of scientific production is reflected in the welcome message of the World Premier Research Center Initiative website. It states that the Initiative was launched in 2007 “in a drive to build within Japan ‘globally *visible*’ research centers that boast a very high research standard and outstanding research environment, *sufficiently attractive* to prompt frontline researchers from around the world *to want to work in them*. These centers are given a high degree of autonomy, allowing them to *virtually*

revolutionize conventional modes of research operation and administration in Japan” (JSPS 2010b; emphases added). Importantly, what emerges in the statement is almost an intense desire for global visibility and recognition – and a nagging sense that Japan’s institutions are not quite there yet in global scientific imagination and respect. The message, as seemingly innocuous as it is, also reveals the attempts to change – that is, to “virtually revolutionize” – the institutions of scientific production and administration in order to reach global acceptance. While this ambition alone does not explain the co-presence of the multitude of research institution types in Japan, it does offer a glimpse into the measures the Japanese government employs in order to gain participation in the global knowledge economy.

The strive for global participation, however, is fraught with tensions. On the one hand, the government aims to make Japan’s scientific institutions “sufficiently attractive” for foreign researchers in order to achieve global recognition. On the other hand, the positions offered to young international researchers are mostly temporary, signaling both the shift in the scientific labor regime in Japan and, at the same time, reflecting institutional and social uneasiness with foreign workforce. This ambivalence toward migrant workforce has been well documented in social scientific research (Douglass & Roberts 2003; Graburn et al 2008; Haines et al 2012; Lie 2001; Liu-Farrer 2011), with recent discussions focusing on Japan’s preference for robot rather than immigrant labor to address the care deficit in the aging population (Robertson 2010). Knowledge workers, including scientists, however, represent a comparatively desirable and manageable group of migrant labor: both due to their labeling as “skilled labor” and also due to the expectations embedded in the current global regime of scientific production – that young scientists will keep moving in order to gain employment.

Thus, for instance, a new system of what the Japanese government refers to as “Points-based Preferential Immigration Treatment for Highly Skilled Professionals,” introduced in 2012, aims to promote the presence of skilled workers in the country and alleviate their entry into the country (Immigration Bureau of Japan 2015). Adorned with pictures of light-skinned, large-nosed cartoon characters representing the “highly skilled professionals,” the explanatory webpage of the Immigration Bureau of Japan includes scientists and researchers in this category. At the same time, as assessments of the Highly Skilled Foreign Professional visa to be gained through the point-based system suggest, while the visa type may be useful for long term foreign residents in Japan, it “suffers from unclear application requirements and inconsistencies in administration, greatly increasing the amount of time and effort required to navigate the process” (Green 2015).

As Japanese bureaucrats and decision-makers at Japan’s scientific institutions are ambivalent about the presence of knowledge workers in the country, young foreign scientists also have conflicting thoughts about their host institutions and workplaces in Japan, as well as about their own position there. The question of how foreign researchers, recruited to work in Japan’s research institutions on fixed-term contracts, perceive the country’s place in the global hierarchy of scientific production is the focus of the rest of this chapter.

It is useful here to think of the encounters between foreign scientists in the country and the Japanese state and society, represented by its research organizations, in terms of “contact zones,” a concept proposed by Mary Louise Pratt in her seminal work on European colonial travel writing. Arguing that European travel books about non-European parts of the world created the domestic subject in the centers of power and encoded imperial aspirations in particular – including systemizing and scientific – ways, Pratt suggests that encounters between people and

peoples can be analyzed through the lens of contact zones. A contact zone, she proposes, is “the space of colonial encounters, the space in which peoples geographically and historically separated come into contact with each other and establish ongoing relations, usually involving conditions of coercion, radical inequality, and intractable conflict” (1992: 6). For Pratt, the contact zone perspective emphasizes the ways “subjects are constituted in and by their relations to each other” and treats the relationships between them “in terms of copresence, interaction, interlocking understandings and practices, often within radically asymmetrical relations of power” (1992: 7). While it is the violence of the colonial encounter that is the focus of Pratt’s narrative, it is useful to remember that not only do foreign scientists in Japan and their hosts come into contact, interact, and shape each other’s practices, they also represent a multitude of nodes and locations in the global hierarchies of scientific production and prestige.

As social scientists have shown, throughout the history, the place of scientific production has mattered and remains to be a crucial factor in assessing and evaluating the validity of scientific claims (Henke & Gieryn 2008; Latour & Woolgar 1979; Livingstone 2003). Science, as Henke and Gieryn (2008: 355) argue, “is not randomly or evenly distributed all over the skin of the earth. Rather, the activities and wherewithal of scientists are clustered together in discrete locations recognizable as centers where most science happens.” Despite claims that science now is a global enterprise, facilitated by communicative flows of data, ideas, and people, some regions, nations, universities and laboratories are deemed more trustworthy than others. Some places, in turn, are seen as locations that produce knowledge to be taken with a heightened level of distrust and suspicion. In today’s world of scientific production that pushes for increasingly accelerated flows, intensity and groundbreaking relevance assertions of knowledge claims, which at the same time are equally increasingly impossible to replicate and verify (Smaldino &

McElreath 2016), the so called centers of scientific production – in the United States, United Kingdom, also Germany, France, and Australia – occupy a privileged position in making their work, channeled through prestigious journals, not only read and heard, but also believed in. Along resources invested in building and developing infrastructures and equipment for natural science research, academic mobility to these centers – or centers-in-making – fortify their prestige as “knowledge hubs” (Jöns 2015). As Sharon Traweek puts it, “[n]ational scientific communities are no longer in the margins when their scientists’ findings are accepted as a matter of fact and without replication” (1992: 451).

In his account of the historical marginality of scientists in Japan, James R. Bartholomew (2010) discusses the country’s position vis-à-vis “scientific mainstream” as that of exemplifying the “tyrannies of geography.” Working in the “wrong” location or belonging to “a local scientific community of uncertain reputation,” among other factors, may contribute to the difficulty in gaining appropriate recognition for one’s scientific work (Bartholomew 2010: 25). Considering Japanese researchers who have received the Nobel Prize in comparison to the overall number of Nobel nominations extended to Japanese scientists since the late 19th century, Bartholomew suggests that “the value of working in a major center of scientific research” (associated with institutions in the United States) and “the costs of working in a more remote venue” (such as a university in Japan) are clearly discernable.

In 2014, 3.59% of Japan’s GDP went to research and development expenditure; this number has been slowly but steadily rising since 2000, when the fraction was 3% (OECD 2016: 21). The percentage is one of the highest among the OECD countries, following South Korea and Israel. Despite this staggering investment, Japan, I suggest, is still perceived as “not quite there yet” in my interlocutors’ Euro-American centered global imagination of scientific production

that still deems the world outside the center lacking. Japan serves as a place of comparison for the adherents of North American and European science; it is perceived, to borrow from Pratt (1992) and Livingstone (2003), as the exterior and is therefore defined through its relationship to the center. Japan's ambivalent wish to be "sufficiently attractive" for foreign scientists to want to work there reflects this positionality, and so do the narratives of international researchers in my study.

Sharon Traweek (1992) recounts the double marginality of the Japanese physicists she worked with in Tsukuba Science City in the 1980s: as scientists working in a comparatively new institution outside the historically developed Japanese research university system, they were liminal in the domestic research hierarchies; as Japanese scientists, however, they were seen as marginal by their foreign colleagues. Ironically, Traweek notes, "the Japanese needed the aliens in order for the laboratory to gain credibility in the international high energy physics community; the foreigners were afraid they were losing status by even being there" (1992: 451). While, several decades later, none of my interlocutors expressed the sentiment that they might be losing their status and credibility as scientists by working in Japanese labs, few were excited about the opportunity to do so. Many, however, did proudly recount their previous research or study stints in European or North American institutions. While only a fraction of my research participants could claim to come with the power of the center in terms of their upbringing and college education, they easily aligned themselves with it.

This sentiment can be discerned from a snappy remark a postdoctoral researcher – himself from Russia but with cherished previous work experience in France – made about a French master's student during a holiday party. The younger man had been quite annoying the whole evening, among other things boasting about his success in his study program. Irritated, the

postdoctoral researcher remarked: “If he was really that good, he wouldn’t be here, but in Oxford.” Even though studying in Japan at a master’s or doctoral level may make financial sense for foreign students due to the relative availability of Japanese government scholarships, the assumption embedded in the remark points to the power of the center in scientists’ imagination.

Positioning themselves as disciples of a seemingly unified European or North American (or simply “foreign”) scientific tradition, they claimed belonging to the center, thus both othering and generalizing Japanese scientists and their practices of scientific production. While my interlocutors worked at a variety of the different types of institutions named in the earlier part of the chapter, the diverse ways – nationally, institutionally, and personally – of managing scientific work were subsumed in an all-encompassing “Japanese” mold. It was used as an explanatory mechanism to account for what my interlocutors saw as differences between the practices of the center and those of Japanese scientists.

Thus, having discussed the importance of personal connections and seniority in gaining employment and obtaining grant money, as well as the lack of female researchers in Japanese institutions and having framed these issues as “cultural problems,” Bill, a confident associate professor, continued:

A long standing culture of the West versus kind of the East... [...] In the West – Spain, France, Germany, and the UK – you have the cultural renaissance period. See, the renaissance is when it... the spirit of inquiry... just doing things differently and creatively... just changed Europe completely. So, the art, music, and science gave birth to industrial revolution, gave birth to so much of the golden centuries of European science. And doing science for the sake of science, pursuit of knowledge for the sake of pursuit of knowledge was a noble and honorable thing to do. And it still is. In the UK, we value that hugely. This is a sign of nobility; this is what gentlemen did. It’s a fascination with nature and the unknown. It’s kind of an exploring mind. It still has an effect on our psychology, the way we think about things. And the professions that we value, science being one of them. [...] So I think this is deeply ingrained in the culture of those countries. You see it in art, and you see it in music.

You see it in science. This is just what good minds did at the time. I'm not really in a strong position to comment on the culture of Japan... it's clear that if you look at the miracle economies of the East, they're driven by technology and industry... and the idea of doing things that are useful is much stronger. Directly useful, instead of things done for the sake of science. (Emphases added.)

What emerges in Bill's narrative, is the juxtaposition of what he considers to be the center of scientific production – the UK in particular and Europe in general – and the ways the Japanese practices he has observed at his workplace and other institutions differ from the ideal. It is in the “culture” of European countries to value science for the sake of pursuit of knowledge, while the “culture” of Japan is characterized by striving for technological advancement, that is, a less noble pursuit. The divide between the center and the periphery is further demarcated through the erasure of complexities and differences among scientific traditions in Europe, as well as those in the East Asian region.

Bill's “golden centuries of European science” are reminiscent of what geographer Kerry Holden (2014) refers to as lamentations of the “golden age” in science, emerging from the tensions that arise from pursuing science both as a job and a vocation. As Holden suggests, “[p]laying a performative role in scientists' own self-understanding, the myth [of the golden age] not only underwrites scientific identity, but also supports research management by demarcating ‘science’ from the practices that manage, measure and commercialise it. The ‘golden age’ [...] embodies a moral economy that is detached from its institutional contexts, and thus unable to resolve the inequalities and tensions produced through the political economy that relies on it” (2014: 24). Ironically, it is precisely the tension between science as a calling and research as a job that brought Bill to Japan in the first place. Even though he participates in the project of defining the center – characterized by limitless creativity it is supposed to engender – through marking Japanese science as external to it, the power relationships in this “contact zone” are

more complicated than those usually represented in center-periphery encounters. After all, while he may consider the Japanese “culture” of science lacking in comparison to the European one, Bill is employed by a Japanese institution and offered a position that may not have been easily available to him in the center. Thus, like the “golden age” myth, the imaginary of the global hierarchy of scientific production “helps to get science done, not to disrupt it” (Holden 2014: 42).

A similar theme emerges in the narrative of Ali, a doctoral student from a country in the Middle East. He was introduced to me as someone who had had a very tough time in his institution due to disagreements with one of the higher-ups in his lab and could therefore tell me a story, as our mutual acquaintances inferred, of true hardship. At the time we met, however, Ali thought he had resolved his conflict with the assistant professor in his lab who had been too harsh with him – yelling and throwing things. Acknowledging that the assistant professor had probably been in a vulnerable state of mind due to personal issues as well as lack of research funding, Ali explained his experiences in terms of “culture.” During the difficult for him time, Ali had spent his free time reading literature about Japan that he thought would explain his predicament in the lab and analyzing his own behavior. Thus, he stated early in our conversation, that:

In Japan, since they’ve been [on] this isolated island for thousand years, they used to live in a group. Group is very important for Japanese people. So you have to accept it. And that takes time. They’re a different people. So, *in our culture*, being independent is a sign of maturity. In Japan, being a group member is an indication of maturity. (Emphasis added.)

Feeling that after trying for three years he had finally gained acceptance in his lab group, Ali – at the time of our conversation – was feeling generous towards his higher-ups and colleagues in the lab and thought that the “Japanese culture” framework explained his earlier conflicts. What is intriguing in this assessment is that the opposite of “Japanese culture” for Ali

was not necessarily the culture of his own country or even the geographical or geopolitical region. Rather, he referenced what he considered to be the European or American tradition – both as a way of life and a way of practicing science. He aligned himself with this “culture” and hoped he would get an academic job at “a good university in the United States.”

A related contradiction emerges in Diana’s narrative. In the process of job search, a confident young woman from a country in South America and with a recent PhD from her institution in Osaka, she spoke of professors from other countries her department had invited to give talks and lead seminars. Diana mused:

They come here because they want to teach the things that they know. Actually, I only go to the seminars taught by foreign professors. You can really learn then. I have to say, that’s a real privilege at [my] university. [...] Internationally famous people come here to present their research. The foreign ones are top level. And they come. It’s amazing, the level.

Abed, Diana’s husband and a recent graduate at a different department of the same university, then – without prompting – returned to the topic they had been discussing before: that of what they saw as poor communication skills of their Japanese colleagues or, as they inferred, Japanese people in general. Abed stated:

I had a conference in [a city in Europe]. And I was with my associate professor, the big professor, and the assistant professor. All three. We were walking in the subway. And there was this lady working in our field. She actually wrote a book... she’s one of the experts. They didn’t even talk to her! She talked to us. And they [Abed’s professors] stood on the side, as if I was flirting with her or something. I cannot understand these people. And, you know, they waited for me to finish my conversation with her, and then she left. So yeah, they are very bad at socializing.

The irony of both Diana’s and Abed’s statements about the weak communication and teaching skills of Japanese professors and other Japanese colleagues lies in the fact that the same scholars and institutions they deemed lacking were the ones that provided them with opportunities to meet and discuss their work with internationally famous researchers in the first

place. Access to the professors who lead the seminars that Diana attended and considered amazing, as well as the scholar who Abed enthusiastically called “one of the experts” in his field was made possible by the institutional, professional, and personal setup that both of them found insufficient and inefficient. That is, as in the case of many of my interlocutors, even if they did not want to recognize it explicitly, Diana and Abed’s study, research and work experience in Japan meant for them not only geographical but also social mobility; it provided them with professional opportunities – in terms of the comparative ease of access to lab equipment, conference funding, talks by leading researchers in their fields, and other resources – that they may not have necessarily found easily available in their respective home countries.

Of course, not everyone shared the view of the structure of scientific production in Japan as lacking. Ester, an enthusiastic postdoctoral researcher at a university in Tokyo, was highly aware that she would not have access to the same opportunities and resources in her home country in the Middle East. I met Ester through a long-time friend of mine who was an associate professor at her department; having arrived in Japan on a MEXT scholarship ten years earlier, he had remained in the country and climbed up the career ladder at his PhD institution. (His position, however, was not permanent.) From the same country as Ester, my friend had consciously tried to accept as many foreign students as possible in his department. Ester had been one of them, but, unlike the students who arrived with MEXT scholarships, she had paid her own way through the first year of her PhD program. Her husband was in Japan, and it was important for her to be with him. After her first year, Ester applied for a competitive grant and gained funding for the rest of her doctoral program. Upon completing the PhD program, she had remained in her department as a postdoctoral researcher. (It was now her fifth year in Japan.) She was not, however, getting paid for her work at the time we met and she was anxiously awaiting

results of another Japanese government scholarship for which she had applied. Ester was hoping that the scholarship would cover her salary for the next couple of years; she had been independent since her undergraduate years and it was difficult for her to rely on her husband for financial support. As Ester laughingly put it, “When your mind is relieved of money problems, you can think better about your research.” Even though she was anxious about her grant application results at the time we met for our conversation, Ester was enthusiastic about doing research in Japan. For her, the resources now available to her were in stark contrast to those in her home country:

I came [to Japan], and *now I realize why Japan is one of the best*. They have a lot of opportunities, and *the government is paying a lot of money, cares about research*. So that’s good. [Laughter.] Actually, here we can do whatever we want. We have all the facilities in our department. Even... I did a lot of research in different fields, but I didn’t even have to go to another department. *We have a lot of things here. In my country, for one of them, I may have to wait months*. To find a device and so on. So it’s really good to do research here. And they help you. For example, in my department, I do whatever I want, and nobody says anything. [...] They need the results. *Because you’re using the budget, you’re using the facilities. So you have to have a result*. (Emphases added.)

While Ester did speak of culture shock and was concerned about the financial aspect of her work, she did consider Japan a great place for research – especially in comparison to her country or origin. Ester saw that material resources and infrastructures were available for her work and considered that she had the freedom to pursue whatever research question she had in mind, as long as she produced quantifiable output. For her, the reference point was her home country rather than an idealized location in one of the global centers of scientific production, and she viewed Japan as a place that enabled her to pursue more rather than less in comparison.

2.3 AMBIVALENT ALLIANCES: IMAGINING AND NARRATING SCIENTIFIC EXCELLENCE

Tensions, I want to suggest, emerged in the narratives of mostly those of my interlocutors who strived to compare their work experiences in Japan with those they perceived as characteristic to Western European or North American institutions – even if, as I have suggested earlier and aim to highlight throughout the dissertation, their own countries of origin were located in the periphery of the networks of global scientific production. Thus, they struggled to account for the ambivalence they felt toward their presence in Japan in the context their thoughts and revelations about the patterns of work in Japanese research institutions. They laughed and at the same time were infuriated and annoyed by what they saw as the uselessness of lab meetings that their Japanese colleagues, according to one of my interlocutors, used as “a four-hour long nap.” Irritated, one of my research participants remarked that she had woken up a guy in her lab who had been sleeping on the floor and snoring too loudly; she had asked him to go home, but his response had been moving to nap at his desk. Another interlocutor, in a conversation we were having over text messages while he was attending a conference, sent me a line that not only students, but even the assistant professor from his lab “fell asleep.”

Despite noticing that early arrival at work and late departure was praised while “laziness” in attendance was remarked upon and shamed in various ways, my research participants did not understand why Japanese scientists – from graduate students to professors – spent so much time at their labs. Thus, another tension emerges in the way my research participants tried to make sense both of their own positionality in their departments vis-à-vis that of their colleagues. While doctoral students often felt compelled to stay at their labs as long as their Japanese colleagues,

postdoctoral researchers in particular were incredulous about the practice and, in most cases, refused to stay at their labs after the official work hours.

Amala, an assistant professor at a prestigious university in the Kantō region who, having found a day-care center for her young daughter, had recently begun her work full-time at the lab with which she had been affiliated for more than three years, laughingly told me: “I think, compared to the average Japanese there, most people still consider my work part-time. They all stay till 10 [PM], I think. I don’t know what time they go home, honestly. [...] I can’t do it, it’s impossible.” Even though she suspected that her colleagues would think that she was working more and harder, or that she was a better member of their department if she stayed longer, Amala could not and did not want to do that. First, as her partner travelled a lot for business, she often was in charge of picking up their daughter from day-care and taking care of their older child as well. Second, like most of my research participants, she did not think that the hours she spent at work affected her “output” negatively. Third, again, like many of my interlocutors, Amala referred to the “kindness” of her supervisor as an explanatory mechanism for why she was she was given more flexibility than her Japanese colleagues.

I describe the importance of building and maintaining positive relationships with one’s supervisor in Chapter 3, but it is crucial to note here that foreign researchers – especially those in postdoctoral research or assistant professor positions – in general had greater freedom in their respective institutions than their Japanese counterparts. This pattern was often explained by my interlocutors in terms of the supervisor’s “kindness” or him being “not like a real Japanese professor” for one or another reason. However, it must also be interpreted in the context of the Japanese government policies and institutional practices that, on the one hand, promote the influx of foreign researchers and, on the other, remain ambivalent about retaining these workers

long-term. While some professors more than others may indeed be more open to accepting foreign scientists in their labs and respecting different work styles, it is also financially beneficial for institutions to hire international researchers in fixed-term positions. For instance, reflecting the state role and guidance in increasing the numbers of foreign scientists in Japan, many of the young researchers arrive with Japanese government grants that cover their salaries. Even if they do not receive government funding, due to the purported importance of internationalization and interdisciplinary-oriented policies, research institutions gain good standing with the MEXT and its associated organizations through the presence of foreign names and foreign faces in their midst. Thus, the contact zone between Japanese institutions and foreign scientists in them is permeated with contradictions; the same foreignness that renders international researchers desirable in the Japanese scientific labor market also keeps them away from structures of more permanent employment and belonging, at times leading them to question both their own positionality and that of Japan in the global hierarchies of scientific production.

This tension emerges in two opposite takes on the quality of scientific production in Japan through the evaluation of its Nobel prize count. The question of the number of Nobel prizes that Japanese scientists have received was brought up in completely different conversations with two young researchers (who did not know each other) several months apart. On two different occasions, John, a sensitive North American, talked to me about what he considered to be the high count of Nobel prize winning Japanese scientists. The first time, discussing Japanese reliance on and pride in the country's technological development, he said: "If you take away the United States and the UK, I don't think any other country has as many Nobel prize winners as Japan." The second time, the topic was brought up in a more

contemplative manner. As we were discussing the low numbers of foreign and women researchers in Japan's research institutions, John mused:

I'm still in shock when you walk into one of the best institutes in Japan, and they're all Japanese men. Which to me... *it boggles my mind. Not because of the obvious bias, but – how are these institutions able to sustain themselves?* Because they're denying themselves a lot of smart people. Women and foreigners. *But they are able to do it. I mean, all the Nobel prize winners in sciences over the past ten years... I think, Japan ranks third if not higher in Nobel prizes since 2000.* [...] I don't know how they do it. But, yeah, it would be nice to recruit women... (Emphases added.)

For John, the matter constituted almost a moral conundrum. On the one hand, he was deeply dedicated to having more foreign and female researchers in his institution; after all, his job – as he perceived it – was to increase the number of international scientists there, and personally he also did not feel at ease in groups that felt too homogeneous. On the other hand – and despite his supposed task to attract foreign scientists to his institution – John was not quite sure whether the organization was actually interested in having them, apart from making claims of internationalization and interdisciplinarity to the government. He was trying to think about the issue logically, as he put it, and treat it as a matter of supply and demand. That is, Japan does indeed need the labor of foreigners and female researchers to support the research structure. At the same time, he observed, the structure somehow seemed to support itself through the labor of male Japanese scientists, and the Nobel prize count seemed to serve as a proof that something in the system was working.

A different reading of the Nobel prize issue, however, emerged in Elaine's comment. Elaine, a sharp tongued postdoctoral researcher from a large country in Western Europe, and her partner were discussing what they saw as the problem with efficiency at Japanese labs when she paused and said:

I have a very nasty comment on that. If you count the number of scientists working for this country, the number of hours they work... *how come they don't have that many Nobel prizes?* In comparison to [her country of citizenship]. Where we're [fewer] researchers, we're working less... *I know it will be over*, but now I just have to make that comment. [Laughter.] (Emphases added.)

For Elaine, it was crucial to assert that the structure of scientific production in Japan as well as the country's science workers were lacking, especially in comparison to the system and researchers in place in her country of origin and Western Europe in general. She did not aim to explain this lack in terms of the numbers of female and foreign-born researchers. For Elaine, it was rather a matter of work and communication style that frustrated her in her Japanese workplace, and she aimed to demonstrate this supposed deficiency through the framework of the Nobel prize count. Ironically, however, John's estimate is indeed more correct; according to the official website of the awarding organization, while Elaine's country of origin can indeed boast a larger overall number of Nobel prize recipients since the inception of the award, Japanese scientists have received many more Nobel prizes since 2000. Nevertheless, what I suggest is important in these seemingly conflicting narratives are the attempts to resolve the tension between one's positionality in Japan and Japan's positionality in the global hierarchy of scientific production. That is, when John is amazed by the fact that what he considers to be the unsettlingly homogeneous "Japanese system" works, or when Elaine is convinced that it does not (even though, by her own chosen criteria it seems to perform better than her country of birth), they both aim to account both for Japan's relationship vis-à-vis the globally esteemed centers of scientific production as well as their own – even if temporary – position outside them.

Doubts about the quality of Japan's research institutions were expressed by my interlocutors throughout my study. One of my first research participants, a charismatic associate professor at a well-known research institute in the Kansai region, brought up the question of

“scoundrels” and “sloppy people” in Japan’s scientific institutions during our first conversation. He was an admirer of the Japanese whistleblower with the pseudonym Jūichi Jigen (“eleven dimensions”) who, in YouTube videos and multiple blogs, had anonymously revealed several cases of research misconduct and plagiarism in publications by scientists working in Japan’s research institutions – both Japanese and also foreign-born researchers. My interlocutor, a highly self-reflective individual and a leader of his own lab, was concerned about the “lies” and “cheating” that, he suggested, were happening all around. Having spent around ten years in Japan’s research structures, he was privy to conversations and gossip on the topic; he was one person who was definitely not surprised when the Obokata scandal broke out in early 2014.

Haruko Obokata was a thirty-year old postdoctoral researcher at the Center for Developmental Biology, a branch of the well-known and government-funded research institute Riken. In January 2014, with Obokata as the first author, two simultaneous articles were published in *Nature*, announcing the existence of STAP cells: ordinary cells turned into stem cells by subjecting them to profound stress. STAP stood for “stimulus-triggered acquisition of pluripotency.” The announcement was considered to be groundbreaking, and Obokata was the star of it. Young, beautiful, composed, and female, she turned into a celebrity overnight. Japanese media outlets spoke both of her Nobel prize prospects (especially in light of the recent Nobel prize to Japanese scientist Shinya Yamanaka for his stem cell research) and her demeanor, brightly colored lab walls, pet turtle, and the Japanese garment *kappōgi* she wore instead of a lab coat.

Her status as the rising star of Japanese science and media darling did not last long, however. The first doubts about the existence of STAP cells were raised in early February 2014,⁴

⁴ One of the best resources in English for tracking the rise and fall of Obokata and STAP cells is available at “The

and a step-by-step takedown of the *Nature* articles was posted by Jūichi Jigen (2014a) on his blog. As many labs around the world scurried to reproduce STAP cells following the protocol provided by Obokata, one of her co-authors called for the retraction of the papers. In March 2014, Jūichi Jigen (2014b) further damaged Obokata's reputation by posting about instances of plagiarism in Obokata's dissertation, defended at Waseda University, one of Japan's most prestigious private academic institutions. In July of the same year, both STAP papers were retracted, and, in August 2014, Yoshiki Sasai, a well-known scientist, one of the founders of Riken's Center for Developmental Biology, and a coauthor of the *Nature* articles, committed suicide. Obokata had lost her job at Riken and, claiming mental health issues, had gone in hiding; Riken itself was threatened to be restructured and lost large amounts of government funding. Waseda University stripped Obokata of her PhD. All the while, however, despite her own failure to reproduce them, Obokata has been insisting that STAP cells are indeed real. In January 2016, her book titled *Ano hi* ("That Day") was published, in which she claims to have been framed by her co-authors; the book was an immediate bestseller (Otake 2016). In March 2016, a website was launched, supposedly by Obokata, to prove the existence of STAP cells.

Ironically, even though Yoshiki Sasai committed suicide, the work lives and reputations of two of the other article co-authors and Obokata's former mentors, Teruhiko Wakayama and Charles Vacanti do not seem to have suffered much. Wakayama, who Obokata now accuses for making her a scapegoat, teaches at the University of Yamanashi. Vacanti, who imagined the possibility of STAP cells in the first place and recruited Obokata to test his hypothesis, took a year of sabbatical from his position at the Brigham and Women's Hospital in Boston all the

Niche: Knoepfler lab stem cell blog" (<http://www.ipscell.com/>), written and maintained at the lab of Dr. Paul Knoepfler at the UC Davis School of Medicine. A recent overview is provided in *The New Yorker* article "The Stress Test: Rivalries, Intrigue, and Fraud in the World of Stem cell Research," by Dana Goodyear (<http://www.newyorker.com/magazine/2016/02/29/the-stem-cell-scandal>).

while claiming that he himself had also produced STAP cells (Rasko & Power 2015). While he no longer insists that that had been the case, his name does not seem to be tarnished as much as that of Obokata's. A recent article in *The New Yorker* portrays the US researcher in an entirely sympathetic light as someone who had trusted the smart, beautiful yet dishonest Obokata (Goodyear 2016).

As the Obokata scandal was unfolding in early 2014, I had the opportunity to hear the thoughts and impressions about STAP cells and Obokata herself. Some people – women in particular – wanted Obokata's claims to be true, as that would show that somebody young, female and not too high in the institutional hierarchy could indeed have a groundbreaking discovery. Others were more dismissive. The interlocutor who had introduced me to the blogs of Jūichi Jigen shared some gossip from Riken that Obokata had always been an attention seeker and, therefore, everything she was doing was in order to remain in the public eye, for good reason or bad. Another research participant, based on his knowledge of stem cells, simply did not think STAP cells were possible.

Most of my interlocutors, however, situated the STAP cell debacle in the larger context of scientific production in Japan. For them, research misconduct was a Japanese failure, rather than a global phenomenon that, to a great extent, may be explained as a result of the increasing pressure on scientists all over the world to publish at an accelerated speed and the demand to produce ground-breaking results in order to advance one's career. *Retraction Watch*, a blog dedicated to tracing research misconduct and plagiarism cases in scientific publishing through reporting peer-reviewed article retractions, shows that it is scientists from all over the world whose papers are retracted due to suspicions of research misconduct. While it is indeed a Japanese scholar (Yoshitaka Fujii) who takes the dubious leadership position of having the

highest number of retracted articles (183 as of 2015), *Retraction Watch*'s daily updates show the pervasiveness of the problem around the world. Overall, according to Grieneisen and Zhang (2012: 7), "a larger proportion of articles from authors in China, India and South Korea are being retracted in recent years when compared to those from authors in the USA, EU-27 and Japan." Importantly, however, the number of retracted articles has grown considerably and drastically since 2001 in all the countries listed above (Grieneisen and Zhang 2012: 12).

My interlocutors lived and worked in Japan, though, and discussed the global trends through the lens of their institutions and practices they observed there. One of my research participants, a young man from Central Europe, was particularly amused by a colleague of his at a prestigious institution in the Kansai region who nobody had ever seen conducting experiments. Always smartly dressed, the man was apparently known for spending little time in his workplace, yet writing and publishing papers at a great speed. My interlocutor was convinced that the "big boss" of the institution was aware that something was wrong but was more concerned about new publications appearing in high impact factor journals. At times when he was feeling particularly down about his own project, the young man turned to analyzing the behavior of the colleagues who had conducted the experiments he was now supposed to carry out; as he suggested, even though he tried to get experiment protocols from people at the other lab, nobody would share the information with him. While at more cheerful moments my interlocutor ascribed this unwillingness to "Japanese" forms of research work, at darker hours he suspected that the colleagues did not have anything to share because they had not actually achieved the results he was now tasked with reproducing and publishing.

The young scientist considered that researchers in Japan were asked to "write papers no one cares about" and that one day the "bubble" would burst because "no one cites their papers."

His friend, also from a country in Central Europe, agreed with this assessment during one of our conversations and announced that he had stopped two papers coming out of his lab from being published. When I expressed my surprise, he suggested that the leader of his lab was guided by “belief” rather than the scientific method. The professor, he continued, treated the “noise” of the machine that was used to conduct the experiments as data and pushed the students of the lab to publish it as such. When, surprised at my interlocutor’s acknowledgement that the lab leader was also foreign-born, I asked him what made the situation “Japanese,” he shifted the focus to the graduate students in his lab. They are “biorobots,” he claimed, who are “not allowed to think”; that is, “they produce results, but they don’t understand.” Due to the structure of the lab, he implied, fake knowledge was being accepted, analyzed and published. Through his presence and work at the lab, though, my interlocutor continued, the students started to realize what the professor had been doing and were now having “good ideas.”

What emerges in these conversations is, as I have shown throughout the chapter, not only the tension between science as a local and a global enterprise but also young science workers’ attempts to situate themselves within both local and global structures of scientific production – and do so against the background of fast changing scientific labor regimes. With global trends and pressures being interpreted as peculiarly “Japanese” ones, my interlocutors position themselves as transnational actors, dedicated to the ideals of scientific production most often associated with the historically established centers of scientific production in Western Europe and the United States. Through such alignments, young foreign scientists attempt to negotiate their position both in Japanese and also transnational systems and labor regimes of scientific production. Aligning themselves with the models associated with Western European or North American institutions allows them – at least for a period of time – to engage with and resolve the

tensions and paradoxes embedded in their temporary research stays in the country. As suggested in the chapter, both the state and foreign science workers feel ambivalent about their presence and work in Japan. While the Japanese government aims to resolve this tension through policy measures and financial incentives (both for research workers and research institutions), young international scientists do so by claiming their “true” belonging to structures of scientific production that lie outside Japan and are imagined as superior. Such conceptual alignments emerge despite the fact the young foreign researchers are employed and remunerated by Japan’s research organizations, their presence is facilitated by the state, and, for many of my interlocutors, their doctoral studies or postdoctoral projects in Japan imply social mobility and access to resources not necessarily available before. Denouncing the “Japanese” structures of scientific production as lacking and constructing the “true” belonging to a different scientific tradition and practice allow young researchers to “localize” and thus make sense of the global scientific labor regimes that situate their brains and bodies as easily transferrable and manageable workforce.

3.0 THE YOUNG AT WORK

You know from the very first day that you're leaving. (Irene)

When it comes down to it... if the guy thinks you're ok... (Hugh)

In his call for anthropologists studying experts in various fields to “humanize” their research participants, Dominic Boyer has suggested that knowledge specialists should be approached “not solely as rational(ist) creatures of expertise, but rather as desiring, relating, doubting, anxious, contentious, affective – in other words, as human subjects” (2008: 38). Humanizing the expert, he argues, offers insights that reach beyond the institutional, professional and public dimensions of expert lives and, in turn, may transform the picture – and “the rationalist core” – of the field of expertise in question. It is in line with this call, and with Boyer’s encouragement to “[e]ngage the non-professional” and the processual (2008: 44) in particular, that I turn to my discussion of experts in the margins: in the margins of their expertise, in the margins of their places of living and working, and in the margins of anthropological conversations about their fields of expertise. What I aim to highlight here, to borrow and paraphrase Nicole Constable’s poignant remark that “migrant workers are never only workers” (2014: 7), is that transnationally mobile researchers are never only scientists – they are workers as well.

While anthropological literature has engaged with the question of what goes into making and becoming an expert – for instance, a physicist (Traweek 1988) or a medical doctor

(Wendland 2010; Prentice 2012) – in various cultural and socio-economic contexts, my goal here is different. Focusing on the experiences of foreign researchers in Japanese institutions of scientific production, I explore how those who may be considered early career researchers – newly minted experts, young experts, experts questioning their dedication to the chosen field of scientific expertise – make sense of the work they invest in *being* scientists. I argue that, apart from their immediate work with specimens, cells, mice, computer programs, and tools for data recording and analysis, as well as the administrative and support duties that sometimes escape the definitions of scientific work (Fujimura 1987), researchers also engage in highly personalized and affect-filled forms of labor in order to remain employed. I highlight that the researchers in my study interpret the work they invest in maintaining positive personal relationships with their group leaders, heads of institutes and other higher-ups as engendered by Japanese forms of relationships. These narratives, I suggest, disguise the careful ways in which young scientists make investments in their human capital portfolios, “composed by their behaviors” (Feher 2009: 34), to remain employable in both the local and transnational scientific labor market.

3.1 YOUTHFUL WORK

It is first useful to discuss the discursive power of the language of youth in conversations about scientific knowledge workers, and the work it does to hide the increasingly limited access to full-time and permanent employment many scientists face. In her recent discussion on the politics of new forms of labor in contemporary East Asian contexts, Gabriella Lukacs highlights how the notion of “youth” has shifted and expanded in advanced capitalist economies. As she suggests, “[t]he neoliberal state incorporates youth in its growth strategies because young people –

especially the unmarried and the childless – ideally satisfy the demands for labor flexibility and mobility” (2015a: 387). The workforce, Lukacs persuasively argues, is expected to stay “youthful in attitude” (2015a: 388), despite its members reaching the age that earlier generations had associated with full adulthood. Adulthood, characterized by a stable job and properly managed home life, has been substituted by “a state of eternal temporality” (Lukacs 2015a: 388) and continuous ideological and structural reinforcement of flexibility and mobility as values to be strived for and embraced. While Lukacs’ argument aims to highlight the shift in the organization of Japanese, South Korean and Chinese labor practices, the employment patterns of foreign researchers in Japan – as well as the way the researchers make sense of their career plans – suggest that scientists are also drawn in the expanding regimes of “youthful” work.

The “youthful in attitude” employment regimes and practices of these scientists are defined by flexibility and mobility – both quite physical across long distances, and also more conceptual, that is, from one temporary position to another, or even from one yearly contract to another in the same position and at the same institution. Intriguingly, these regimes reflect both the global and also the highly local in the ways “youthful” work practices are engendered and the category of youth is being expanded and fitted to accommodate organizational demands of the state and the workplace. On the one hand, the scientists in my study had embraced mobility as a requirement for career advancement and thought of it as a necessity rather than a choice, and many had often quite consciously suspended or postponed “adult” responsibilities during their stay in Japan. On the other hand, their employment in Japan was defined and made possible by a highly particular shift in Japan’s regime of scientific production. This transformation is characterized by the government’s attempts to identify, build and financially support research institutions that would be most conducive to high productivity and easily quantifiable research

output. The same shift requires scientists and administrators of the newly built or enhanced institutions to embody the change, that is, to embrace the “eternal temporality” of flexible and mobile employment practices. My interlocutors had arrived in Japan in the midst of this change in the scientific labor regime. Like their Japanese counterparts, they had to learn the ropes of the new regime – managing their work present and future as highly individualized agents, aware that mobility is the default state, rather than an exception. At the same time, precisely because they had arrived while the transformation was taking place, my research participants were caught in the bind between the earlier patterns of organizing research work and the more novel ones. More so than their Japanese colleagues, foreign scientists had to learn to distinguish between the old and the new, between the local and the global – to recognize which practices were engendered by the now eroding Japanese employment system and the *kōza* structure of organizing laboratory work, and which were the result of transformations in scientific labor regimes on a global scale.

Irene’s account provides an insight into how researchers and administrators were struggling to maintain an uneasy balance between what might have been referred to as group-oriented Japanese forms of cultivation of belonging and the pressures of new employment practices. Irene, herself from a country in the Mediterranean region, had earned her doctoral degree in a policy-oriented field from a university in southern Japan and was working as one of the coordinators at a national institute in the Kansai region at the time we met, while also applying for academic positions in the area. The spacious institute had been established in early 2000s and, according to Irene, was still trying to find and at times defend its place in both Japan’s and international research landscape. In her description of the institute, Irene told me that “it’s experimental, but it’s permanent.” She immediately followed up with another remark, however, stating that “nothing is permanent,” as the MEXT planned the institute budget for six

years, and the situation may change at the next MEXT budget meeting. The institute had been designed and continuously funded by the Japanese government as an inherently interdisciplinary institution, focused on addressing environmental issues, and researchers from natural sciences, social sciences and humanities were involved in various project-based research groups. During the first few years of the institute, each project leader was supposed to have an affiliation with a Japanese university and take a leave of absence to work at the institute for the duration of his or her project. By the time Irene was describing the institute setup to me, however, this requirement had been lifted, and primary investigators did not have to have a permanent teaching position elsewhere. The maximum period of a project was five years, in addition to a couple of years devoted to project preparation. Each project had different stages and had to be defended to various audiences – such as an institute-wide evaluation panel, an international panel, and MEXT bureaucrats – every year. A less successful presentation could therefore mean dismantling of the project at any stage.

As there could be more than one hundred people involved in one project, I asked Irene how researchers perceived their position at the institute. While during most of our conversation Irene had focused on the necessity to promote interdisciplinary research and prove the worth of the institute to the scientific community and the Japanese government, she now said:

That's a problem for us. I always feel a bit sorry for them, but *that's one of the things that is like one of our distinctive features. Fluidity. It's just moving around.* [...] And especially for postdocs... I'm full time here, but it's still stressful because you have to renew your contract every two years... So it's up to the project leader, whether they like your performance or not. Might be stressful a little bit. As a postdoc [...], you just come here, you see this as a step to move forward... to just focus on your research, publications... *and also towards the end of your contract.* Until the end of your project, if you're happy with the project, you can stay, but when the project finishes, you also have to finish [and look for something else]. *So every year our students, well, they're not students, but it's like they're our own kids... They have our name, it's like, we call*

them our sotsugyōsei... [The Institute], in a way, is a step for them. We always tell our postdocs, if you find something better in the middle [of your appointment here], take it. No one wants to keep you [here]. [...] We always wish they have positions. It's always the news, where they're going next, what's the next step. Shūshoku katsudō, yeah, they do that a lot.

In the context of Japan, referring to their job search as *shūshoku katsudō* and to the researchers themselves as *sotsugyōsei* (graduates of an educational institution), students and even kids, is a linguistic move that places the knowledge workers – all holders of doctoral degrees – in the category of recent college graduates. *Shūshoku katsudō* is an institutionalized form of job search that Japanese undergraduate students undertake towards the end of their studies; it is a grueling and stressful process for the job hunters, as companies engage in *en masse* recruitment of new permanent employees around the same time once a year. Importantly, the process of *shūshoku katsudō* is also supposed to represent a transition to adulthood. Successful job hunt means that the person joins not only a place of employment, but also the social world of adults (*shakaijin*). While, as scholars of Japan have highlighted in recent years, permanent employment is becoming inaccessible to increasing numbers of university graduates (Allison 2013; Genda & Kurosawa 2001), it remains an aspirational ideal for many people (Genda 2005). Irene's remark reflects this aspirational attitude, along with the acknowledgment that mobility is built in the structure of the institute she represents. By default, the project-based setup of the institute does not offer the kind of stability that many of its employees may desire. Irene's portrayal of the institute as a stepping stone – a place where a researcher may build his or her resume to be even better prepared for the job market – is, however, indicative that successful running of the institute depends on the aspirations of those working there. Like the unemployed American tech workers of Carrie M. Lane's study (2011), or the transnationally mobile Indian IT specialists of Biao Xiang's work (2006), researchers at Irene's institute are expected to invest in themselves:

through research and publications that would increase the prestige of the organization to which they belong only temporarily. Participation in research projects is presented as an opportunity to improve one's chances of employment in the future. As Lukacs has persuasively argued, such a system of organizing and managing work "enables workers to project themselves into the future by allowing them to develop new skills that will improve their employability" (2015a: 389).

What is striking in Irene's account, then, is the particular configuration of the various kinds of acknowledgments: that mobility is ingrained in the conceptual architecture of the organization; that the institute's success at least partially depends on the work researchers do to improve their future employability; and that scientists working at the institute – irrelevant of their age – occupy a liminal space between youth and adulthood. This configuration reflects the existence of an uneasy meeting point between the ideal of permanent employment and the structural impossibility of it. Referring to the researchers as *sotsugyōsei* and their job search activities as *shūshoku katsudō* is a move that points both to the aspirational ideal of permanent employment, and to the uneasiness with what might be called permanent temporality, built in the institute. Depicting the institute as a place from which one "graduates," as implied by the use of the *sotsugyōsei* concept, does double work. On the one hand, it expands the category of youth, conceptualizing the work of researchers as preparation for future employment. On the other hand, it attempts to construct a community of care under the circumstances of institutional lack of care. When Irene talks about the institute employees following careers of the researchers who have left the institute, or encouraging them to quit their projects when a better opportunity arises, she evokes the notion of the institute as a place of belonging. Like school, it is framed as a space that, while inherently temporary, will provide a permanent connection to those who have been

part of it: they will always be *sotsugyōsei*. Leaving – and accepting the leave – is a form of care in a situation that institutionally prohibits the fostering of it.

3.2 BUILDING RELATIONSHIPS AT WORK

Temporary project-based structure is shared by many other newly established and revamped research organizations in Japan. That negotiations of the old and the new, mobility and belonging take place there was a theme that emerged in the narratives of many of my interlocutors, as they attempted to discern their position and navigate their responsibilities in Japanese laboratories. What came to be visible in these uneasy and often quite uncomfortable moments, was the importance of interpersonal relationships. The structure of permanent temporality that is built in many of the new institutions seems to encourage fleeting, contract-like and impersonal interactions, focused only on quantifiable output. However, ability to build and maintain positive relationships with one's superiors and – to a lesser extent – colleagues was a skill that may have become even more important than during the time of affluence and permanent employment. While literature on the post-bubble Japan has often decried the deterioration of social support networks at home and workplace (Allison 2013), more recent scholarship also explores the hopeful possibilities of new forms of affinity, sociality and belonging that are emerging in various settings and circumstances. The narratives of my interlocutors suggest that it may also happen in spaces that are undergoing structural reforms and are precisely the locations where the social support networks are supposed to be diminishing. What I want to suggest is that in the context of institutional dismantling of social ties, the need for support networks has intensified

and that the interpersonal relationships that have been built become increasingly crucial for maintaining one's survival in the job market as well.

No narrative offers a more poignant and concentrated elaboration of this point than John's story. John, a thoughtful North American in his mid-thirties, was one of my first research participants. He had arrived in Japan for the first time in 2004 to work as a postdoctoral researcher at a large laboratory in the Kansai region. Like for most of my interlocutors, Japan had not been his dream destination. Rather, John had applied for a Japanese government grant and accepted the position for, as he explained to me, three reasons. First, because his graduate advisor had worked with the PI of the lab, John thought he could trust the man; second, John found the offered salary and the overall work conditions described in the contract much more appealing than similar offers in Europe; third, seemingly quite paradoxically, John had decided to go to Japan precisely because he had had no interest in Japan. John told me that he had envisioned the two years of his postdoctoral research position as a temporary stay in a country that he would have never visited otherwise. However, while John had imagined his employment in Japan to be temporary, he was still in the Kansai region and working with the same professor eight years later when we met. Many things had changed in the meantime. Upon the completion of his postdoctoral appointment, John had traveled the world and decided to, as he put it, quit research work because he had been "an unhappy scientist." Science, John said, did not make him happy and therefore he had attempted to do other things. One of them – a consultancy job – brought him back to Japan. However, like a later stint at a corporate office in Tokyo, John considered this job to have been a mistake. During the time of our conversations, John still despised the pressures of the corporate world and being treated as a resource that can be disposed of at any time. What allowed him to do so, was the fact that he was again employed by the

university where he had spent his postdoctoral research years. Moreover, John was working with the professor who had welcomed him in Japan in the first place. After leaving his research position, John had maintained cordial relationship with the former boss. When John had realized that the consultancy job and the corporate world were not meant for him, the professor had invited him to return to his institute, but this time in a new capacity.

The way John understood it, now the focus of his responsibilities at the institute was to attract more foreign scientists to the organization and to portray his place of work in an appealing light to potential collaborators and researchers abroad. While he framed it as an opportunity to discover his role and responsibilities at the institute, John admitted that his hirers had been “very vague in their expectation.” John was not given specific tasks or institutional encouragement to achieve the goal of gaining more international exposure to the institute, therefore he had to devise these opportunities himself, while at the same time accepting his ambiguous position at the organization where he worked. John did at times feel frustrated with his position and the lack of substantial support for his activities, but truly appreciated the time and what he called “flexibility” that it gave him. I now turn to a discussion of the importance of his relationship with the professor who had made his employment possible. When I asked John why his boss had given him a helping hand and offered employment, even though their professional relationship had ended and John had vowed to quit scientific work, John readily admitted that the main reason it had happened was because the professor had liked him. During a later conversation, in response to my question of whether his employment was permanent, John said:

No, but *as long as my boss is here... as long as he's running the show, there is stability*. The cost of that... That stability means that you can't negotiate salary and expect filthy rich money. Which for someone like me is fine. And I think for a lot of people is fine. They rather have the stability. But... I feel that there are a lot of things that I do that I'm not qualified for. I would not have my job in another country. Only in Japan.

And I think a lot of it has to do with the people that I know. And I think it works in my favor. It doesn't do a lot for my confidence. Doesn't necessarily make me feel good... but grateful for it. *And I do think that as long as I have this – I like to call him my guardian angel, right, coz that's what he is – he'll take care of me, he will not throw me out on the street.*

What is crucial in this affirmation of the importance of personal relationships is the notion that being “liked” is a property that can make the difference between having employment that at least *feels* safe, and fear of being thrown out on the street. While in John's case, unlike for many others in Japan and elsewhere this fear is more figurative than literal, it points to a particular configuration of seemingly contradictory values: stability-oriented care relationships on the one hand, and flexibility-focused neoliberal market valuations on the other.

It may seem intuitive to point to aspects of Japanese culture that would accentuate the importance of collaboration, team work and “company as family”-like sentiments. John himself evoked this category as an explanatory mechanism for the professor's affinity for him, saying that in a Japanese workplace, more than in North America, “it's not enough just to be good. You have to remember that in East Asian philosophy you're not an individual, that you belong to a community.”

Throughout the dissertation, I highlight how foreign scientists employ the category of “Japanese culture” as an explanatory framework for their fortunes and misfortunes in the workplace, but what matter in John's utterance here are his attempts to incorporate himself in supposedly local forms of support networks, suggesting that they are more care-based than those in the West. Trust and loyalty, John mused, are more important than “being good” at one's immediate job. He thus positioned himself as belonging to the institutionally maintained and perpetuated “dependent security” that Thomas Rohlen's ethnographic account of a Japanese bank (1974) described more than forty years ago. At the same time, having experienced the

corporate world in millennial Japan, John was careful to note that he found qualities like trust and loyalty to be appreciated mostly in public institutions, such as the one where he worked, thus highlighting the dissonance between what he considered to be “Japanese” forms of relationality, and the limited scope within which he actually experienced them:

The private company, uh, that’s different. [...] They look at you sheerly in terms of value. They give you X, and you must bring back X plus. [...] They work you harder, harder, and harder, till you become a minus. And then they get rid of you. [...] They see you as a resource. No different than oil or gas. And once that [resource] is exhausted, they’ll get it from somewhere else. I don’t like that. And *I would never want to work in an environment like that. That is becoming commonplace around the world.* And while I’m critical of Japan... *for all the stress in Japan, I’ve never had this fear – at least working at the university – that I’ll be unemployed.* OK, that can happen if the grant money runs out... there’s the risk of that. But I don’t think anyone has walked up to me and said: “Prove your value. What have you done? Prove that the salary you’re earning doesn’t cost us money.” [...] I don’t get grants, so I don’t bring in money. I might have a hard time proving to somebody that I actually bring in something. And in corporate world, you have to do that. [...] *I work to live. I don’t sit there and think about my value.*

John perceived work at a Japanese public institution as a respite or even refuge from discourses and practices that value human beings and natural resources on the same terms of exploitability. Iterating refusal to think of his own value, John echoes Michel Feher’s critique that “insofar as our condition is that of human capital in a neoliberal environment, our main purpose is not so much to profit from our accumulated potential as to constantly value or appreciate ourselves — or at least prevent our own depreciation” (2009: 27). Explicitly acknowledging that he is not the “best” person for the job in terms of formal qualifications and that only the specific circumstances in Japan allowed him to acquire the current position, John evoked refusal to participate in a system where his potential and profitability would be measured,

and where he would have to engage in the process of, to borrow from Feher (2009), self-appreciation and speculation with his human capital.

However, it was because of his relationship with his professor that John was able to iterate his resistance to the neoliberal condition and claim his affinity to the liberal ideal of non-confluence of one's material and spiritual worth. John understood that not everyone at the institute shared the same vision of his work as the professor. As John himself put it when I inquired further about his responsibilities at the organization: "It's an odd situation. It's secondary to everyone else. Nobody else sees me as that valuable." Even though he firmly believed that his job of making the institute more appealing for potential foreign recruits was important, and assumed that the professor shared this belief, John was struggling to convince other people at the organization of his mission and continued to think of new ways to persuade them to participate in his outreach projects. However, what mattered for John's continued employment, was his relationship with the professor. The support network John has, is not the institutional one that was provided for permanent employees in Japanese companies during the period of high economic growth in exchange for limitless hours dedicated to work. Rather, it relies on the affective disposition of being "liked."

While John's case may seem extraordinary, the importance of being "liked" was a theme that emerged in the narratives of several of my interlocutors. Andrej, a bioscientist at a well-known and highly regarded institution in the Kansai region often pondered as to why his contract had been renewed despite his lack of quantifiable research output. For the first two years, his salary as a postdoctoral researcher at the institute was covered by a Japanese government grant for which he had successfully applied. However, Andrej had not been satisfied with the results of his experiments and did not publish during that time. He was, however, extremely conscientious

and dedicated to his work, often spending weekend hours at the lab. As most researchers I talked to at his institute, Andrej emphasized the pressure to publish in as high ranking journals as possible to retain one's employment at the organization and the organization's standing in the global hierarchy of scientific production. He often wondered to what lengths some of his colleagues would be ready to go to reach this goal. Thus, Andrej was pleasantly surprised when his professor offered to extend his contract at the institute when the two years of his postdoctoral research were over. At the end of the day, Andrej decided, his likeability had been an important factor. Andrej mocked himself, saying that the professor had chosen to keep him around not for his research skills or the significance of his project, but because he was perceived as cute and amusing. Andrej became even more convinced of the importance of his likeability after he had been one of very few researchers invited to an exclusive two-day trip with the professor. While he thoroughly enjoyed the trip, Andrej could find no other explanation as to why he had been invited other than the perception that the professor simply liked to have him around.

That being "liked" is closely related to being "cared for" was even more explicitly stated by Natalya. A scientist from Russia, Natalya was in her late twenties and had recently received her doctoral degree from an institution in the Kansai region at the time we met. She had arrived in Japan on a MEXT scholarship five years earlier. Natalya had aimed to earn her PhD in three years, but, as she had met her future husband while in Japan and given birth to their child as well, finishing her degree took a longer time than she had initially expected. As a result, Natalya could not complete all the degree requirements in the period covered by the scholarship; however, her professor stepped in to provide financial support from his laboratory funds for her to finish her studies. When we met for our first conversation, I was struck by Natalya's assertion in the very beginning of our meeting that she felt cared for in her lab. When I conversationally inquired

about her experiences at her institution, she said: “I didn’t expect care... My friends don’t agree. They say their professors don’t care about them. I think mine does.” As our conversation unfolded, it became clear that even though there were times when Natalya struggled to interpret her professor’s actions and was hurt by them, she was certain that he had her best interests at heart. While acknowledging that her gender may have played a role in how her work was perceived by the professor (I turn to the question of gender in Chapter 5), she never ceased to refer to him as “passionate and very supportive,” and fundamentally “a very nice guy.” After all, as Natalya pointed out to me, “care” was not something that many people in her circle of friends felt at their respective workplaces.

3.3 SITUATING CARE AND DEPENDENCY

In her recent essay on the hierarchical practices of scientific production at the Max Planck Society in Germany, Vita Peacock argues that “the ubiquity of temporary contracts” at the organization reflects more than “a generic neoliberal precariatization of the academy”; rather, she suggests, “precarity of employment in the Max Planck Society is the contemporary expression of dependencies initiated by a far older tradition of intellectual leadership” (2016: 1). Peacock thus highlights the importance of analyzing research organizations as cultural spaces with their own ideals, their own particular ways of engendering these convictions as well as the practices through which contemporary processes and values are incorporated in long-existing systems of scientific production. Focusing on the inherently hierarchical relationships between the highly independent directors of research centers and the researchers working with or, more precisely, underneath them, Peacock argues that “[t]he Society’s discourse of autonomy is as

pronounced a discourse of dependency as it is of autonomy, only that the latter is never explicitly articulated” (2016: 17). The type of dependency that the discourse and its related practices enable, she suggests, is highly individualized and requires careful personal negotiations to achieve positive outcomes (for instance, extension of one’s contract). While joining James Ferguson’s (2013) call to de-pathologize dependency in contemporary thought, Peacock is careful to emphasize that “[d]ependency’s relative desirability [...] becomes contingent upon the quality of this interpersonal encounter” (2016: 18). That is, individualized dependency is a site of active action, especially if it is to yield welcome results.

Individualized dependency, as well as the historically formed and institutionally maintained hierarchy that makes the autonomy-dependency coupling possible and that Peacock observes at the Max Planck Society, may also resonate with the experiences of many of my interlocutors. However, the context within which they take place is different. In his discussion on the changing forms of sociality and labor in South Africa, James Ferguson suggests that, following the shift from a people-scarce labor system to a people-surplus one, seeking dependence enables particular social personhood (2013). Rather than treating it as a remnant from the days of “colonial paternalism,” search for dependence on those better off should be understood as an attempt to transform “asocial inequality” into a social one in the context of worsening labor conditions. As Ferguson points out, “[t]o be dependent on someone is to be able to make at least some limited claims on him or her” (2013: 231). While they explore the potential of dependence in very disparate circumstances, both Ferguson and Peacock highlight the notion that “the emancipatory liberal mind” (Ferguson 2013: 223) perceives independence and autonomy as paramount values, even as fostering relationships of dependence may remain the only recourse for those with less or no power.

In contrast, discourses of dependence – as well as providing and receiving care in order to form and maintain relationships of dependence – have been highly influential ideological formations in postwar Japan. For instance, from early 1970s, one of the best-selling texts in the *nihonjinron* (“theories of Japanese uniqueness”) genre was Doi Takeo’s book *Anatomy of Dependence* (1971), in which Doi describes *amae* (“passive dependence”) as a basic concept through which to gain access to the Japanese psyche and understand Japanese social organization. Relationships of dependence, Doi argued, were deeply ingrained in Japanese life – home, school, work, and the nation as a whole. Care – described in terms of the mother-child bond and therefore supposed to be intimate – was what maintained this relationship not only in the family, but also the workplace. As Amy Borowoy argues, “the ideological success of the language of *amae* is linked to the way in which the word captured key elements of postwar social organization – specifically the way in which nurturance came to be an element (both ideological and real) of the way in which the state and its constituent institutions enfranchised and mobilized Japanese citizens” (2005: 22).

The workplace – the corporation as a large scale employer in particular – came to be perceived as the provider of “total care” (Borowoy 2005: 81). Job stability, predictable promotion timeline, benefits for the whole family, as well as company sponsored training and entertainment were provided for permanent employees in return for their loyalty, dedication to the corporation and acceptance of at times exploitative work conditions. The company was thus supposed to be more than a money-making enterprise; it was presumed to be a family-like unit that serves as a mentoring system and provides “moral kinds of education” (Rohlen 1974: 210) as well. The “moral” aspect of one’s employment was framed in the language of mutual responsibility, dependence and care.

As anthropologists have shown in various employment contexts (Allison 1994; Kondo 1990; Ogasawara 1998; Roberts 1994; Rohlen 1974), the Japanese workplace in the postwar era was wrought with tensions, inequalities and institutionalized forms of exclusion. In the context of scientific production, Samuel Coleman has described the detrimental effects of the hierarchical structure of Japanese research organizations during the period, suggesting that despite the comparative job security scientists enjoyed at the time, professional and personal relationships were often strained due to, among other issues, the extreme power heads of laboratories had over the lives of their subordinates (1999). However, the discursive power of institutional dependence and care has been so strong that the post-bubble Japanese employment system and social organization has often been defined in terms of the *loss* of care. Neoliberal reforms that came in the footsteps of economic recession, focused on the construction of a new type of employee subjectivity – self-reliant and risk-taking – and the propagation of employment relationships within which the “total care” of the postwar years had no place. The reforms left increasing numbers of people in highly precarious position. Thus, contemporary Japan has been understood a place where the institutional and family relationships that used to provide care are disintegrating, resulting in *muen shakai* – “relationless society” (Allison 2015). That is, Japan is conceived of as a place where care used to exist, but no longer does. As Anne Allison powerfully suggests, contemporary Japan is characterized by “care deficit”: it is “a capitalist society where reserves of care have dried up” (2009: 92; see also Allison 2013).

In her call to politicize and democratize care, Joan Tronto suggests that care, caring responsibilities, and care work are gendered and racialized practices that have been continuously marginalized in the US society (2013). Care, she argues, while “a fundamental feature of collective human life” (2013: 11), has been considered less important than other activities, such

as production or protection. While Tronto explores what she refers to as the care deficit in American society, there is something qualitatively different in her approach to the issue than in Allison's conceptualization of care deficit in contemporary Japan. Tronto suggests that "[t]he care deficit refers to the incapacities in advanced countries to find enough care workers to meet the needs of people, their children, elderly parents and relatives, and infirm family members" (2013: 17). She calls for democratization of care relationships, suggesting that care-related activities have consistently been marginalized and undervalued in the United States. What Allison argues in the context of Japan, however, is that "as the economy has weakened and transformed in the direction of immaterialization, the ability – and willingness – to care for its members has dissolved, certainly for the corporation and increasingly for the family as well" (2009: 102). Care deficit in Japan, she seems to suggest, is also highly affective. Evocations of dissolution of care relationships, "a collective sense of a dwindling soul" (Allison 2013: 40) point to the affective power postwar discourses of care and dependence have. The very framework of loss suggests that care may involve more than ascertaining the physical well-being of those in need; rather, it is – at least ideologically – a form of relationality that maintains and perpetuates the family, the workplace, the state. When dissolution of care is decried, these narratives assume that properly and truly meaningful care relationships once used to exist in postwar Japan.

Care – even defined by its loss or, quite possibly, precisely because of the sense of loss – constitutes a value and a particular frame of reference within which to understand professional and personal relationships. For instance, in her essay on women's photography in recessionary Japan Gabriella Lukacs argues that male critics tended to interpret women's artwork as commitment to social reproduction and attempts to regenerate lost communities (2015c: 172). As

she points out, “this interpretation [...] has more to say about the ways in which critics envisioned a national future beyond the recession than about women’s photography itself” (Lukas 2015c: 172). Highly gendered, the male critics’ stance reflects both their desire for expressions of normative femininity, and nostalgia for the forms of social reproduction that characterized Japanese middle class during the period of high economic growth. Despite their explicit and irony-filled claims otherwise, women photographers are perceived as caring for repairing, maintaining and reproducing family ties. The gendered nature of care is, of course, explicit in these nostalgic musings and reflects the gendered division of labor in postwar Japan that relegated middle class women to home-making and taking care of their husbands, children and in-laws (Borowoy 2005). However, these nostalgic interpretations also point to the existence of an assumption that unadulterated care and care relationships once used to exist. Evocations of metaphors such as “company as family” highlight the discursive and ideological power the notions of care and dependence held also in the sphere of professional relationships; that is, if women used to represent care in the domestic sphere, men were defined by institutional care as well.

While Peacock’s theorization of “precarity as dependence” at the Max Planck Society (2016) constitutes a call for untangling networks of responsibility and responsible reciprocity, I want to highlight the importance of active *affective* action involved in remaining “liked,” being “taken care of” and maintaining personal relationships of individualized dependence. I want to suggest that, among my interlocutors, professional networks are constituted by inherently personal relationships. Maintenance of positive dependence relationships may mean the difference between feeling the sense of security at work, and being out of work. What matters here is that John explains the importance of dependence relationships and care networks in his

work life as a culturally Japanese phenomenon. What evocations of “Japanese” forms of dependence in this context do, however, is serve as a twofold phantom frame of reference. That is, on the one hand, it serves as an explanatory framework for a social support system that has become unattainable to increasing numbers of Japanese workers, yet benefits John partially due to Japan’s “internationalization” policies that facilitated his arrival in the country and rendered his employment desirable by his institution and his professor. On the other hand, it disguises the increasing importance of maintaining positive dependence relationships with one’s superiors on a more global scale.

Like John’s narrative related earlier, Hugh’s story brings out these tensions. Hugh, in his mid-thirties, had been living in Japan for a bit less than ten years by the time we met. He was a well-established and highly regarded researcher at a renowned institution in his field. At the same time, Hugh’s field of research and the work his lab provided for the institute were often seen as supplementary to the research that most other groups in the organization did. That is, Hugh constantly had to negotiate the position of his group in the institute and navigate the work of his lab to engage in research other than doing certain experiments and providing data for the other labs. This process, as he laughingly put it, involved hoping that he would not annoy “powerful people” in the institute. Hugh had, however, learnt how to avoid confrontations at his previous institution in Japan where he had received his PhD and also worked for a few years. Relating a moment of realization of how he had come to establish a positive professional and personal relationship with the professor at his previous lab, Hugh said:

And then I realized... that’s what *aaaaaalll* those years of meetings when sometimes I was just falling asleep [were about]... don’t let it out, you know, don’t show your impatience in a meeting. Then go drink coffee with your friends and [makes a growling noise]. [...] In reality, I can be quite angry and frustrated. I’m not really a calm guy. But I tend to shut

that off when I'm with people who... you know. *Then I realized, oh, that's kinda Japanese! So in some ways I do fit in here.*

That restraint in meetings had been significant in establishing positive relationships, Hugh realized when he was offered an associate professor position at his present institution. He described the conversations that had taken place between his previous boss and the head of his current institute as an example of “the boys club Japan networking thing.” According to Hugh, the two men had had a meeting in which the responsibility for him had been transferred from one to the other. In his description of the conversation, Hugh evoked the notion that because the former professor had “taken care of” him for several years during his doctoral studies and as an employee of the institute, he was in a position to negotiate on Hugh’s behalf. This negotiation, as Hugh’s narrative highlighted, was two-sided: on the one hand, it was a reiteration of the notion that “you can’t just take someone and then drop them”; on the other hand, it bound Hugh in multiple networks of dependence, as it had been the former professor who had made the new boss “promise to take care of” Hugh and, as a result, would keep reminding Hugh of that.

While Hugh interpreted these practices as specifically Japanese conventions of organizing professional and personal relationships, his continuing narrative unsettled this notion.

When I inquired him about his experiences at the previous institute, Hugh said:

I actually joined that [lab] to do my PhD, so in a way, he [the former professor] sort of charmed me into it. You know, I look back and realize that it could’ve been so many different things, but... *they really took care of me.* [...] They turned up the red carpet for me. They gave me a great desk. All my friends, all the people who were even higher than me, didn’t have a desk. A guest of honor! [...] The professor was really kind. He knew how to talk to foreign people. [...] *As a foreigner, if you’re careful – and many guys do screw it up – if you’re careful, you get a bit shielded.*

What Hugh’s story highlights, is the foreign researchers’ unsettled and at times unsettling search for a framework in which to locate and understand their experiences at their host institutions. Hugh’s remark that keeping his dissatisfaction with group meetings to himself and

thus “fitting in” at his institute allowed him to enter inherently Japanese networks of professional relationships suggests that being “taken care of” is an extension of highly local relationships of dependence. At the same time, Hugh’s impression that as a foreigner he had been “shielded” and “taken care of” in ways that differ from the experiences of his colleagues, points to a more particular network of care – one that prioritizes establishing relationships of individualized dependence with members of specific groups of employees, that is, foreign researchers. To add another layer, Hugh’s acknowledgment that “many guys” are “are not careful” and “screw up” the opportunities of being “taken care of” emphasizes the highly personalized angle of the relationships of dependence.

3.4 LABORING FOR STABILITY

What Hugh’s narrative – along with those of John, Andrej, Natalya and others – also highlights, however, is that foreign scientists employ a highly particular and contextual configuration of emotional, affective, and interpretive labor to remain “liked,” “taken care of” and, when it comes down to it, employed. On the one hand, social theorists and science and technology studies scholars have long highlighted the work of scientists that lies outside the seemingly immediate forms of scientific production. They suggest that researchers invest time and effort in acquisition of scientific capital and maintenance of the scientific habitus (Bourdieu 2004; see also 1975; 1988), as well as accumulation of credit (Latour & Woolgar 1979; see also Mirowski 2004 for a subtly ironic take on the novel forms scientific credit assumes under the neoliberal condition). They have also shown the importance of articulation work – planning and coordination at various levels – that is necessary for scientific production to ensue (Fujimura 1987), and highlighted the

boundary work that takes place in order to demarcate what practices lie inside or outside the sphere of science (Gieryn 1999).

On the other hand, feminist scholars have equally long emphasized the employee's emotional investments that are required by increasing numbers and types of jobs. In her seminal work *The Managed Heart*, Arlie Hochschild argues that emotional labor “requires one to induce or suppress feeling in order to sustain the outward countenance that produces the proper state of mind in others” (2003 [1983]: 7). For Hochschild, emotional labor is an unremunerated part of service work that requires service providers to make impersonal transactions seem more personal: as the workers are working for a fixed wage, they are not making independent profit from their emotional labor. As Hochschild puts it, “[t]hey are not selling themselves, they are selling the company. The *idea* of selling themselves helps them only in selling the company they work for” (2013 [1983]: 109; emphasis in original). More recently, affective labor, defined by Michael Hardt as a form of immaterial labor that draws on human contact and interaction and produces “social networks, forms of community, biopower” (1999: 96), has gained considerable attention of scholars working on the issues of new labor regimes and practices around the world. While emotional labor and affective labor may at times be conflated, Gabriella Lukacs highlights the necessity to maintain the distinction between the two, as they draw differently on the subjectivity of the worker (2015a: 395-396). She suggests the use of emotional labor to “designate the component of service and care work (both in the material mode, as well as in the immaterial mode) that entails the investment of emotions in the interest of amplifying the effects of the labor expended.” Affective labor, by contrast, draws on unalienable part of subjectivity: constituting extension of emotional labor and crucial to creative industries, affective labor

“designates a productive process in which subjectivity is invested in its entirety to produce affective commodities and relationships” (Lukacs 2015a: 395).

The distinction is crucial in the context of my discussion of the experiences of foreign scientists in Japanese research institutions. Unlike for those engaging in affective labor – or attempting to transform their emotional labor into affective one (Lukacs 2015b) – emotional labor is not a source of profit for the worker. It is, however, an increasingly indispensable part of work, and, I suggest, it does not escape the labor practices of scientists either. The aspect of this work that I want to highlight, however, is the emotional labor researchers in my study invest in maintaining positive professional and personal relationships with their employers: heads of institutions and group leaders. While emotional labor usually tends to be conceived as work that employees invest in, as Hochschild suggests, “selling the company” by appeasing customers and making clients feel comfortable, the people-surplus labor regimes (Ferguson 2013; Xiang 2008) make it imperative to entice, captivate and entertain the employer as well. Having the sense of being “liked” and “taken care of” are returns for the expressive and repressive emotional labor (Hoang 2010; 2015) that many of my interlocutors invest in managing relationships with their bosses.

What is particular to employer-oriented management of emotions under the conditions of people-surplus labor regimes, I want to suggest, is that it involves what David Graeber has named “interpretive labor” as well. Concerned with the seemingly mundane and “boring” nature of structural violence and structural inequality, Graeber argues that “[m]uch of the everyday business of social life [...] consists in trying to decipher other’s motives in perceptions” (2015: 67). What makes these moments interpretive labor, he suggests, is that maintenance of social ties and “endlessly trying to see the world from others’ points of view” are processes and practices

that are not distributed equally; after all, “those relying on the fear of force are not obliged to engage in a lot of interpretive labor, and thus, generally, they do not” (201: 67). As Graeber points out, interpretative labor – and the practices of imagination that it involves – explains how “while those on the bottom of a social ladder spend a great deal of time imagining the perspectives of, and genuinely caring about, those on the top, it almost never happens the other way around” (2015: 72). That is, more so than emotional labor alone, a configuration of emotional, affective and interpretive labor accounts for the fact that the work that early career researchers invest in maintaining positive relationships with their higher-ups is enmeshed in structures of hierarchy.

To provide an example of this highly mindful configuration, I return to the account of Natalya, the Russian researcher whose narrative I related earlier. At the time we met, Natalya was still confused and upset by a decision her PhD advisor had made a few months earlier: the professor had asked her to “work more” on her PhD thesis and postpone graduation, even though he was familiar with her work, had encouraged Natalya to defend her dissertation, and it had been approved by other committee members. During our conversation, Natalya was struggling to understand and explain his reasoning. Was it because the professor had not expected the other committee members to approve her dissertation? Was a failed defense a rite of passage that everyone in her lab had to go through? Was the professor concerned about the feelings of the male students who were more advanced in the program but had not graduated yet? While Natalya had no answers to these questions, she invested interpretive labor in trying to understand and imagine her PhD advisor’s stance – the motivation that he had chosen not to disclose. She did most of her interpretive labor in conversations with her partner and friends. At the same time, Natalya also invested great emotional labor in not showing how painful the professor’s decision

had been. She had taken a day off from work not to explode in front of the advisor. She had refused to cry in his presence, and kept going on with her project even though she considered the situation to be unfair and had no clear interpretation of the professor's decision.

At times, my research participants had to navigate different networks of relationships at the workplace and be highly strategic in their emotional and interpretive labor investments. That was the case for Daniel. Daniel, having received his PhD in his home country in Southern Europe, had arrived in Japan as a postdoctoral researcher around eight years before we met for our conversations. He was one of the very few of my interlocutors who had been interested in aspects of Japanese culture, such as martial arts and animation, before arriving in the country. Upon receiving his PhD in a bioscience field, Daniel had applied for postdoctoral research positions in various institutions in Japan. He was accepted to work at a lab in his discipline in a major university in the Kansai region and spent six years as a postdoctoral researcher there. Talking about the first few years at the lab, Daniel spoke of various frustrations: he felt there was not enough guidance for his work, he did not feel independent enough to pursue his own projects, and at times he contemplated whether he wanted to stay in academic research at all. Over time, however, things changed. Daniel received a Japanese government grant to support his postdoctoral research position, his Japanese language skills improved and, having resolved his – as he called it – “identity problem,” he decided to do everything in his powers to remain in research work. Observing the structure of his lab (still organized along the lines of the *kōza* system), however, Daniel realized that he would not have too many chances of promotion there. Daniel was also unsure whether the grant from which he received his salary would continue, and, as he had gotten married and had a child by that time, he started looking for other options in the region. During this time, Daniel applied for a position at his current institution as well, but was

hesitant to accept it because he felt strong dislike for the leader of the group in which he would be working. At the end, because he was offered an assistant professor position and enticed with the promise of becoming a group leader himself one day, Daniel accepted the job. What he had not expected, however, was that one of his responsibilities would involve very close interactions with the group leader; the institute, in Daniel's interpretation, had hired him partially because of the expectation that the two men might get along for one reason or another and thus improve the lab environment and the group's research progress. While Daniel claimed to be "strong enough to deal with the boss," he also professed to be incredibly emotionally tired because of his encounters with the man. The lab technician had left her job because of the group leader; one of the postdoctoral researchers had not produced any meaningful results in several years partly because of harassment he experienced on daily basis, and the other researcher in the lab apparently disliked the man as much as Daniel had come to despise him. Daniel felt he had to juggle all the responsibilities involved in doing research and applying for grants and, on top of that, invest incredible emotion work in appeasing, constraining or ignoring his immediate boss. As Daniel put it, "what is conditioning my career here is my interaction with this person." His emotions toward the man varied from anger to pity, and, over the course of our coffee meetings, Daniel spoke of the different ways of attempting to negate his "toxic" presence. More than any other topic, Daniel's boss was the focus of our conversations.

Importantly, what kept Daniel going, however, was the hope that one day he would have his own lab somewhere. Daniel was investing emotional labor both into being, as he put it, "in charge" of the group leader, and, because of this unwritten responsibility, also negotiating his own role and future with the institute's higher-ups. While Daniel was careful not to explain his emotional investments as practices that were specific to Japan and suggested that "toxic" people

like his boss could be found anywhere, he assumed that one of the reasons for his employment went beyond his research, publishing or grant writing skills. Daniel presumed that his job partially depended upon the success he would have with “managing” his group leader and the laboratory environment, thus highlighting the highly personalized and individualized networks or relationships, including those of dependence and care, that many foreign researchers have to recognize, accept and engage with in order to remain employed and employable.

Of course, scientists provide customer or outwards-oriented emotional, affective and interpretive labor as well. Several of my interlocutors mentioned the proper conduct that was expected of them during external grant reviews and meetings with MEXT officials or industry representatives: accounting for the use of taxpayers’ money or requests for more funding have to take a particular form, and drinking parties will need to be attended even if one does not particularly desire to do so. Bill, one of my interviewees, related how he had asked other scientists at his institute to perform emotional labor to attract positive domestic and international attention to their organization. As he was trying to revamp the website of the institute, he had engaged a professional photographer to take pictures of the organization’s employees in bright lights and “attractive” settings. Bill specifically asked the researchers to smile in the pictures in order to appear more open and welcoming: smiles were meant to reflect the “international” aura the institute was supposed to have – or at least project. While Bill did not speak of his request as a form of emotional labor, he did consider smiling in pictures to be part of the job and was satisfied (and slightly disappointed at the same time) that only one scientist had refused to do that. Ironically, it had been one of the most powerful professors at the institute, highlighting the fact that emotional labor is not distributed equally.

The labor scientists invest in maintaining positive relationships with superiors extend outside the immediate workplace as well. In her discussion on the importance of after-work socialization among Japanese company male employees, Anne Allison has argued that entertainment spaces such as hostess clubs encourage “both a release *from* work and an extension of commitment *to* work” (1994: 36; emphasis in original). Time spent with one’s superiors and colleagues outside work is incorporated in the world of work; it is supposed to create a stronger bond among colleagues and increase employees’ dedication to their workplace. Demands of this form of socialization did not escape foreign researchers in Japanese institutions either. Thus, Roberto, a postdoctoral researcher from southern Europe, could not refuse the offer of his professor to visit restaurants, bars and hostess clubs almost every week – and sometimes more than once a week – to entertain his lab’s industry collaborators. Working at a small lab that for some time had few other employees apart from him, Roberto felt that he had to bear the brunt of entertaining his professor’s associates. Unlike the scientists belonging to larger research groups who often spoke of ignoring or rejecting invitations to group after-work *nomikai* (drinking parties), Roberto was under pressure to attend most of them. Even though he despised *shōchū* (a distilled Japanese beverage, usually made from rice, barley or sweet potato), Roberto had to partake in it, as *shōchū* was the professor’s drink of choice. Even though he felt uncomfortable discussing his personal life or preferences in potential romantic partners, like some of Anne Allison’s interlocutors several decades ago (1994), Roberto was under pressure to participate in discussions on women and intimacy in order to, as he saw it, entertain and bond with his professor’s collaborators to ensure smooth working relationships not only with them, but also the professor himself. It was not only Roberto’s dedication to his lab’s research projects, but also the emotion work that he invested in after-work socialization that made him particularly concerned

and upset at moments when he thought his efforts were not appreciated. When, for political reasons, the professor attempted to add someone else's name as an author on a paper that Roberto had written, or when the professor tried to lower Roberto's salary at the end of his first contract, Roberto questioned the worth of the investments he had made attending the group outings.

What interests me here more, however, is the notion that proper management of emotions and imaginative interpretations of the superior's attitudes, as outlined in the narratives of my interlocutors above, may mean the difference between being out of work and having a sense of safety at work. In addition, I want to suggest that the language of dependence and care, that takes the form of references to Japanese practices and values, disguise the emotional, affective and interpretive labor in which scientists engage at their workplaces. Learning not to let out frustration about the length or content of lab meetings, as Hugh's story suggests, is an important aspect of emotion management that tends to be rewarded if performed properly. For those of my interlocutors who were enrolled in PhD programs or had obtained their PhDs in Japanese institutions and continued to work there as well, learning to hide or make light, inoffensive fun of their discontent with lab meetings was a major form of repressive emotional labor. While they often found the meetings too long and pointless and joked about sleeping through them (or observing others falling asleep), many researchers quickly understood that showing discontent would have consequences.

For some, the discontent of their bosses and colleagues higher in the lab and institutional hierarchy was of little concern, as they often conceived of their stay in Japan – at least in the beginning – as an interim period between different and seemingly more important stages in their lives. Some, like John, thought of their contracts in Japan as a time frame within which they

should decide whether they want to remain in academic research, look for jobs in the industry, or quit research work at all. Others spoke of their positions in Japanese labs as research jobs they had accepted because other options had failed. There were also researchers who had been encouraged to gain “international experience” in order to successfully apply for more permanent positions in their home countries. PhD students, on the other hand, often spoke of plans to return to their home countries or go “somewhere else” upon graduation, by which they usually meant North America or Western Europe.

While, as I highlight in Chapter 6, over time researchers begin to question the temporality of their stay and learn to navigate the scientific labor market in Japan on different terms in order to remain in the country, many do not consider Japan as a permanent place to live and work upon their arrival in the country. These considerations, as well as personal traits, upbringing and forms of socialization at previous institutions affect the extent to which researchers are invested in nurturing relationships with their group leaders and other higher-ups. However, most of my interlocutors gradually learned the specific emotional, affective, and interpretive labor practices necessary to maintain positive relationships with their bosses, and came to interpret these practices as specifically Japanese forms of behavior. For instance, Antoine, a bioscientist, recounted the only altercation he had had with his former professor and PhD advisor the following way:

That was probably at the point when I was frustrated. With my life in Japan. And it probably reflected in my behavior in the lab during group meetings and so on. And [...] I wanted to give a presentation at a conference. And I applied for... they pay your travel expenses, right. And I had to get a letter of recommendation from him. And he wrote that. And I didn't thank him clear enough probably. [Laughter.] And one day I was called to his room. And he said – in Japanese: *saikin hijō ni karada ga tatte imasu*. [That is,] “I'm very angry with you.” And I had no idea why. And then he explained why. [Laughter.] I had to admit... that my

behavior wasn't... [Pause] *Probably in Europe it would have been still acceptable.* [Laughter.] *But not here.*

Like Hugh's former professor, Antoine's PhD advisor had helped him find his current position and shown other, as Antoine put it, "moments of kindness." At the same time, the support and care had come when Antoine had altered his behavior to conduct himself and express gratitude in particular ways. Rather than explaining the professor's discontent in terms of his personality, or referring to behavioral restrictions imposed by the institutional framework, or even evoking universal standards of professional behavior that Antoine may have failed to meet, Antoine interpreted this conversation as an encounter that was inherently Japanese and had intrinsically Japanese consequences. It does not necessarily mean that Antoine began to avoid showing his discontent. He laughingly admitted a penchant for complaining and, in his words, annoying colleagues with his gripes about Japanese right wing politicians and others aspects of life in Japan that he found frustrating. Rather, what matters here is the emotion work that Antoine learned to invest in conveying his attitude in a way that he thought would be acceptable to Japanese superiors in particular.

4.0 THE FOREIGN AT WORK

There came a point during many of our interviews when my interlocutors paused while recounting their experiences and told me that they had other “foreigners” in mind that might be interested in talking to me and whose experiences in Japan I might find illuminating. At these moments, I was happy to see that the “snowball sampling” method was working better than I had expected and my interviewees were willing to extend the courtesy and introduce to me to their colleagues and friends. What occurred to me as I was transcribing the interviews and reading my notes, however, was that the “foreigner” concept was used by my research participants in a much more restricting and at the same time more fluid sense than a mere reference to a person who, as Merriam-Webster would have you think, was “coming from or belonging to a different place or country” other than Japan. The Japanese term *gaijin* was often evoked along that of the “foreigner,” and, it seemed to me as I was listening to the recordings of our conversations later on, that there was a tacit assumption that I would surely know who and what exactly the category included and, equally importantly, excluded – also because there was apparently something about my own persona that deemed me as being “in.” While I could not quite pinpoint what it was that deemed me *inclusively* “foreign” among the young researchers I interviewed, I relied on this peculiar form of belonging to forge my own professional and personal networks – and oftentimes both. “Foreigner” – or *gaijin* – was where it was at.

Gaijin seems to be one of the first words in Japanese that many foreign residents of the country learn. While *gaijin* may be explained simply as a shorter version of *gaikokujin* (“a person from another country”), many people consider that it has the more nuanced connotation of an “outside person.” That is, some would say that *gaijin* is used to mark the difference between Japanese people and those who are not from Japan and, therefore, are radically different and do not belong there. The concept of *gaijin* is constantly discussed and contested, and, at the same time, used as a self-referent by Japan’s foreign residents. For instance, from time to time new videos, articles and blog posts appear in which both Japanese and non-Japanese people discuss the question of whether the term *gaijin* is insulting and even racist, or whether it’s a simple word to refer to somebody who is visibly not Japanese. The visibility of *gaijin* is another point of contention, raising the question of who exactly counts as *gaijin* of who is excluded from the category. Thus, a recent post in the satire blog The Rising Wasabi discussed – tongue in cheek, of course – the necessity for a “Asian-*gaijin* Awareness day,” as “Asian *gaijins* in Japan face the harsh stigma of being regarded as regular citizens” (The Rising Wasabi 2016). While ambivalent about being called *gaijin* by Japanese people, many foreign residents of the country refer to themselves as *gaijin* to emphasize the difference between themselves and the Japanese. Thus, a simple *Google* search will reveal a bunch of blogs and other websites with *gaijin* in the title that are aimed at telling about the personal experiences of the creator of the website or give advice to newcomers to Japan. As a self-referent, the term *gaijin* is also used to explain why a foreigner does not or should not act in accordance with Japanese expectations for polite behavior. For instance, some consider that small transgressions – such as speaking on the cell phone on public transport – should be excused and tolerated if the offender is visibly a *gaijin*.

While “foreigner” and *gaijin* were the most frequent self-referents among my interlocutors during my fieldwork, I noticed that a discursive shift occurred after I had left Japan and engaged in conversations about my project with other social scientists in North American and European contexts. Influenced by my research participants’ self-identification, I referred to my interlocutors as “foreign scientists” or, at times, simply as “foreigners.” (This notion and self-description is reflected in the dissertation title as well.) As I did so, I was often met with understanding nods and follow-up questions that seemingly easily shifted from the “foreigner” category that my interlocutors and I had used to that of the “expat.” In these conversations, the young researchers whose uncertainty-permeated lives I was trying to capture and highlight were suddenly deemed expatriates. Yet again I was left wondering about the seemingly innocent labels: what exactly was it about the way I discussed the mobile lives of young doctoral students, postdoctoral researchers or assistant professors – and, importantly, their professional and personal experiences in Japan in particular – that allowed for their inclusion in the expatriate category? What had made it easy for me to accept and use the category of “foreigner” – even as I was aware of the ambivalent ways it was used by my interlocutors – yet become more reluctant when hearing the “expat” label?

4.1 WHO ARE THE EXPATS? WHO ARE THE FOREIGNERS?

Before examining the category of “foreigner” as it is used by my interlocutors, what I want to ask in the context of this chapter is the following: what work gets done when somebody is named an expatriate? And, more importantly, what assumptions about skilled migrants are challenged and reworked when a mobile young professional – like most of my research participants – rejects

the term “expatriate” as a form of self-identification and claims belonging to a different way of labeling of the self and others?

As Johnine Leonard (2010), among other scholars (see, for instance, Fechter 2007; Fechter & Walsh 2010), points out, the term “expatriate” is a baggage-laden one. It evokes privilege and, most importantly, a particular form of mobile and classed whiteness. The term “expatriate” tends to connote “not only *the West*, as it is most commonly used in reference to people living overseas who originate from Europe, North America and the Antipodes; but also *privilege* – as it is usually used to refer to well paid members of the professional middle classes; and *whiteness*, as it is rare to hear the term used in relation to people who are, for example, natives of the Caribbean or South Asia” (Leonard 2010: 2; emphasis in original). Even as mobility and place-making patterns of various groups of migrant workers intertwine and complicate attempts to draw clear-cut boundaries between them (Knowles & Harper 2009), and as the face of privileged transnational mobility (Birtchnell & Caletrio 2013; Ong 1999) and un-privileged belonging (Constable 2014; Vora 2013) transforms, the notion of the expatriate identity as that of white, professional and privilege-infused holds sway in various contexts. For instance, as the author of a recent *Wall Street Journal* blog post muses,

[I]t’s strange to hear some people in Hong Kong described as expats, but not others. Anyone with roots in a Western country is considered an expat. But the distinction is muddled among Hong Kong’s deeply entrenched Southeast Asian community. Filipino domestic helpers are just guests, even if they’ve been here for decades. Mandarin-speaking mainland Chinese are rarely regarded as expats, but they are certainly not locals. By contrast, a native Cantonese speaker earns an automatic right to belong, even if she spent most of her life in Sydney or Vancouver. (DeWolf 2014)

While acknowledging the existence of policies that render the paths available to foreign domestic workers quite different from those of his own, the author of the blog post states that “Hong Kong will extend all of its rights and protections” to him in a few years, leading to the

conclusion that “[m]aybe that’s what an expat is today: not a foreigner, not a sojourner, but someone who lives between worlds” (DeWolf 2014).

A response article in *The Guardian* (Koutonin 2015), however, reiterates the notion that even “living between worlds” is labeled differently depending on *who* does the living. As the author of the short article forcefully argues,

Africans are immigrants. Arabs are immigrants. Asians are immigrants. However, Europeans are expats because they can’t be at the same level as other ethnicities. They are superior. Immigrants is a term set aside for ‘inferior races’. (Koutonin 2015)

In a tongue in cheek call to his presumed audience – African professionals in Europe – he concludes: “If you see those ‘expats’ in Africa, call them immigrants like everyone else. If that hurts their white superiority, they can jump in the air and stay there” (Koutonin 2015). Intriguingly, apart from the question of who gets called an expatriate and what kind of people tend to be excluded from the category, two other issues emerge from the feisty blog post. First, in the process of labeling someone “expatriate” or “immigrant,” it matters not only who does the moving around the world, but *where* the movement takes him or her as well. Second, the question of who does the work of labeling needs to be unpacked. That is, do transnationally mobile professionals consider themselves expats, and, if so, under what conditions?

To address the first issue, it is crucial to remember that expatriate mobility practices are deeply enmeshed in colonial or postcolonial encounters, continuities and discontinuities, tales of coming to terms with one’s situational and relational privilege, as well as the transformations of privilege in the wake of socio-economic and geopolitical changes (Farrer 2010; Fechter 2007; Hindman 2013; Hoang 2015; Yeoh & Willis 2005; Knowles & Harper 2009). It is not merely the kind of people that travel for work across borders (white professionals) and not only the kind of labor (“skilled”) they do that renders them more “expatriate” than others; it is also the kind of

places they travel to that mark them as such. That is, for instance, why do middle class Swedish women in the United States or Spain are not generally referred to as “expatriates,” while those accompanying their partners to job posts in Singapore get labeled as “expatriate wives” (Lundstrom 2014)? One answer may lie in the (gradually disappearing) existence of a particular type of corporate employment that renders some workers “lifetime expatriates” on bountiful “expatriate packages”; such packages include compensations, allowances and support systems that enable the employee and his – or, in rare cases, her – family to move around the globe with relative ease, unencumbered by financial worries (Hindman 2013; see also Kurotani 2005). An “expatriate wife,” then, might be considered a “trailing spouse” who accompanies her husband to wherever his corporate work takes him and whose main responsibility comes to be home-making and highly formalized and restrictive socializing with other women in her position (Fechter 2007: 37-57). However, such an explanation would be only partial and leave out the colonial legacies and postcolonial realities that enable the presence of European, North American and Australian corporate workers in places like Hong Kong and Shanghai, Singapore and Indonesia in the first place. The narrative of the expatriate as a particular type of globe-trotting employee with a wide safety net and various financial benefits for his nuclear family does not fully explain why even social scientists refer more easily to skilled Western migrants in particular as expatriates – especially when considering their movements in the context of former colonies, influence spheres, or the developing world in general.

This brings me to the second issue raised earlier: the question of who does the labeling and renders somebody an expatriate, a “lifestyle migrant” (Benson & O’Reilly 2009), a “sojourner” (Mizukami 2007), a “cosmopolitan” (Hannerz 2004, 2007), a skilled migrant, or any other category that aims to capture the transnational mobility patterns of, on the one hand,

professionals and, on the other hand, white migrants. In many cases, as Anne-Meike Fechter and Katie Walsh point out in the introduction of their volume on expatriate mobility, interlocutors themselves employ the “expatriate” category to refer to and discuss their migration practices (2010: 1199; see also Lehmann 2014). In other cases, however, it is less clear who does the labeling. Including somebody in the expatriate category – and excluding others from it – may reflect researcher’s own assumptions about the kind of people and the type of mobility practices that are encompassed by the concept.

For instance, do *Doctors Without Borders* employees providing medical aid around the world necessarily consider themselves expatriates, or is this how Peter Redfield (2012, 2013) perceives them? Even as he traces the complex and painful ways in which “economy encounter[s] moral economy” (Redfield 2012: 377) in every step of humanitarian aid work and points out the lack of career security that aid workers experience, he deems them “materially heavy and socially light” (Redfield 2012: 360) – and therefore expatriates. In his work on foreign correspondents, Ulf Hannerz is more ambivalent about what he calls the “expatriate condition” (2004: 91). Tracing his interlocutors’ careers as “movements within a global landscape of news” (2004: 40), Hannerz first considers the extent to which foreign correspondents may fit the “cosmopolitan” category before concluding that most of them meet the definition he has of the expatriate: “people not strongly rooted in the territory where they reside for a period, often more affluent than the locals, engaging in a lifestyle and a pattern of social contacts which somehow does not quite belong there, in large part in the company of others of more or less their own kind” (2007: 305). While this description of expatriates highlights their situational privilege in terms of financial rewards, it leaves out the notion that “their own kind” most likely refers not only to other foreign correspondents, but those – at least among Hannerz’s interlocutors –

originally from North American and European contexts that enabled their comparatively advantageous belonging to global news organizations in the first place. While Hannerz's interviewees refer to their career stages as those of, for instance, an "Africa correspondent" or a "South East Asia correspondent," the narrative leaves untold whether they consider themselves expatriates as well.

Similarly, it remains unclear whether the middle class Japanese housewives in Sawa Kurotani's study (2005, 2007) necessarily consider themselves expatriates. In her discussion of the implications that *kaigai chūzai* – that is, assignment of experienced workers and managers to foreign locations – has on the life of Japanese corporate employee families in the United States, Kurotani refers to her interlocutors as "expatriate wives." She examines the highly gendered ways in which Japanese women are made responsible for ensuring their partners' corporate success and protecting the integrity of their children's "Japaneseness" (2007: 18). Importantly, however, Kurotani's work also traces the changes in the *kaigai chūzai* patterns of Japanese corporate employees: that is, the shift from defining foreign assignments as "prestige" to considering them "routine," as corporations attempt to cut costs and remain competitive in the global marketplace. Such transformations and the loss of financial and career benefits accompanying it, Kurotani points out, affect the lives of the women accompanying their husbands to overseas assignments and complicate their efforts to ensure their children's national belonging to Japan. The question that comes to mind, then, is whether the "expatriate" category equally captures the experiences of those women who enjoyed the "prestige" conditions of corporate assignments to the United States, and those Japanese housewives whose husbands' overseas work is deemed "routine."

Katherine Hindman addresses this question in her study on what she calls “expatria” in Kathmandu (2013). Tracing the shift from “package” or “career expatriates” to “new style expatriates” (that is, flexible and subcontracted development workers and engineers), as well as highlighting the growing presence of young travelers in Nepal, Hindman examines the “expatriate” concept and what might be considered the expatriate way of life. She suggests that “[i]n Kathmandu in the 1990s, who was an expatriate seemed self-evident. It was an explicit term of self-reference— expatriates were who other expatriates identified them to be” (Hindman 2013: 8). Expatriates were defined by the “expatriate package” that implied their employers’ investment in training the worker to be a lifetime overseas employee and guaranteed various benefits to the worker’s whole family as a compensation for continuous displacement. That is, it was a particular labor structure that enabled specific forms of socializing and relating to others and the Other; importantly, as Hindman suggests, “expatria” of the late twentieth century reflected not only the labor that the employees do, but also “the work done to make them expatriates” (2013: 16).

However, the face of contemporary overseas workers has changed. Corporate focus on flexible and limited-term employment, as well as the rhetoric of the ease of global travel have engendered a shift from “the family wage policies of older forms of expatriate employment to an expectation of short-term, independent contractors” that, in turn, changes the face of the expatriate community, “produces an influx of single white men [...] in Kathmandu” (Hindman 2013: 21), and transforms the social fabric of expatria. The loss of privileges formerly associated with expatriate life, as well as the institutional exclusion of women and non-white workers that accompanies this loss (Hindman 2013: 121-142), yet again raises the question of whether contemporary transnationally mobile workers – even if comparatively privileged migrants – are

to be considered expatriates. After all, it is not only the work they do that has changed, but also, to borrow from Hindman, the work done to create a particular kind of transnationally mobile employee.

That social scientists struggle with ways of defining and labeling transnationally mobile professionals points to the fact that the term “expatriate” does not capture the realities – or the diversity – of the experiences of skilled migrants. What I want to suggest here is that the ambivalence as to who gets to count as an expatriate reflects the gradual loss of privilege – or being excluded from privileged movements that guarantee job security from the beginning – that transnationally mobile skilled workers experience. That young professionals taking positions away from home – like the early career researchers in my study – do not consider themselves expats and employ different categories to refer to themselves and people they consider similar, suggests that their lifestyles and ways of relating to their “host” country greatly differ from those of “career expatriates.” The preference for the “foreigner” category, accompanied by frequent references to the *gaijin* concept, I suggest, reflects precisely the acknowledgment of the twofold lack of privilege that young international researchers experience in Japan as workers.

First, the global rhetoric and national policies that encourage transnational movements of researchers engender the kind of science worker that takes highly individualized and contract-like global mobility for granted. Unlike the “career expatriates” of Hindman’s study who expected and were expected to go to new destinations following corporate directions, the young scientists I met during my study were expected to follow job openings – and, in most cases, to do it without much regard for their personal circumstances. If “career expatriates” were almost expected to accept corporate involvement in framing their domestic lives in specific ways (for instance, rendering women home-makers and guaranteeing enrollment in international schools

for children), the management of the young scientists' attachments is their own responsibility. To borrow from Kurotani (2007), once global movements for skilled work have come to be considered "routine," both financial privileges and expectations that the overseas assignment would lead to career advancement disappear. A two-year position in Japan is just another job: despite the comparatively high salary, it comes neither with special awards and compensations, nor provides any guarantees for a higher position afterwards.

Second, despite Anne-Meike Fechter and Katie Walsh's assessment that "contemporary 'expatriates', or citizens of 'Western' nation-states who are involved in temporary migration processes to destinations outside 'the West'" are the "modern-day equivalents" of European colonials and settlers (2010: 1197), this claim misses the mark in the context of Japan and its engagements with what may be called "the West." Japan has borne the burden of oriental longings and exotization, admiration and reverence, fear and disgust, and scholars of Japan have tried to trace and examine these attitudes for many decades. Different periods of Japanese history have witnessed the presence of Dutch and Russian sailors, German engineers, British missionaries, doctors and scientists, American troops, Chinese, Korean and Filipino workers, as well as temporary stays of travelers and tourists from all over the world. Despite having had strained relationships with Western governments since the nineteenth century, Japan escaped the fate of the colonized that many regions around the world endured and, in turn, emerged as a colonial power itself in early twentieth century. The aftermath of the Second World War rendered Japan one of the strongest allies of the United States in the region, leading critics of the geopolitical arrangement between the two countries to decry Japan's "childlike" state in the relationship.

4.2 THE “FOREIGN” MEETS THE “JAPANESE”: MATERIALITIES AND COMMUNICATION

Despite the economic recession and stagnation in more recent decades, the country’s economic growth in the second part of the twentieth century renders Japan a wealthy country by global standards and makes it difficult to think of contemporary Japan’s foreign-born residents – including the comparatively privileged ones – as modern-day equivalents of colonial settlers. At the same time, as those recruited to both advance scientific innovation in Japan and raise its international appeal, my interlocutors held more complicated attitudes toward the flows of resources they saw invested in scientific production. These ambivalent attitudes, I want to suggest, are reflected in the “foreigner” category that young international researchers employ as a form of self-identification and, importantly, differentiation.

“Money” was often the first answer I received when inquiring what my research participants considered to be different in Japan in comparison to their previous places of work or studies. However, despite the reverence for the material and financial assets that they saw circulating around them, my interlocutors were often baffled by or disagreed with specific administrative, logistic or managerial aspects of how the resources were distributed. The prevalent sentiments are clearly illuminated in an informal conversation I had with two young bioscientists. Both men had arrived in Japan from their respective countries in Central Europe a bit more than a year before we met for the conversation. They were both post-doctoral researchers in different labs in the Kansai region and would sometimes meet up for a drink to talk about work and other experiences in Japan. This particular time I was invited along and, sipping tea, listened to their stories. One of the men strongly suspected that his boss had chosen to mistake the “noise” of the lab equipment for valid data and had therefore sent graduate

students in the lab on a wild goose chase for information that did not exist. He felt that the students were not allowed to think; all they had to do was to “produce results.” Exasperated, our conversation partner exclaimed: “The world thinks that Japan is great at science! But all they have is money.” It had made him realize, he continued, that there were “very good labs at home” with very good leaders; what they did not have, however, was money. Money, state of the art equipment, and the pressure to publish, both men agreed, were the “Japanese” elements at their places of work. A few moments later, his friend returned to his earlier complaint about the situation in his lab and sighed: “I’ll go home in a year, I have money... but I don’t want my name in fake papers.” Half tongue in cheek, he stated that felt “responsible for science”: in his lab, in Japan, and in general. After all, he remarked, “if such things [as the fake data] are published, science will lose the trust it now has.” That is, money, while a very important factor, was not the only reason he remained in his lab and attempted to counteract his professor’s “beliefs” and help the graduate students there.

Most of my interlocutors observed and commented on the resources that went into building and maintaining infrastructures, as well as procuring expensive lab equipment. These resources, however, are not distributed equally. Recent decades have witnessed the construction and establishment of several new research centers that are large, spacious, and, quite ironically, difficult to reach due to their location in the outskirts of the closest city or town. Whether leaving from Osaka or Tokyo, I would spend hours and hours on rapid train, then local train, and finally on bus in order to visit these places. On these journeys, Sharon Traweek’s (2012) tracing of the development of Tsukuba Science City always came to mind, as I wondered whether the still new and shiny researcher centers I was trying to reach were going to follow the example of Tsukuba and with time come to be more integrated in the larger infrastructure of the city they were closest

to – or whether they were meant to remain isolated. Quiet and spacious, they seem unpopulated. A Japanese scientist I met at one of these centers mentioned that for several months he had been the only person on his floor; to fight the boredom and have someone to talk to, he laughingly said, he had gotten married. Another one, a single mother, told me that she had almost quit work, as the bus schedule did not allow her to pick up her child from daycare on time.

However, for most research organizations, especially those built on university campuses in larger cities, space can become a point of contention. While doctoral students and postdoctoral researchers would often complain about cramped lab spaces, those in higher ranks had to negotiate access to these infrastructures. One of my interlocutors, receiver of a prestigious research grant, recounted how he had had to negotiate the use of space in his institute. The institute had just been built and he had just received the grant. He was trying to hire a postdoctoral researcher to work on his project, but the process was taking time:

It was actually pretty hard. I had to defend my space. At the same time, it was completely empty. There was nobody here, and there was nothing here. And I was saying, yeaaaah... and I put a lot of cardboard boxes. Sometimes empty. [laugh]

As he was a principal investigator at the institute and was building his own team, this researcher was trying to negotiate space with colleagues in the environment of what he felt was great competition. For him, the competition for space was directly related to scientific competition within which it was easy for him to lose, as the research that was done at his lab was not the main focus of the institute as a whole.

A colleague of this researcher was in a similar position: a principal investigator supervising groups of people whose research activities were aimed at assisting other labs in the institute. A North American in his forties, he was considered very savvy at leading his team and directing its activities in a way that rendered his group indispensable to the more “important”

labs at the research center. He also had good relationships with the head of the institute, as well as other people in power. Thus, it had come as a huge unpleasant surprise that one day a person from one of the “main” labs had arrived in his office with a measuring tape and, without asking, had begun taking measurements in order to claim the space as his. My interlocutor was fuming when recounting the event: even though he did not lose his office space at the end, the potential shifts in the material arrangements signaled to him the possibility of negative changes in his relationships with higher-ups as well.

What I want to emphasize here, however, is that while my interlocutors often bemoaned, mocked or were angered by some of the specific ways funding was distributed and even when they did not benefit directly from the flows of resources, they witnessed the circulation of money around them on daily basis – and perceived the abundance of it as a defining feature of Japan in general and scientific production in Japan in particular. Money, as my research participants saw it, was not an issue; what was problematic, their stories seemed to suggest, were the institutional practices and human relationships enabling and disabling the flows of resources.

In his article on laboratory work in Ghana, Damien Droney (2014) discusses the meaning of the casual and ironic jokes about “African science” that his research participants employed in conversations about their workplace. Situating these statements in the context of Ghanaian modernity and the (failed) hopes that had engendered scientific production in postcolonial Ghana in the first place, Droney argues that ‘scientific vocations’ and their practitioners in Ghana have undergone a shift in more recent years. That is, he suggests, “African scientists have moved from seeing themselves and their work as part of the project of *African science*—where the building of scientific institutions, the training of African scientists, and the practice of scientific research are representative of the promises of African modernity—to instead seeing themselves as scientists

working in the context of Africa” (Droney 2014: 365; emphasis in original). Such a shift implies seeing Ghana as a site of lack, rendering laboratories to be defined through what they were supposed to have but did not and therefore “appeared as obstacles to careers in science that might flourish elsewhere” (Droney 2014: 372). Importantly, as Droney argues, the lack that Ghanaian scientists joke about is a referent to the state of equipment and the (not so) smooth running of the available technologies: “What made science ‘African science’ was tied to infrastructural, material, and technological particularities of place, especially its shoddy quality, not to the scientist” (2014: 378).

Like the young laboratory workers of Droney’s study who used the material infrastructure of the laboratory to make claims about the conditions of their work, the early career researchers of my project situate themselves as scientists in the context of the material resources surrounding them as well. However, unlike Ghanaian scientists who define “African science” by its technological lack, young foreign researchers in Japan characterize “Japanese science” both by its wealth and by what they perceive as irrational distribution of it – ironically, too rigid and too arbitrary at the same time. Importantly – and I will return to this question later – they see themselves as scientists, that is, as professionals working in the context of Japan. As a result, the young international researchers have to navigate both the material infrastructures and personal networks that engender, manage and facilitate the circulation of resources, thus negotiating their own place within the system.

Even though young foreign researchers are often not on the receiving end of the circulation of money directly,⁵ they witness the various ways in which, as one of them put it,

⁵ Doctoral students – even those on Japanese government scholarships – often experience the need to work a few hours at *eikaiwa* (English language conversation) schools, teach English privately (even if English was not their native language), or find other part-time jobs in order to cover their living expenses in Japan.

“obscene amounts of money” are channeled into setting up and maintaining infrastructures, creating contradictory practices of engagement with the infrastructures, as well as the research personnel and the administrative apparatus managing them. For instance, most of my interlocutors learned to take for granted that their institutions would cover conference travel costs. What was contested through complaints, however, were the procedures that enabled and disabled particular forms of travel. For instance, my research participants were baffled by the specific procedures that had to be followed to get reimbursed for conference travel; they were annoyed that their institutions would require them to follow the procedures even when there were cheaper and more convenient options available. Thus, during informal conversations, both doctoral students and postdoctoral researchers shared stories of what they considered unreasonable requirements: for instance, not being allowed to stay at the conference location for a day longer than the conference period or, in case of two conferences within the span of a few days, having to return to Japan between the meetings, even though it would be easier to fly from one conference city to the other directly. Sometimes, they noticed that their supervisors would choose to send international students and researchers to conferences overseas, while Japanese students were more encouraged to attend conferences in Japan. Other times, they realized that their professors were engaged in negotiations with other established figures in the field, adding their names to the students’ conference papers. A postdoctoral researcher in a small lab recounted a story of his supervisor removing the name of one author and adding the name of a colleague to whom he owed a favor on the paper that my interlocutor had written and was preparing to present at a conference; much to his shock, the scholar whose name had been removed publicly berated my interlocutor before his presentation, decried his lack of loyalty and later on sent out damaging emails to his superiors both in his home country and Japan. While the

researcher recounting this event did not necessarily think that the removed scholar should have been listed among the authors of the article in the first place, he felt betrayed by his professor who had forced him to deal with the unpleasant situation alone.

Like conference travel, the use of lab equipment, as well as the institutional and personal relationships that facilitated it were a point of conversations and contention among my research participants. For instance, there were stories circulating among some biochemistry doctoral students in a lab in the Kansai region about a student who had had to drop out of the program because her professor had not allowed her to use the equipment necessary to conduct the experiments needed for her research project. In the same peer group, there was a student who thought that his advisor was punishing him and trying to jeopardize his graduation by not allowing the purchase of a chemical substance necessary for his experiments. Others felt that they could not make the best use of lab equipment – and gain the techniques associated with mastering it. As Karl, postdoctoral researcher in a bioscience lab recounted,

In terms of monetary resources, I have a lot. I don't know what it's like for other groups, but with my grant... wow. [Laughs] Having said that, though, access to equipment [is] very limited. Access to special instruments and things I'm used to, very limited here. [...] I find it very difficult to find contacts with people, to go and use other instruments, you know, in other buildings. Virtually impossible. Whereas in my university [in Australia] instruments were pooled, shared university-wide. You know, if I needed something from the Physics Department... here, ugh, it's really difficult. So you sorta make do as you go. Instead of doing something in a day, you spend three, four weeks running around. [Laughs]

As Karl's narrative suggests, while “money” is not an issue, and neither is equipment in abstract sense, access to the resources necessary for research is limited. Infrastructures and equipment are not available by default; rather, they become available through careful negotiations within a specific institutional and interpersonal framework. Karl, like many other

researchers in my study found it difficult to find somebody to teach him new techniques or how to use the available equipment; however, while he tended to explain it in terms of a mixture between the institutional setting and the presence of a particularly “toxic” associate professor in his, others, like Natalya considered lack of access to the technological resources and skill sets of other labs a specifically Japanese feature.

Natalya, a doctoral student from Russia, had learned throughout her PhD program that collaboration, including asking for help from other labs, was not done in Japan. Her professor, she suggested, was “very Japanese.” Natalya’s explanation for not having a technician in her lab was not of the financial kind; rather, she suggested, her professor was of the opinion that all the preparations need to be done by the researcher him- or herself. As a result, much to Natalya’s chagrin, he was also quite averse to collaborations with other labs and scientists. For her, not only collaborations but even conversations with other researchers were lacking, thus slowing down her work progress, and she perceived this absence as specifically Japanese. Speaking of her professor, Natalya said:

He never said, let’s do this with these guys or with those guys... it always comes up when I talk to visiting professors from the US or Europe. They’ll say: [mock cute voice] Why don’t you do this with these guys? Why don’t you collaborate? Why don’t you just send it to them, and they’ll give you the answer... why don’t you do this...

She continued:

Some people say that they are extraordinary Japanese. When they emphasize this, it means that it’s not a very typical case. I talked to another professor here in Osaka; he’s a really big head. And very collaborative. He says, OK, we work with these guys and those guys, and everyone. [...] And people from his lab said he’s not very Japanese. *Even though he is Japanese, he doesn’t behave like Japanese. That makes me feel that it’s very typical for [the] Japanese to live... isolated, I don’t know.* (Emphasis added)

Natalya, like many of my interlocutors, thought of isolation – both in terms of research and everyday life – as a Japanese characteristic. That is, Natalya explained the lack of access to resources and knowledge in terms of Japanese society at large; for her, what stood in opposition to this lack and represented availability was the international or the “foreign” connection – either in the form of North American or European scholars, or a Japanese scientist who is not “really Japanese.”

A similar theme emerged in my conversation with Diana and Abed. Diana, from a country in South America, and Abed, from a state in the Middle East, had met in Japan several years earlier when they had both arrived in Japan to begin their doctoral studies. They had fallen in love and gotten married. When we met, Diana and Abed had both finished their PhD programs and were looking for jobs while raising their child. The future was uncertain, but they were both sure they did not want to remain in Japan. For Abed in particular, Japan represented a space of exclusion. Research institutions and research practices served as an extension of the social exclusion that Diana and Abed felt and perceived as being manifested through a particular engagement with technologies. The “foreign” connection, then, like in Natalya’s narrative, represented openness, communication and accessibility to resources that stood in stark contrast to what my interlocutors interpreted as “Japanese” practices. The way Diana discusses an associate professor in her lab that had studied and worked in the United States and had recently returned to Japan serves as an example of this attitude:

He’s the only true researcher in the lab. He’s doing experiments. And if he doesn’t know something, he’ll try to do new things. Good for the lab in general. It’s the kind of environment that I missed the first years [here], I think. Just him being there helped me a lot. The lab has changed. More people speak English. And these guys [with research experience abroad], you know, I can ask them things. They’re receptive to this kind of question and answer [format]. Especially this guy. He’s really good. And he always has answers.

What marks the associate professor of Diana's story as a "true researcher," is not only the fact that he's "doing experiments," but also his power at changing the environment at her lab to seem more open and, as a result, enable access to information that was not available before. Importantly, what Diana considered to be the reason for the shift in the lab environment was the researcher's work experience in the United States, that is, his "foreign" connection.

While this attitude was quite prevalent, some of my interlocutors, however, wondered whether their attempts to access the material and knowledge resources had been denied because they themselves were not Japanese. Abed, for instance, saw being – constantly, as he snickered – given the worst table at the restaurant as representing the same kind of exclusion as being pushed out of a group picture at his research center. As he angrily put it:

Somebody say something! The photographer is taking the picture, and the professors are looking... I don't understand! And then I just stood in the corner in the picture. I still look funny there. Everyone standing straight... [...] Even the bastard besides me didn't move! [...] And the professors, nobody said anything.

Abed perceived this situation as an attempt of exclusion on behalf of his Japanese colleagues, manifested through a specific use of technologies, space and human bodies. When, as a follow-up, I asked Abed if he felt "pushed out of the picture" in his lab as well, he continued:

No, at least they have some respect. They would still make space for me. But you know... they have this *sempai-kōhai* thing when the *kōhai* have to kiss your feet – that thing still exists in my lab. But you can notice it when one of them doesn't like it. [...] *If you see he doesn't treat you as a sempai, you know he doesn't like foreigners.* [...] If he doesn't bow or open the door for you... *it's not that important but it means he doesn't like you.* (Emphasis added)

Abed employs Japanese concepts and practices associated with them – such as the physical and verbal respect that junior members of a group are supposed to show their seniors – to describe his experience of exclusion. It is his knowledge of the cultural framework – the

sempai-kōhai relationship which he generally considers outdated – that allows Abed to perceive certain actions as dismissive towards him. Importantly, as the slight shift in Abed’s narrative suggests, he interprets disrespect towards him as dislike for “foreigners” in general. Thus, for Abed, a colleague’s refusal to teach him a new technique or explain how to use some lab equipment is a materially mediated attempt at exclusion of not only him as a researcher, but also as a “foreigner.”

As the narratives that I have outlined suggest, stories of denied access to material resources and scientific knowledge are closely tied to personal relationships that my interlocutors saw as institutionalized – at the level of the research organization where they worked, at the level of Japanese culture and society, or, most often, both. Importantly, what my interlocutors’ stories highlight is the importance of the management and facilitation of information flows in transforming *theoretically* available material resources, infrastructures and technologies into practically accessible ones. In her discussion on (gendered) phatic labor in Cairo (2010), Julia Elyachar proposes that “communicative channels,” built on and through the labor of communication and socialization, should also be considered infrastructures, even if they are less visible and tangible than roads, bridges and pipes. For Elyachar, “communicative channels” constitute infrastructures because they enable mapping and building, maintaining and tapping into localized, yet fluid networks not only of human relationships, but also quite physical structures, and transnationally informed economic systems. As Elyachar shows in the context of her Cairo neighborhood, “communicative channels” may facilitate reputation-building, construction of a network of small businesses, and, more recently, the influx of global capital. That is, “communicative channels” enable flows of information.

Through their focus on the *lack* of access to research equipment, techniques and knowledge that should be easily available in different circumstances, the narratives of my interlocutors highlight the interconnectedness of “communicative channels” and physical infrastructures. The absence of a seamless intertwinement of the two renders visible the labor that goes into gaining access to the “communicative channels” that would, in turn, make technologies and other resources available. At the same time, my interlocutors’ narratives also express the experience of the lack as that of a simplified divide between “Japanese” and “foreign” practices, rendering the “Japanese” side a site of exclusion and isolation, and lauding the “foreign” one as that of communication and openness.

Thus, communication and lack thereof was a central theme in a conversation I had with Johannes and Elaine, the following exchange took place:

E: Sometimes I feel like... *Westerners*, we’re like... hmm. In my lab where I work, there are several collaborations with people from Europe and America. Every time there are these kinds of guests, we will be invited to take part. But I think it’s because *they* need some people to make the conversation. Like, if you speak with Japanese [colleagues]... they have no idea what’s going on in the world, about politics...

J: They can’t hold a conversation.

E: That’s why I think *foreigners* in the lab are quite convenient because they will be there to converse with the guests.

J: But I think it’s even something *they* don’t know! Even if they do, they simply don’t know how to entertain a conversation.

E: So it’s good to have some Westerners because they will entertain the conversation. So the Japanese people don’t have to talk much. (Emphasis added.)

Several themes emerge in this exchange that were shared by many of my research participants. First, like outlined earlier, there is a notion that the communicative channels of Japanese researchers and, by proxy, those of Japanese people in general, are too complicated or

simply lacking. This lack, then, renders international scientists the enablers of communication and collaboration with “Europe and America” – despite the fact that, as in this case, collaboration between institutions and researchers was in place before my interlocutors arrived at their respective labs. At the same time, it also makes young international researchers in Japanese labs question their purpose at the institutions where they were employed. Are they meant to contribute to the research taking place at their institutions, or, as sarcastically suggested by some of my interlocutors, are they hired to correct English in their colleagues’ papers, smooth conversations with international collaborators, show “foreign” faces when government officials are visiting, and be the “token foreigners” of their workplaces?

The second theme that emerges in the above exchange is the conflation of “foreign” and “Western” which, in turn, stands in opposition to “Japanese” or, as unwittingly highlighted in the exchange between Johannes and Elaine, “them.” Many of my interlocutors felt left out of the communicative channels that they perceived as enabling information flows between their Japanese colleagues. Not being part of group emails or noticing that they – as international members of their labs – were the only people not invited to group lunch meetings were the most common complaints. While some of my interlocutors dismissed these instances as proof that, as one of my research participants exclaimed, “their English is so bad, and they have no communication skills,” others, like Johannes, were deeply bothered by these situations. They questioned the reasons for the perceived exclusion and found answers in what they thought of as “Japanese culture.” As Johannes suggested,

It’s actually *culturally* different the way *they* work and *we* work. And it’s difficult for foreigners to understand that when they first come. They don’t know much about Japanese culture. It’s easy to get frustrated and even angry coz you feel like you’re giving to them, and they’re not giving anything back. And it should be – I give you something, and in exchange you give me something... It feels like a one-way thing. But I

believe it's entirely a cultural thing. [...] It doesn't prevent me from feeling... in a certain way like that. (Emphasis added.)

As tempting as it may be to analyze Johannes' thoughts from the gift exchange perspective (Mauss 2011 [1954]), what I want to highlight here are the discursive mechanisms that allow for personal experiences to be explained through the lens of culture to the extent that clearly differentiated "us" (that is, "foreigners") and "them" (that is, Japanese researchers and, by proxy, Japanese people in general) emerge. While the personal experiences described vary, and so do the cultural explanations offered to account for them, these explanations do a particular kind of work. First, they draw a line between "us, the foreigners" and "them, the Japanese." Second, they enable the circulation of stories that many international researchers share with one another. Like *nihonjinron* (theories of Japanese uniqueness) discourses (Befu 2001; Yoshino 1992), references to "Japanese culture" or "Japanese society" serve as an explanatory mechanism for a wide variety of personal and institutional practices, glossing over their incongruities, complexities and inequalities within.

4.3 NETWORKING THE FOREIGN: INCLUSIONS AND EXCLUSIONS

When Natalya says that there are no discussions in her lab because "Japanese people are shy," when Abed argues that it is impossible to have friendly relationships with Japanese colleagues because "everybody for them is a *sempai* or *kōhai*, and they cannot make friends with either of those," and when Laura suggests that "Japanese people are afraid of nature," their narratives provide streams for another kind of communicative channel. This communicative channel maintains and facilitates the fluid networks of foreign researchers in Japan, enabling and

legitimizing a sense of belonging to a loose community of people who are trying to make sense of their positionality in both Japanese and transnational labor regimes.

In his work on late socialism, Alexei Yurchak proposes the concept of “deterritorialized public” to describe and explain the ways of relating to others that were enabled by the Soviet authoritative discursive regime (2006: 117). Discussing the loose membership to groups of *svoi* (roughly translatable as us/ours), Yurchak emphasizes that *svoi* were not construed in opposition to the state; they neither supported, nor opposed the authoritative regime. Rather, Yurchak suggests, “[t]hese publics of *svoi* were often organized in tightly knit networks of friends and strangers who shared some interest, occupation, or discourse. Such networks can be described as tight milieus that were never completely bounded and isolated, and were always in the process of emergence and change, with an open-ended and somewhat shifting membership” (2006: 131-2).

Despite the obvious differences, like *svoi* in Yurchak’s account, the deterritorialized public of international researchers in Japan is also constituted by small groups of friends. While the membership of these groups change over time, as some young scientists depart from Japan at the end of their doctoral studies or postdoctoral research years, and others arrive and take their place, the collectivities themselves remain in place. They are often focused around international student dormitories or other housing for international researchers. As most doctoral students are required to devote at least a few months to intensive Japanese language studies, Japanese language classes is another context within which young researchers meet and, along finding their first objects of conversations and complaints, build friendships and other kinds of affinities. (Among others, Abed and Diana, as well as Natalya and her husband had met during one such Japanese language course.) Thus, for instance, many of my interlocutors recounted how they had found the class to be mismanaged and highly lacking, and, in our conversations, interpreted this

shortcoming not as an institutional or personal inadequacy, but rather as a poignantly Japanese failure – or conspiracy. Complaining about the language class served the function of both building one’s circle of friends and, at the same time, establishing the difference between the “foreign” and the “Japanese.” Physical infrastructures come to be entangled in the communicative ones and vice versa, as sites of language study, work and even rest both facilitate the emergence of the deterritorialized public of international researchers, and, at the same time, turn into a topic for differentiating conversations. For instance, specific pubs and bars, often (though not exclusively) run by owners originally from Europe, the Middle East, and other parts of the world are frequently visited by fluid groups of young researchers, along with other “foreigners.” In such places, young scientists, such as my interlocutors, seek out and rely on networks of other “foreigners” not only to hang out and socialize, but also to carve out spaces to temporarily mark and designate as their own. They thus attempt to reverse the patterns of belonging and displacement that they perceive to lie beyond the walls of their chosen places of entertainment, those “in” and those who remain in the margins.

Ironically, like Yurchak’s groups of *svoi*, the collectivities of young international scientists in Japan are enabled by the state and its science policies. Both physical infrastructures, such as dormitory buildings for international researchers specifically, as well as communicative ones, such as Japanese language classes, that serve as sites of affinity-building are enabled by Japanese government policies and, consequently, their material enactment. At the same time, the deterritorialized public of international researchers in Japan is also a result of transnational scientific labor regimes that promote global movements of scientists and researchers, and position them as mobile knowledge workers rather than labor migrants. As I aim to show throughout this text, Japan had not been a dream destination for most of my interlocutors – that

is, scholars who work in natural sciences, rather than humanities and social sciences. Those who had arrived as doctoral students, in most cases took advantage of Japanese government scholarships that supported a three-year PhD course, in addition to two years of master's studies and at least several months of language acquisition. They told me that they had applied for scholarships in other countries as well, but their applications to do research in Japan had been the successful ones. Similarly, for postdoctoral researchers, Japan was also only one of the potential destinations, and in most cases it was the remuneration or a failed job search in Europe or North America that prompted the young researchers to take positions in Japanese scientific organizations. Of course, some of my interlocutors were truly enthusiastic about the opportunity to reside in Japan and, for instance, take martial arts classes or be closer to the centers of *anime* and *manga* production. Most of them, however, described the move as “it just happened that I came to Japan.”

The fluid deterritorialized public that young international researchers create in Japan is a response to national and transnational policies, yet, as in the case of *svoi*, the members of this public is neither actively supporting or denouncing the regime that made it possible. The “foreignness” of the young scientists, however, does have its boundaries – even if fluid and shifting. The first one is that of occupational boundaries. English language teachers working comparatively low paid jobs at private English conversation schools, while seemingly foreign enough, were seldom included in the category of “foreigners” that science workers had construed for themselves. Like James Farrer’s (2010) “expat” interlocutors bemoaning the influx of “low quality” foreigners in Shanghai, my research participants often emphasized the difference between themselves and “English teachers.” The young researchers of my study drew loose alliances along occupational lines and took pride in their work, as it had enabled their

transnational movements – even if not always necessarily desired. The main asset of English teachers – their English language skills – is not that easily transferable or highly valuable in other global labor market contexts; in addition, they are often seen as aimless, drifting and drinking too much (Nagy 2015). As a result, even if the exclusion was not necessarily conscious, English teachers seldom gained entrance into the collectivities of young scientists and, if they did, they soon drifted out – or, like people who created “too much drama” in a collectivity, stopped being invited to group gatherings. The “foreignness” that young international scientists construe is that of professional belonging and expectations invested in their career paths.

The other ambivalent boundary of the “foreign” category among my interlocutors is that of regional, national and ethnic belonging. First, this boundary renders my interlocutors’ Chinese and Korean colleagues into “not-quite-foreign-enough” researchers that are supposed to understand Japanese practices better and be aligned with them more efficiently. As Abed angrily exclaimed, recounting an upsetting past experience with a Korean boss, “they’re all the same!” A similar remark was made to me by an interlocutor-friend from Central Europe. I had introduced him to a Chinese researcher, also an interlocutor and a friend. After a while he inquired about her, and I responded that I had not talked to her much recently. Even though it had been my fault that we had not kept in touch, my friend’s immediate response was to place the responsibility for the loss of contact on the notion that Japanese and Chinese people acted the same way in disregarding friendships over time.

Second, this form of boundary-making places Japan strictly within the category of “Asia,” erasing differences between Japanese science and migration policies and the institutional practices of countries like China and South Korea, and conflating the category of the “foreign” with that of the “West.” Thus, as I was discussing future plans with Johannes, he told me that

both he and his wife were both looking for jobs and that the process could take them anywhere in the world “except Asia.” When I inquired about this pronouncement, Johannes responded:

There is a problem with... you can say, the additional problem with Japan and probably the case with other Asian countries... if you're not from that country, you don't have a future in that country. Even though they're trying to accept foreigners... it's still a xenophobic country.

Recounting situations in which he had felt discriminated in Japan, Johannes suggested that he would encounter similar situations in other countries in “Asia” as well, as he considered them culturally similar in their attitudes toward “foreigners” like himself and his family. Channeling the arguments of scholars like Edwards Said (1978; see also Sakai 2000), this sentiment of Johannes and other foreign researchers (though by no means all) highlights one of the ways the category of Asia is constructed by those who claim belonging to the West and the modernity associated with it – while simultaneously being employed by institutions in places they themselves may consider “the Rest.” After all, as literary scholar Naoki Sakai has observantly suggested in his discussion on the West-Asia binary, in the West-centered dominated popular imaginary, “[t]he same person or thing cannot be Western and Asian at the same” (2000: 792).

The third point is directly related to the first two. The boundary-making along regional lines allows for those who do not come from Europe and North America to identify with these places and the ideals – both scientific and cultural – that they represent. In the above-mentioned text by Naoki Sakai, the author offers a poignant observation as to why the categories of the West and Asia cannot be abolished overnight:

Certain people will persist in relying on these historical constructs because they have to fashion themselves in these terms and by means of distinction from each other. By positing Asia “over there” away from the West “this side,” this voyeuristic optic somewhat engenders a fleeting

sense of a distinction between the West and the Rest [...]. Let us note that that *this voyeuristic optic, therefore, also serves as an alluring fantasy for those who feel most insecure as the Westerners*. (Sakai 2000: 797; emphasis added)

In line with this reflection, my interlocutors, even if in terms of longing for belonging, often spoke of “Europe” and “America” as the places they would most like to move next after Japan. They considered these locations to be not only be better for gaining research opportunities, but also seemingly more familiar and closer culturally – even if their experience with them was more limited than that with living and working in Japan.

Thus, Omar, a biochemist from a country in the Middle East, told me that the United States would be his dream destination once his current postdoctoral research contract was over. Every day, he would spend time on the social networking site *LinkedIn* updating his profile, looking at job announcements and searching for people who might help him find a position. Gentle and soft-spoken, yet with a wonderful sense of humor he recounted a silly *faux pas* he thought he had made while looking for his dream job in the United States and hoped that he had not jeopardized his chances. While he had never been to the United States, he considered that it would be the best place for him to live.

Similarly, Natalya excitedly recounted to me a recent conference trip she had made to New Orleans. It had been her first time in the United States, and she enthused about how easy it had been to talk to people and agree on plans there. The trip had made Natalya seriously consider applying for postdoctoral research positions in labs in the United States, and she worried whether her publications and grant applications skills were good enough for this step. Herself being Russian, she aligned with the “foreign” represented in the United States. She said:

People [in Japan] treat you well coz that’s the style they use. [...] Sometimes you realize they don’t appreciate something about you even though you thought it was OK... You just feel it then. [...] They never

tell you. That's the difference between, for instance, the American society and the Japanese society. In American society, they will tell you: I don't like this from you. Then you say, OK... You can adjust to people. But here you have to guess.

Not only does Natalya draw a clear line between “Japanese” and “American” way of relating to others, but she also aligns herself with the “American” model, even if it is one with which she has had more limited experience.

Most poignantly this attitude was expressed by Anita. Anita, born and raised in a Middle Eastern country, gained her bachelor's degree in Japan. As she had loved the region where she lived and was fluent in Japanese, Anita decided to stay in Japan longer and earn a master's and possibly a doctoral degree as well. However, having moved to a large university in the Kansai region, she found her lab and professors there alienating and decided to look for a job in industry after completing her master's course. She encountered various difficulties during the process and gradually became deeply embittered with Japan and Japanese people. As she put it, her only respite was meeting with “other foreigners” and sharing their experiences. At the time we met, she was working at a company in Tokyo that had branches in other parts of the world as well. She hoped that with time she might ask for a transfer to the company's branch in Germany. As she had not been in Germany before, I asked her why she wanted to be there in particular, to which Anita responded: “Because there are more foreigners there.”

The cognitive shift in Anita's reasoning is revealing of the construction and the boundaries of the category of “foreign.” As I have elucidated in this chapter, the “foreign” emerges as a category that stands in opposition to “Japanese,” erasing complexities within, as well as the messy continuum betwixt and between. Ironically, even though appearing as a response to what my interlocutors see as isolating and isolated “Japanese” research processes and, by proxy, restrictive Japanese society, discourses and practices of the “foreign” are equally

exclusionary, rendering only some foreigners and experiences “foreign” enough. Additionally, in the context of “Japanese science” being defined through its abundance of resources and the complicated communicative channels through which they are distributed and circulated, the category of “foreigner” comes to be more than a mere substitute for the “expatriate” one, as it reveals the complex ways in which transnationally mobile knowledge workers engage with the uncertainties of their working lives.

To illustrate this point and lead it into the next chapter, I want to end here with an ethnographic vignette. I was chatting with Andrew in his office when he realized that his contract would expire in less than a month and he had not been offered an extension yet. As a principal investigator of a large-ish lab, he had a secretary whom he promptly called upon the realization. When the secretary arrived, she tried to sooth Andrew’s irritation by saying that providing contracts at the very last minute was characteristic to their institute and that not only foreigners, but also Japanese workers, including her, had not received their new contracts. To her comment, Andrew’s immediate response was: “Well, you’re an honorary foreigner!”

5.0 GENDERING WORK, WORKING GENDER

Surveys of the migratory practices of scientists and researchers suggest that the geographic mobility of academic knowledge workers is a gendered and gendering process. Such studies indicate that, despite the dominant narratives of equality, women academics have fewer opportunities to conduct research abroad and participate in internationally collaborative projects, thus revealing the complex ways in which unequal power structures – both within research institutions and family organization – affect women’s movements (Leemann 2010; Muller and Kenney 2014; Vabo et al. 2014).

At the same time, as recent feminist scholarship suggests, young professional women increasingly tend to situate themselves as individuals who, at least in their work lives, are not affected by the systemic inequality that position female gendered bodies at a disadvantage in comparison to their male counterparts. Feminist scholars argue that recent years have witnessed a gradual move away from alignments with a collective feminist identity toward the focus on choice and development of entrepreneurial selves that, while gendered, are not united by a shared vision of how the gendered nature of their bodies matter in the production and reception of their selves (Gill & Scharff 2011; Negra & Tasker 2014; Scharff 2012). That is, while surveys show that women scientists are at a disadvantage in terms of their access to resources, collaborations and higher positions in the academic hierarchy, this disparity is not necessarily experienced and narrated as such.

This chapter engages with the paradox of the erased experience of difference and asks: how should we talk about inequality among academic knowledge workers when systemic advantages take the guise of individual success stories of entrepreneurial selves, and disadvantages are narrated as personal failures to be more competitive? How is the configuration of scientific knowledge as a particular skill set, the gendered subjectivities of scientific workers, and mobility experienced? And, more specifically, how is the temporary presence of foreign scientists in Japan gendered? Employing the analytical lens of gender to highlight the different implications research employment in Japan has for male and female researchers, I examine how scientists position themselves – or refuse to – as gendered beings in the structures of scientific production. In the first part of the chapter, I relate the ways foreign female researchers navigate these structures that visibly put Japanese women scientists at disadvantage, while at the same time deeming the foreign bodies seemingly genderless. The second part is devoted to the question of foreign male researchers re-fashioning their sense of masculine selves through their engagement with Japanese colleagues and workplaces.

5.1 WOMEN SCIENTISTS: EMBRACING WORK, EVADING GENDER

To begin with, I want to suggest that Japan, epitomized by its scientific institutions among my interlocutors, emerges as a space that allows for questioning of the post-feminist notion of individual responsibility and rationality, and opens up the possibility for conceptualization of the practices and processes of inequality as a gendered phenomenon. When women scientists in my study contemplate convergence of their subjectivities as those of women-on-the-move and scientists-on-the-move, the institutional practices of Japanese scientific organizations force them

to consider the ways their gendered bodies affect and shape their experiences as scientific workers. Like Scharff's (2012) interlocutors in the United Kingdom and Germany who focused on carving highly individualized, stripped-of-gender narratives of their professional lives, my female research participants were often reluctant to bring up the idea that their woman-ness might be a variable in molding their experiences of their work environments. At the same time, it was difficult for them to avoid the gender prism when relating observations about their position – and, importantly, that of their colleagues – in the research organizations at which they worked. During conversations with my interlocutors, I realized that, while male scientists tended to conceptualize problems they encountered at work as those of Japan's failure to live up to imagined scientific or social interaction standards or, to a lesser extent, personality clashes, women scientists expressed more ambiguity about their experiences. They were more reluctant to put the blame for complications or conflicts they faced at work on their lab leaders or colleagues, or Japan as a country for enabling these men to assume positions of power in the local hierarchies of scientific production. They expressed uncertainty when narrating unpleasant remarks made by their supervisors and struggled to pinpoint the locus of the problem. While unwilling to employ the individualist rhetoric of a savvy and entrepreneurial knowledge worker, they were equally reluctant to place responsibility on more structural forces, thus shifting between two equally disconcerting possibilities: that either they were failing to fully and successfully participate in the opportunity to craft the most desirable (that is, entrepreneurial) professional selves, or that there were indeed institutional factors in place that marked them as inherently gendered scientific workers.

Laura's narrative offers a glimpse into this dilemma. Laura and I met after she had already left her postdoctoral position at a comparatively small research institution in southern

part of Japan. In her early 30s and from a country in Northern Europe, she had gone to Japan with her young son. As with many of my research participants, Japan had not been her dream destination. However, following a period of unsuccessful job applications in Europe, the United States and Canada, Laura drew on various professional connections and took the steps to look for a postdoctoral research position in Japan. As she put it (reminiscent of narratives of the young Chinese migrants in Tokyo in Jamie Coates' [2013] study), "somehow it happened that I went to Japan."

Of course, while "somehow some things just happened" was a line that Laura uttered frequently in our conversation, it does not imply that her move to Japan lacked agency or great effort on her part. As Laura and her partner had planned that she would bring their daughter with her when she found a position, her child's welfare was a major factor in Laura's decision to apply for a postdoctoral research jobs only in smaller research institutions outside major cities. After lengthy search, she had contacted several possible host professors in research organizations that Laura thought would both fit her interests as a scientist and alleviate her concerns as a mother. Only one of the professors she had contacted responded to her inquiries, narrowing down her list of options and leading her to join a small research group in the Western part of Japan.

At the time we met, Laura for both personal and professional reasons had left her position mid-contract and returned to her home country. Having heard of my study from a mutual acquaintance, she was eager to reflect on her time in Japan and, as I realized, had actively contemplated the problem of gender in Japanese. Laura brought up the topic herself early in our conversation, saying to me:

I hear your study is also connected to women, and I can say one sentence that was told to me in the beginning. At that moment I didn't realize it

was somehow important, but it was said to me: “You’re too young and you’re a woman, so don’t expect anything.” It was a person from another institute [who said it], just in the corridor...

Before I could ask her what she made of this striking statement by the random person in the corridor, Laura brought up what she called an “another example.” She had gone to one of the largest and most important conferences in Japan in her field and made the following observation:

Laura: I was asked to meet women researchers in Japan... and it was a dinner... it’s an annual conference, and there have always been active women who ask [other women researchers] to have dinner together. It’s not public. As I understood, every year they meet. Some of them are very active, probably they meet every year, but some people are changing... and they just discuss their situation in Japan. How they can manage... They’re women, so they can’t develop [professionally] like men, they can’t have high level positions. [...] And I also had to share my experiences in [home country]... if I’ve ever experienced any kind of... [Pause]

Ieva: Discrimination?

Laura: Yeah. And I said no! [Laughs.] Of course, it’s more difficult for women to do [science] if they have children, family, and all these things... maybe it is difficult, but I can’t see any kind of pressure... but they do! They really do. And it’s visible somehow also. After that sentence [“you’re too young and woman”], I started to look around... The institute where I worked at it was a little bit softer, I think, but I realized that in some institutes it is not easy to be a woman and work there. But in some cases women accept it, and that’s it. [...] But in this conference I met some active women who somehow wanted to scream, or wanted to show they’re disappointed... that they don’t feel well in this men [dominated] environment... but it was just a dinner, and it was this year, and it will be next year, I’m sure, because they won’t do anything about it. [...] I don’t know how they can have that... [Pause] men and women are equal at universities. They say they are equal, but they don’t act like that. [...] You can be a very, very powerful lady, you can have a huge amount of papers, but still... in competition with males... you’ve already lost before you even applied. [Laughs.] But yeah. You have to be very strong. Most of women who are professors, they don’t have families, they don’t have children... [Pause] But for me and in my institute, it was softer somehow.

What is striking in Laura's narrative, particularly in the context of her bringing up the topic without any prompting on my part, is the cognitive dissonance between the various poignant observations she makes about gender inequalities among Japanese scientists in her field, and her own position. Like the young women in Christine Scharff's study (2012), Laura does not see herself as affected by the subtle workings of power. For her, it is only Japanese women scientists – and those working at *other* research organizations at that – who may face discrimination. When she is told by a colleague from another research group that she would not be able to “achieve anything” because she is “too young and a woman,” she directs her gaze and attention not to her own position in her institute and in relationships with her colleagues, but to other women scientists outside her immediate sphere. When, struck by her narrative, I asked Laura how she herself experienced her position as a woman researcher, the following exchange took place:

Laura: I was surprised at this sentence that “you’re a woman and too young,” and I was surprised that I was asked to this dinner, but no... in meetings and conferences I took part in... I personally didn’t feel [discriminated].

Ieva: You mentioned that after you were told the sentence you started looking around...

Laura: Yes, but not exactly connected with me, but with other women – what kind of position they have in university... are they only secretaries or assistants... but, basically, yes... for example, in our team there was a lady, and she had three children, and... she was a lab assistant, and she was really clever. Like, if we were talking about lab stuff or methodology, her English wasn’t the best one, so I couldn’t discuss any difficult topics with her, but she was very, very clever if she had to work in the lab. She was working part-time... *For her it was enough, I suppose...* to work only in laboratory, not to go further... But yeah, personally, I didn’t feel any kind of discrimination or [laughs] eyes on me. (Emphasis added.)

Scharff, in her analysis of young women’s reluctance to claim affinity to a collective feminist identity, argues that what takes place in the minds of young “empowered” British and

German women is “uncoupling of personal experiences from broader social structures” (2012: 66). In addition, Scharff suggests, the individualist narratives are often intertwined with the construction of the “oppressed other woman” trope (2012: 45-67). While the trope of the “oppressed Muslim woman” was the most prevalent among Scharff’s interlocutors, Laura’s “other woman” was Japanese and quite bound by her professional and ethnic identity. However, unlike the unequivocally “oppressed Muslim women” trope among Scharff’s interlocutors, Laura is more ambivalent about the position of Japanese women scientists in her field. In Laura’s account, there seems to exist a friction between the idea that, in competition with male scientists “you’ve already lost before you even applied,” the notion that working part-time was “enough” for some women (like the married laboratory assistant at her own institute), and the feeling that maybe women did not fight hard enough to transform their position in the power structure (like the scientists who met for dinner during the annual conference but failed to implement any radical changes).

Even though the fateful “you’re too young and a woman” phrase had been explicitly directed at her, Laura’s attention switched to the difficulties experienced by Japanese women in other Japanese institutions, and her own research group was marked as “softer” in comparison. Laura did not attribute any of the difficulties she had experienced while in her postdoctoral research position – such as lack of scientific discussions, difficulties organizing a journal reading group, or the obstacles she had to overcome to conduct some of her work in the nature – to her being a woman. It was her position as the first foreigner at her institute that Laura embraced as an explanatory mechanism for trying to understand why some aspects of her work were not going as smoothly as she had expected. By no means do I want to claim that Laura was necessarily situated in an unequal position with her male colleagues because of her gender.

Rather, what matters here is that in Laura's narrative gender appears as an explanatory framework for the experiences of other women, but not her own.

Narratives that "othered" inequality occurred in conversations about numbers of female researchers as well. Equally importantly, my male and female interlocutors engaged with these statistics differently. Bill, an outspoken principal investigator, did not fail – in the first few minutes of our conversation – to bring up the fact that, in 2011, only 13,8% of researchers in Japanese scientific institutions were women (Nature 2013: 535).⁶ Other men, while not equally prepared to provide me with the most recent statistics, often remarked that the only women in their labs were office staff, a technician, or a rare master's student. Some of them recounted tales of aspiring female students being gradually forced out their departments. Others remarked on conversations with their lab technicians, praising the women's intelligence and blaming the "Japanese system" for not taking advantage of their skills and talents. For my male interlocutors, then, the low numbers of women scientists in their labs and institutions directly reflected a structural failing on Japan's part to attract women to scientific work. The female researchers in my study, however, even when finding themselves to be the only women scientists in their labs, did not narrate their experiences in terms of numbers. More often than not, they did not bring up such facts in our conversations unless explicitly asked, thus reflecting a different kind of engagement with power structures that position them as a marginalized minority. This is not to say, of course, that foreign male scientists are somehow more "aware" of the inequalities female researchers experience. Rather, I want to suggest, men and women scientists are implicated by the institutionalized power relationships in different ways, and women scientists have more at stake in explicitly critiquing such systems.

⁶ While the Japanese government aimed to increase the percentage of new female hirings at universities in various fields to 30% (Council for Science and Technology Policy 2010: 30), it is unclear how successful the measures to implement this plan have been.

Calista's story offers a glimpse into the careful narratives foreign women scientists may have to construct to situate themselves as successful scientists in Japan. Calista, a highly driven bioscientist in her early 40s, was a successful researcher at a well-known institution in the Kansai region. Trained as a medical doctor in her home country in southeast Europe, she had worked as a researcher in North America for five years. Calista had met her husband there and together with him had made the decision to move to Japan ten years before she and I met for the interview. She emphasized that the move was driven by research, rather than personal reasons: both Calista and her husband had been excited to work with a famous professor and had decided to give Japan a try. They had not planned to stay in the country for long, but, as Calista put it, the experience had turned out to be "unexpectedly good." Calista felt her research was going well, she had published "very, very nice papers," and both she was hired to work at an international institute "with English environment." She happily claimed that to both her and her partner "life is science," and her current position seemed to offer both a fruitful work environment, and a balanced support system in the form of affordable and reliable daycare for the couple's children. Calista felt fortunate that she and her husband were both scientists, that the professor she was working with was not a controlling person, and that she could dedicate a lot of time to her research.

While Calista jokingly suggested that she would have never been a successful scientist in her home country, as there would be "other things to enjoy," throughout the interview, she was careful to repeatedly emphasize two things: that a great scientist – his or her greatness being measured by *Nature* and *Science* publications – would be successful anywhere in the world, and that Japan with its scientific labor regimes was one among many systems, each not necessarily better or worse than the other. She situated herself as a global citizen and positioned Japan as one

among many countries where she might work. Calista was also highly aware that her position as an independent associate professor was made possible by the hybrid nature of her institution, established by the Japanese government as an attempt to internationalize the structures of scientific production in Japan. Equally importantly, she attempted to draw a clear distinction between what she considered to be belonging to the sphere of science and scientific work, and those aspects of life – such as petty human emotions, professional cliques, and “ungentlemanly” behavior – that she referred to as being “behind science” and yet found them frustratingly encroaching on science proper. While Calista had figured out a way to situate her foreignness in the power structures of her institute and Japanese labor regimes, her gender seemed to have no place in her success story. Thus, I was surprised when she brought up her situatedness as a female scientist towards the end of our conversation:

Calista: Of course, I have to get my grants. But you never know how that is going to go in a way. Sometimes, when I fail a grant, I feel like... is this because I'm a woman? But that's “behind science” environment. You can never enter that. It's really not until you get to the *Nature*, *Science* point in your publishing [when you won't get rejected]. [Laughs.]

Ieva: Do you talk to anyone about it?

Calista: You can counter-argue all the time. Oh, that guy has a *Nature* [publication], for example... then you have nothing to say if that's the case. But you don't feel like they're reading what you're writing. They just look at your publications. [...] It is kind of a criterion in people's mind[s]. [Pause.] *Maybe it's a bit more severe in Japan.* You know, I was talking to a young professor here, complaining that I didn't get this one grant. And he said: “Why don't you apply with your husband?” I was shocked, you know. No one in the US would say something like that. That was like, oh... shocking, because I thought: might the others also be thinking this way? [Laughs.] This is the young one who thinks this way, right?! [Laughs.] The older ones, you'd expect much more strict ideas... (Emphasis added.)

Despite Calista's success as a researcher, her long-acquired ability to navigate the appropriate markers of success, and her pride in this skill, the male colleague's suggestion for her to publish with her husband – despite their different research fields – opens up the possibility that a Japanese male name is a requirement for a grant application. While Calista had felt before that her application was not being read and research money was given to someone for their publication success, rather than the application content, her colleague's question made visible the possibility that the “behind science” considerations were shaped not only by the impact factor of her publications, professional alliances at place, or even her foreign last name – but by her gender. Even if only momentarily, her claimed position as a transnationally mobile scientist whose gender and bodily locale did not matter in the construction of the successful scientific self was shaken.

When I inquired what Calista's response to her colleague's statement had been, she responded:

I said I'm a completely different person than my husband, and my science is different. I was so shocked. I couldn't even say anything to the guy. You just think... is this the way they think? What am I going to do? [Pause.] These are the negative parts, but, of course, there are positive parts, too, you know...

While Calista expressed how shocked she had been upon hearing the man's utterance and realizing its potential consequences (“Is this the way they think?”), she very quickly restored her position as a balanced participant in a globally connected scientific community. Unlike many other of my research participants who relished in their complaints about what they saw as failures of “Japanese science,” Calista, like in most statements she made during our conversation, returned to the “there are bad parts, but there are also good parts” narrative. As the earlier and the following dialogue demonstrate, “maybe it's a bit more severe in Japan” was most Calista

uttered as a commentary to the possibility of gender inequality in Japanese scientific labor regimes:

Ieva: You're the only woman PI [at the institute]...

Calista: They're trying to get but they can't even find the second one. [Laughs.] Really. The truth is, they can't find one. It's such a pity, really. Women don't even want to go the higher career path in Japan.

Ieva: But your technicians are women...

Calista: Yes, and their level is so high! I said, like two, three years ago, why don't you aim for a higher position? She said she just doesn't like to write. It's perfectly reasonable. And it's also the family reason... the idea is that you have to work really long hours, like men... that's a big pressure on a woman, you know. But this applies to any country. If there are enough good, affordable daycares, you'll see more women in the career path. [...] When foreign people ask me... I tell them, this is the case. You cannot really blame Japan for that. This is a problem everywhere... *maybe a bit more severe in Japan*. The problem is that women don't even think that they can do better, you know. Their confidence is taken... that's *maybe severe in Japan* in many ways. (Emphasis added.)

Like in Laura's ambivalent attitude outlined earlier in the chapter, Calista switches between two modes: Japanese women not wanting to have careers in science, and Japanese women not being able to do so because "their confidence is taken." This irresoluteness is revealing, and points to the uneasy position occupied by foreign women in Japanese scientific labor regimes. On the one hand, Calista's narrative suggests that *her* confidence is not taken and she inhabits a space of power; indeed, as an independent associate professor supported by the head of her institution and accruing the appropriate markers of success, she is on the side of power. On the other hand, the position – or, in the case of a second female principal investigator at Calista's institution, absence – of Japanese women in Japanese scientific institutions, exposes the conspicuous yet precarious nature of the presence of foreign women scientists. They are marked as gendered bodies, despite the attempts on the part of women scientists themselves to

rid their work and accomplishments of gender. In all its unspoken forms, what disciplinary work gets done when the gender of foreign researchers seemingly does not matter, while that of the Japanese bodies in the same spaces so openly does?

In their discussion on the synergy between neoliberalism and post-feminism, Rosalind Gill and Christine Scharff argue that, as both neoliberal and post-feminist subjects, “it is *women* who are called on to self-manage, to self-discipline. To a much greater extent than men, women are required to work on and transform the self, to regulate every aspect of their conduct, and to present all their actions as freely chosen” (2011: 7; emphasis in original). I would add that, when men are charged with the task to transform the self, they are challenged as seemingly generic workers; when it comes to women, they are supposed to improve the self, on the one hand, as gendered workers and, on the other, as always in the process of stripping themselves of gender. Foreign women scientists’ ambivalent attitudes toward explicitly marking themselves as gendered bodies – among other, yet differently gendered bodies – reflect this disjuncture: attempts to posit gender as an explanatory framework or even a variable in one’s work life suggests one’s failure as a rational, responsible and flexible neoliberal and postfeminist subject. Men, whose subjectivity as generic, rather than gendered workers is presumed and usually does not allow itself to be doubted, paradoxically, situate a subject position which allows for more unstrained critiques of inequality.

5.2 GENDERING UNCERTAINTY

However, as Wendy Brown reminds us in her recent critique of *homo oeconomicus*, neoliberalism’s unit of analysis, its “generic individual” is socially male and masculinist who is

not to be burdened outside the market (2015: 107). Women, however, are situated as increasingly between market and household, between professional and care work. Even when positioned as highly skilled professionals – such as the women scientists of my study – they are increasingly responsible for ensuring and maintaining family and social ties. Their care work, as Brown powerfully argues, is deemed to be a “natural” preference, stemming from sexual difference, rather than based in unequal power structures that push women to be “disproportionately responsible for those who cannot be responsible for themselves” (2015: 107). In the context of my research, often the same male researchers, who denounced the “Japanese system” of scientific production as discriminatory toward women, were quick to draw boundaries between what they saw as male and female abilities in sciences. Thus, I was caught off guard when Mario, a charming postdoctoral researcher in physics, remarked to me that, based on his observations among foreign scientists in Japan, he found women to have an innate ability to learn languages better. When I expressed my surprise at such a statement and asked him to elaborate, Mario said that there was something about the female brain – for instance, mine and that of his partner, Rosa – that made it easier for us to speak better Japanese than he and other men in his group of friends did. Mario’s knowledge of the language, he laughed, was limited to ordering beer and saying a few random phrases for the entertainment of his friends. Because his partner was fluent in Japanese, because he was used to hearing his female friends make social arrangements in the language and because, due to his outgoing character, he often talked to the bilingual secretary at his lab and other women socially, Mario inferred that women “naturally” possessed the ability to learn languages faster and better.

What Mario did not take into account, however, was that, for instance, I had studied Japanese for several years before going to Japan and that he and his partner occupied very

different positions in their respective labs. Mario, in his mid-thirties, and Rosa, in her mid-twenties, both from a country in southern Europe, had met at a large research institution in the Kanto region where Mario was doing postdoctoral research and Rosa had started her PhD program in biology. Upon completion of his research project, Mario had secured another postdoctoral position – this time at a large public institution in the Kansai region. In a quite rare move, Rosa managed to transfer to a doctoral program in the same institution to be with her partner. At her new lab, she was the only female member – and one of very few specialists in her particular line of work. While Mario as a postdoctoral researcher felt that he was not really accountable to anyone in his lab and his communication with other members of his group was limited, Rosa had to partake in weekly seminars and present her work in Japanese. As one of the youngest people in her lab, she was also at the bottom of the lab hierarchy. Thus, when Mario praised his partner's language skills and marked them as a sign of innate “feminine” abilities, he negated the work she had invested in carving her space as a young professional in a complicated work environment. By naturalizing Rosa's language skills, he did not take into account that language acquisition was necessary for her not only to navigate her professional life, but also perform the care work to ensure both of their well-being in the country. Reliance on Rosa's Japanese language competency to organize their daily life – to make phone calls, arrange trips, order food at restaurants, among other things – allowed Mario to remain the “generic individual,” while Rosa had to switch between professional and care work.

Of course, I do not mean to claim that male foreign scientists refused to study Japanese language or constantly relied on their female partners for communication with Japanese people. Many found language competency crucial for ensuring continuity of their stay in the country; they were aware that certain grants were only available if the applicant was well-versed in

Japanese or that they would have better access to formal and informal institutional resources if they knew the language and were not left out of internal communication channels. Others, while not necessarily planning to stay in Japan longer than their contracts determined, embarked on the language-learning task out of curiosity for aspects of Japanese culture or in hopes to make interactions with potential Japanese partners smoother. At the same time, reliance on women's communication skills to make arrangements for social gatherings seemed to be a persistent trend. That is, women, while having busy professional lives, directed their language skills not only to improve their personal circumstances, but also to ensure the maintenance of social ties among friends or even family members.⁷

Returning to Rosa's story, another crucial issue needs to be raised: that of uncertainty as a gendered phenomenon. For Rosa, Japanese language acquisition was also a strategy to engage with uncertainty in her daily work life. She felt she was often mistreated and reprimanded for not working hard enough by her group leader and assistant professor in the lab, despite the hours she invested in working not only on her dissertation project, but other tasks as well. Reluctant to bring up the issue of gender herself, yet willing to accept it as an important variable when I cautiously mentioned it as a possibility, Rosa attempted to understand the reason for mistreatment. Japanese language skills allowed her to do it more thoroughly. As she pondered over a mean-sounding phrase or two that one of the professors had made, Rosa tried to cope with uncertainty and make sense of her position in the lab, her doctoral progress, and, importantly, her future.

⁷ As one of my male interlocutors admitted with a deep sigh, despite having lived in Japan and worked at a Japanese research center for more than ten years, he had to rely on his wife to communicate with their children when they were tired after school and refused to speak English.

In a recent volume, Samimian-Darash and Rabinow (2015) call for anthropological engagement with uncertainty. Importantly, they differentiate uncertainty from risk, arguing that, first, “the world is increasingly being populated by forms, practices, and events of uncertainty that cannot be reduced to risk,” and, second, new subjectivities, as well as forms of knowing, governing and managing them also emerge along with the modes of uncertainty (2015: 2-7). In the same volume, Pat O'Malley suggests that contemporary neoliberalism, as extension of classical liberalism, engages with two projects at the same time: the technocratic desire to manage and minimize uncertainty, and the political project to embrace and laud it (2015: 16). “The key changes associated with neoliberalism,” he writes, “were focused on how to reintroduce and valorize uncertainty. Uncertainty would create corporate and personal wealth, efficiency, and wellbeing through competition. For the new subjects of liberalism— not the subjects of this or that policy, but all liberal subjects— uncertainty was not to be feared or reduced, but to be celebrated and embraced” (2015: 28). What is surprising in O'Malley's otherwise to-the-point analysis of the new subjectivity of neoliberalism, as well as the rest of the volume, is the absence of gender. Surely, one would think that gender presents a particular mode – or modes – of uncertainty with, as Wendy Brown might argue, its own particular forms of governing.

While gender is rendered invisible in Samimian-Darash and Rabinow's volume where all the neoliberal subjects who take the form of “generic individuals” happen to be men (at least symbolically and socially), recent feminist and feminist-inspired scholarship shows socio-economic uncertainty (Gill & Scharff 2011; Lane 2011; Scharff 2012), epitomized by economic recession (Cooper 2014; Negra & Tasker 2014), to be a deeply gendered experience. Ethnographic narratives (Kawano et. al. 2015; Kitanaka 2012; Lukacs 2010, 2013, 2015; Satsuka

2015) emphasize the inherently gendered ways of coping with uncertainties and the relevance of gender in analyses in recessionary Japan in particular. Mezzadra & Neilson, in turn, emphasize that migrants are always gendered, showing “the impossibility of considering the bearers of labor power as neutral subjects who exist independently of the power relationships of gender, ethnicity, and race that are inscribed onto their bodies” (2013: 105). Rather than projecting the image of a “generic individual” migrant, they argue that both labor and migration have been feminized over the past few decades, and that female domestic care workers, situated in opposition to the symbolically male financial traders, embody both of these processes (2013: 104-111).

What I want to suggest here – and have hinted at before – is that the uncertainties and ambiguities that accompany labor migration, including that of highly skilled workers, come to the fore in the mobility experiences of foreign women scientists in Japan. When scientific mobility is analyzed as an inherently gendered process, uncertainty – about one’s place within transnational labor regimes of scientific production and Japanese society – reveals itself to be a gendered experience. It is precisely because they are *not* care workers (that is, they are not hired to perform care work) that women researchers’ experiences serve as a reminder that the world the seemingly privileged mobile workers inhabit is also gendered. When scientific production in general (and in Japan in particular) is marked as a masculine enterprise, when mobility of highly skilled professionals is symbolically gendered masculine, when expectations of flexibility associated with transnational scientific mobility are deemed masculine, who inhabits the space between the explicitly female-gendered and underprivileged care workers and the male-gendered highly privileged financial traders?

To engage with these questions, I turn to the narrative of Yue, a bioscientist from China. Yue was deeply reflective about her position in Japan and within its scientific labor regimes. Having lived in Japan for a decade, she often pondered the ways her ethnicity, gender and her academic training in the United Kingdom had come to shape her experiences in the country and its institutions – and the ways she engaged with the immediate world around her. Yue was deeply curious about the intersection between the multiplicity of ways in which she self-identified, and the highly gendered and racialized ways she was perceived by others. That this self-reflection was not limited only to her time in Japan was revealed in a story she told me over a cup of green tea at the university cafeteria on a cold winter afternoon. Recounting her time in the United Kingdom as a highly promising doctoral student, she brought up a party that had been organized by her academic friends. Tired of telling strangers that she was a scientist and wanting to conduct her own social experiment, for the course of the gathering Yue answered the “And what do *you* do?” questions with an innocent remark that she worked for a Chinese delivery restaurant. Having observed the other guests’ bafflement about her “matter out of place” presence at the academic party, Yue did not feel particularly guilty when later reprimanded by the hosts about her mischief either.

I mention this story to offer an insight into the extent to which Yue reflected on her positionality. While unable to carry out the experimental transgressions of the kind in which she engaged as a doctoral student in the United Kingdom, she nevertheless was deeply engaged with issues she perceived to be reflecting on and affected by her professional life as a female scientist in a male-dominated lab, and a Chinese woman in Japanese society. As she put it during our first meeting, she had always been “on the side of the minority,” which, she suggested, explained her aversion to working in the United States and her subsequent escape from there. Ten years later,

Yue still had vivid memories of being offered a lower salary than her husband who was being hired at the same institution in a similar position around the same time. Tellingly, when recounting the experience, Yue was reluctant to point the finger at a particular cause she may have deemed responsible; rather, Yue focused on the fact that her husband had accompanied her to the university officials and joined her demand for a higher salary – which she ultimately received. Again, however, she left her opinion linger as to whether she thought her demand was met because of her insistence, or because her Japanese male partner had joined her efforts.

Yue was more outspoken when following Obokata Haruko's rise and fall that took place over the first months of 2014. While vaguely entertained by Obokata's self-representation as the epitome of traditional (characterized by the "traditional" apron she wore instead of a lab coat), contemporary (marked by cute cartoon characters on her brightly painted lab walls), and future (illustrated by her scientific achievements) Japanese femininity, Yue was nevertheless inspired by the STAP cell story when it first appeared in *Nature* and, immediately after the publication in the prestigious journal, in Japanese news. Over the next few weeks, following the emerging doubts about the STAP cell phenomenon, Yue became less and less convinced that STAP cells were real. However, rather than being disappointed about the non-existence of cells themselves, she was increasingly saddened by the fall of Obokata. As Yue put it, she had wanted STAP cells to be real not only for their scientific potential, but, to an even larger extent, to prove her Japanese male colleagues wrong. When STAP cells news first came out, Yue was angry about the way her older male colleagues had suggested that STAP cells were in doubt because Obokata was both too young and female to make such a discovery. As the events unfolded, and the same news media that had lauded Obokata a few weeks earlier began to tear her apart, Yue's disappointment with the events grew. While not condoning Obokata's actions, she was upset by

her male colleague's glee about having been "right" and the increasingly unsympathetic media treatment of the young scientist. Rather than joining the blame game, Yue pondered the possible institutional pressures that had made Obokata fake the STAP cell results. While Yue's narratives about her own experiences lingered in the border-zone between various possible explanations of what might have happened, the Obokata case highlighted her reflections on what it means to be a young woman scientist in a traditional Japanese research institution, such as Riken where Obokata had been employed.

5.3 MALE EXPERIENCES: EMBRACING ALTERNATIVES

My attention to the experiences of women scientists as revelatory of the inherently gendered aspects of the uncertainty embedded in the mobility of academic knowledge workers, does not mean that the transnational experiences of male scientists are less worthy of scholarly attention. Marking uncertainties as gendered poses questions for the ways male researchers situate their masculinities as transnational scientific workers, and the particular mechanisms men employ to reflect on their position in Japan's scientific labor regimes. In the earlier part of this chapter, I suggested that research stays in Japan both forces and enables foreign women scientists to critically engage with the neoliberal and post-feminist notions of mobility – and migratory patterns of researchers in particular – as genderless and highly individualistic practices. In the second part, however, I want to focus on the experiences of foreign male scientists and show how the displacement and estrangement enabled by both transnational and specifically Japanese labor regimes and hierarchies challenge men's masculine and professional identities, and importantly, the uneasy balance between these two forms of self-identification. I ask: how is

male scientists' sense of self as masculine beings transformed when they are pushed out of their professional, social and linguistic comfort zones, and compelled to resituate their practices of masculinity as the less dominant form in both social and professional spheres.

In her account on Mexican men's sense-making of aging and bodily changes, Emily Wentzell (2013; see also Inhorn & Wentzell 2011) persuasively argues for the necessity to better understand how men's ways of being men transform and are transformed by bodily alterations and shifting social worlds. Calling for more thorough conceptualizations of changing masculinities, Wentzell proposes the notion of "composite masculinities" as a path toward gaining knowledge of the ways "individuals construct and revise their gendered selfhood across time and context" (2013: 26). Defining composite masculinities as "contingent and fluid constellations of elements that men weave together into masculine selfhoods," Wentzell argues that, "because men must be different kinds of men in varying situations and life phases, it is crucial to not only understand what individual masculinities are at a given time but also why and how they change" (2013: 26-27).

While the aging Mexican men whose experiences Wentzell relates in her account have to make sense of their bodily changes in the context of quite local – that is, familiar to them – ideas about gender, nation, and health, the research participants of my study faced the questions of what it meant to be men in settings that they often found unusual and perplexing. Quite often, male scientists of my study had realized that both socially and professionally the forms of hegemonic masculinity (Connell 1995) familiar to them did not translate or transfer easily to Japanese contexts. While several scholars of Japan have noted the decline of the "*salarīman doxa*" (Roberson & Suzuki 2003; see also Cook 2016) and provided accounts of, to borrow from Inhorn and Wentzell (2011), various forms of "emerging masculinities" that deviate from the

previously dominant *salarīman* ideal, most of my research participants worked in environments that had preserved a highly hierarchically structured patterns of masculine behavior. My interlocutors perceived the lab hierarchies to treat them as both inferiors and outsiders, and often found it difficult to reconcile the fact that the masculine forms of communication and socialization they were used to – in their countries of origin or previous research institutions – were seemingly not embraced in their Japanese work places. Importantly, they faced challenges in trying to comprehend what it meant to be professional men in their line of work. Far from hegemonic, the masculine identities my research participants had assumed both as social and professional beings prior to their arrival in Japan, were challenged on daily basis once they stepped into their new research institutions. These questions loomed larger as the men started pondering their place in both Japanese and transnational labor regimes of scientific production and struggled to figure out ways of reconciling their sense of how to be men and how – or whether – to be researchers. My research participants’ ideas of masculine selfhood as inherently intertwined forms of personal and professional self-identification were transformed along the way. That is, taking Wentzell’s notion that social contexts affect the ways men construct and revise their sense of being men in a slightly different direction, I want to highlight the significance of transnational and professional contexts in shaping men’s “composite identities.”

To do so, I want to turn to the narratives of several men who were at comparable points in their careers and faced similar challenges in their professional and personal lives at the time we met. Through analysis of the men’s accounts of their work in Japan’s research institutions, I aim to highlight the ways in which the convergence of transnational scientific mobility and institutional practices of Japan’s research organizations affects and transforms male scientists’ sense of self, as they ponder forms of estrangement and belonging. For Karl, a feisty Australian,

this convergence was an underlying theme in his attempts to situate himself in both Japanese and transnational labor regimes, and to make sense of it. As we were waiting for our food at a university cafeteria during Karl's lunch break, I asked him what had brought him to Japan in the first place. Karl recounted to me how, after the research and development branch of the company for which he had worked in Australia had shut down, he had decided to join his fiancé who had a postdoctoral research position at a research institution in Japan at the time. A few months after Karl arrived, however, his fiancé's research contract ended and she returned to Australia. She had decided to leave scientific research and switch to work in a different sector or, as Karl enthusiastically suggested, "she's living the dream." Karl continued:

In fairness, she works long hours. [...] Bet she gets an hour long lunch break, she gets a gym membership. Things like that. They get masseuses coming to the office once a week to give you massages if you want, like... They really look after you... and that's something... in academia, you're treated like a, well, not even a human, I'd say... you're really just a bolt in the machine. In a corporation, you're actually rewarded. The higher you climb, they actually look after you. [...] So, yeah, I'm jealous. Her job is pretty awesome, actually. Huge pay, decent conditions, she's part of a small team, so they're all, you know, valued... That's one of the important key factors. You've got to have an employee who feels valued and recognized. A lot of that is missing in academia, certainly, because it's very competitive, it has to be these days, and, you know, a lot of the work you do... you know, you realize that a lot of it doesn't go anywhere, seriously, you still get a publication, but who cares? You know what I mean?

When I murmured in response that I supposed that publishing was among things that scientists just do, Karl continued:

The problem is, I've gotten more bitter, because... my project that I'm doing now is, according to the PI... *it's cool and what not, but I just don't value it personally because it doesn't actually help me complete any of the goals perhaps I've set in life*... you know, when I was younger, I was happy to travel and do research because I love research, so *in my 30s I've got a little bit older and have a lot to consider*... I'm sick of travelling, I wanna settle down somewhere... I don't wanna be applying for jobs and writing job applications every two years, I want some stability in my life.

I just don't see that doing research really offers that, you know. [...] So, I guess, it's me, my focus has shifted. I'm no longer that stressed out about punching out results for the, you know, [laugh] the glory of a publication. I suppose, *I want some stability and quality of life*. I'm sick of working long hours and having to take work home with me. [...] I wouldn't mind a nine to five job where I can switch off on Saturday and Sunday. I don't wanna be reading papers or writing crap on weekends like I've done for the last six years. (Emphases added.)

For Karl, then, dissatisfaction with his postdoctoral research position – and future in science – stemmed from a particular assemblage of personal and professional factors that were closely tied to his sense of selfhood and masculine success. His partner's success in the corporate world upon leaving her postdoctoral research position, as well as Karl's own desire to "settle down" after years of movements between locations and positions made him question the meaning of success in the world of scientific research. Karl acknowledged that upon his arrival in Japan more than a year and a half before we met for our first conversation, he himself had been among those who fretted over "punching out results for the glory of a publication." His masculine selfhood was shaped by a system that placed a particular value to taking work home over weekends, competitive publishing and "writing job applications every two years." Yet Karl's narrative also highlights a transition in the value he assigns to the path and markers of success in scientific production in its contemporary forms. Reaching his early 30s, having a financially successful partner and feeling the desire to settle down mark stability as the more important factor for his sense of a successful self, than achievements measured by the indicators of success that the transnational scientific labor regimes avail to young researchers in temporary positions.

For Karl, as with many other researchers among my interlocutors, the sense of dissatisfaction with the global forms of scientific production was compounded by what he considered to be highly local practices of research work and social interactions in Japanese

organizations. While Karl (again, like many of my research participants) was highly appreciative of the professor who had initially hired him, he was disappointed with the relationships he witnessed among the members of his lab and was particularly furious with the actions of an assistant professor there who seemed to insist on micromanaging Karl's time and research work. By the time we met for our conversation, however, Karl, as he put it, had grown "apathetic" to the colleague's outbursts. He pitied the students who had no choice but to work with the assistant professor, but felt that his own position as a postdoctoral researcher placed him outside the man's direct zone of influence. Equally importantly, Karl acknowledged that the assistant professor's contract also would be ending soon and he would need all the markers of success (that is, published research results) to find another position. In the context of changing masculinities, however, the most intriguing aspects of Karl's narrative about the "toxic" assistant professor and the other members of his lab, are his attempts to situate himself in the lab hierarchy and stay outside of it at the same time, thus highlighting the competing models of scientific masculinity that are available to foreign male researchers in Japanese research institutions. Thus, having laughingly suggested that other postdoctoral researchers in his lab are in "competition who can stay [at work] longer," Karl continued:

And our professor stays long hours, too. He comes in on Saturdays and Sundays as well. He obviously doesn't like his family or something. [Laugh.] Back home, if you spend that much time at work, it means you hate your wife. You know. [Laugh] So yeah. He'll stay quite late usually, eight to nine in the evening. Even though he has a wife and a very young child. Six months old. I mean, if I had a baby six months old... my priority is family, you know. Kids or tree frog anuses, you know what I mean? No, seriously!

Along with many other researchers who pondered, expressed frustration or mocked the long hours Japanese scientists are encouraged to spend at their labs, Karl's understanding of what constitutes masculine behavior was challenged by the practices of his colleagues. He

shifted between interpreting his professor's behavior in the framework he would have assumed in Australia ("he hates his wife") and relegating it to the sphere of "culture" ("that's what the Japanese do"). On the one hand, observing his professor stay late in the lab despite having a baby at home affirmed Karl's commitment to his Australian sense of masculine selfhood as that of honoring the importance of family and gender equality by spending time with his partner and children. On the other hand, the practice of asserting professional masculine selfhood through the highly visible commitment to work among his Japanese colleagues did not leave unchallenged Karl's notions of what constitutes scientific masculinity and the ways it should be enacted.

Intriguingly, what eventually allowed Karl to gain more access to his male colleagues' sense of professional behavior and form friendships with them, were his alliances with female colleagues.

In her widely read text on the symbolic meaning of romantic relationships and encounters between Japanese women and white men, Karen Kelsky argues that "in women's narratives of the international, white Western men are idealized for their exemplification of the modern, romanticized for their alleged sensitivity [...], and fetishized as signifiers of success and gatekeepers of social upward mobility in the world" (2001: 8). Leaving aside for now the notion that the global position of white Western men as markers of success has been challenged by the rise of East and South East Asian economies (Hoang 2015), I want to suggest that it is important to remember that in encounters between Japanese women and foreign men in Japan, it is the women who serve as gatekeepers. While I do not want to suggest that no mutual fetishization ever takes place in more informal circumstances, in professional settings men both formally and informally rely on their Japanese female colleagues to make sense of events in their workplaces and ease the transition into Japanese institutional practices. Equally importantly, communication

and socialization between men is often enabled and facilitated by women (Allison 1994). Karl's narrative serves as an example of this pattern:

And the women... because they... you know, they [men] treat them pretty nasty... so you just say, hey, how was your weekend, and you ask about their children, the family... they love talking about kids and family, you know. [...] They're a lot easier to make friends with. And, you know, once you sorta chat with them on regular basis, I noticed the men started talking to me more. I know it sounds really odd. The whole thing sounds absurd.

Having stated that while he had not come to Japan to make friends, Karl had found it difficult to interact so little with his Japanese colleagues, especially in comparison to his PhD program and work experiences in Australia. Once Karl started making friends among his colleagues, however, he had found it strange to realize that interactions with his male coworkers relied and depended on the good relationship he had with the women in the lab, despite his observations that the women are treated "nasty" on a structural level. To Karl's surprise, women in his lab turned out to be crucial in facilitating smoother relationships with the rest of his coworkers. In an even more ironic turn and in quite a reverse motif from Kelsky's observations, Japanese women, rather than the white Western man, turned out to be the international gatekeepers in Karl's case, just as in the experiences of many other of my interlocutors.

Probably my first friend was Akiko. And I was lucky! Coz she was in a different room, and then she came sit next to me. When she first sat next to me, it was really annoying. She had pink everything, you know, very kawaii. [...] [But] we hit it off, she was great. We started just by sharing candy. [...] But I was really lucky coz she speaks very good English. The best of anyone in the group. So we started chatting more and more. I didn't realize it, but she's a bit of a queen bee, she's quite popular with the rest of the research group. I didn't know that. But I sorta figured it out. [Laugh.] So we chat a lot, and she's lived in London before, so she's interested in Australia. [...]

Rather than Japanese women fawning over his "whiteness" and marking him as a possessor of the potential to liberate them from the oppressive Japanese environment, it was Karl

who sought commonalities and found a point of reference in Akiko's international experiences. Karl was the one who felt "lucky" about their friendship, relied on her popularity among the rest of the research group, and, in a rhetorically intriguing move, suggested that her past life in London necessarily reflected her interest in Australia and anything "Western."

While "the whole thing sounds absurd" to Karl, the gendered interactions in his lab are reminiscent of Ogasawara's (1998) argument about the informal means of control office ladies have over their male colleagues in Japanese companies. Ogasawara suggests that "macro-level power relations are not necessarily reproduced in micro-level interactions, and may even be *reversed*" (1998: 9; emphasis in original). She also points out that Japanese men, despite occupying higher ranks in the work hierarchy, rely on the goodwill of female employees to fulfill many everyday tasks. Coming as a surprise to Karl, his female colleagues employed their informal power to ease his interactions with their male colleagues. While still relegated to the category of "absurd" in Karl's mind, the women's role in making him reconsider the gender relationships unfolding in front of his eyes, arguably challenged Karl to treat the masculinities in his lab as less one-dimensional than he had observed at first as well.

That Japanese scientific masculinities are more complex than the common narratives shared among foreign researchers may initially suggest, is reflected in the account of Johannes and Elaine as well. Their story also highlights how interactions with Japanese male scientists in the larger context of contemporary scientific labor regimes challenge and affect foreign male researchers' sense of selfhood and contribute to the construction of "composite masculinities." Johannes and Elaine, a married couple from a country in Western Europe, had lived in Japan for several years by the time we met. While they were both located in the same city in the Kansai region and employed as postdoctoral researchers in nearby universities, they worked on different

projects and, despite sharing similar complaints about their respective workplaces, had developed distinct ways of interacting with their colleagues. While Johannes was frustrated and disappointed that he was not included more in lab socialization, Elaine claimed that, even though she felt like an outsider, she liked to keep neutral relationships with her colleagues and preferred not to develop friendships at work. The move to Japan had been Johannes' choice, as he had wanted to continue the project he had started during his PhD program. This was his first postdoctoral research position, and the second one for Elaine.

In quite an unusual move, they had decided to have a baby while in Japan. Their son was a few months old when we met, and, after Elaine had returned to her position six weeks after the baby was born, Johannes had come to take care of the baby full time until the boy was accepted in daycare for two days a week. Elaine had assumed that her professor would not want to prolong her contract when she got pregnant, but he had turned out to be very understanding. Not only had the professor prolonged the contract, but he had also provided Elaine with access to a room with a sofa and air-conditioner where she could rest. Johannes related his experiences in the following way:

I have to say that my professor is very kind and generous. When Jamie [the son] was born... [...] I'm [...] biology but on the computer. So I can work from home to finish my project. Elaine, she needs to be in the lab. And the lab is a bit of a dangerous place for a baby. [...] I asked my professor if I could from time to time bring my son. Which is something Japanese people would never do. [...] And he said, as long as the students in the room I work in are OK with it, then, yeah, no problem. [...] The other thing was that he actually made me a contract... I would come in one day a week during this time. So, even though I was saying, oh, I don't need to be paid, because I mean to be taking care of my daughter, I'd just like to come in to... he still made me a contract, so he can pay me, even though I was coming in with my son. It meant that I couldn't focus all that much... I could get something done, but not so much. And so he made it possible for me to get some money. [...] I don't think many professors would do that.

When I asked Johannes and Elaine why they thought their professors had been so understanding, they offered the following two explanations. For Elaine, her professor's support – and even “pride,” as she later laughingly suggested – was directly linked to the fact that he had lived in the United States for fifteen years and therefore had a “different style.” In addition, Elaine suggested, he had also had children when he was doing his postdoctoral research; while his wife did not work, “he knows that... if you're working as a woman, it's not that easy.”

While Elaine considered her professor's international past to be the reason for his kindness towards the couple's circumstances, Johannes found it a bit more difficult to come up with an explanation:

So my professor is very different from her professor. He was very understanding, too... but not... I don't think for the same reason. He... I think the most he spent outside of Japan in a row is one month. He never went abroad for a postdoc or anything. But... the only explanation I can have for him being so understanding and helpful is that he's just a nice guy. [...] He's in a position where he has to... being a nice guy is not necessarily that easy. But he is.

What is fascinating in these accounts and Johannes' bafflement about his professor's kindness in particular, is the wish to locate the source of behavior that does not fit the notions of a strict and emotionally unavailable “Japanese professor” outside Japan or in the realm of “niceness” as an incredibly rare occurrence. While the generosity of Johannes' and Elaine's professors should not be discounted, foreign researchers bringing their children to work was not unheard of even among my research participants. Even though far from an institutionalized practice, it was not that rare of a sight to see children's drawing on whiteboards in my interlocutors' offices.

However, the same privileges were not necessarily given to Japanese researchers in the same labs that easily, and Elaine's confusion about her coworkers' diverse reactions to her pregnancy reflects another gendered dimension of foreign researchers' position in their

workplaces. Categorizing the professor of her lab as very understanding and even “proud” of her pregnancy, Elaine was mystified by the attitudes of her female colleagues. She mused:

Actually, I got very bad reactions from... Japanese colleagues... female ones. Males were very nice. They were surprised that I was working. Actually, I was working until [the day before the son was born]. [...] *So I think maybe the girls were a bit upset because usually when they become pregnant here, when they get married, they stop working, so it's like I changed a bit the rules, showing that a woman with a big [gestures to her stomach area] can work.* And I came back six weeks later, so also... I got some reaction. Some girls told me that they were surprised that I was already in good shape. Some others... actually I got very strange reactions from female Japanese, not male. Like, [the] male [colleagues] were very supportive. Saying, oh, it's great that you're working, and so on. So I was a bit surprised. I thought... that women will be kind... and actually it didn't happen. Only... of course, some Japanese girls were nice, but it was a minority. (Emphasis added.)

Elaine's narrative is reflective of the subtle ways foreign women researchers in temporary positions mark themselves as different from Japanese female scientists. Like the women researchers whose experiences were described in the first part of the chapter, Elaine marked herself as more professional and more devoted to science than her Japanese colleagues. She considered herself to have “changed the rules” of the workplace and explained her female colleagues' “negative reaction” – and, importantly, the male colleagues' supportive comments – in terms of her dedication to work and finishing her project. For Elaine, Japanese women quitting work at the time of marriage or pregnancy are practices that lie in the sphere of choice and possibly culture, rather than institutional power structures which, while in many ways marking her as an “outsider,” nevertheless allow the foreign woman researcher to continue working – and be praised by her boss and male colleagues for it – in situations that would draw criticism on her Japanese female colleagues. Intriguingly, while perplexed by her female coworkers “negative reaction,” Elaine refused to engage and attempt to understand their dissatisfaction. She was annoyed by her immediate colleagues' suggestions that lab work may be “dangerous for the

baby,” and surprised that some women from the neighboring lab had stopped greeting her in the hallway once they had realized Elaine was expecting. However, when I inquired if Elaine had tried to talk to the women about it, she responded with an empathic “no!” and explained it in terms of her preference for work relationships that, while collegial, are not too intimate. Rather than engaging with her female coworkers and potentially seeing their “negative reactions” as micro-resistances to the unequal power relationships within the research institution, Elaine relied on alliances with her boss and the male colleagues whom she perceived as supportive of her as a woman scientist and her choice to return to work a few weeks after childbirth.

While Elaine’s narrative adds another piece to the complex set of discourses foreign women researchers in Japan have to employ to make sense of their position in Japan’s research institutions and gender hierarchies, the reason I relate her insights in the section that focuses on the “composite masculinities” of foreign male researchers in Japan lies in the implications her return to work has on the division of domestic labor in her partnership with Johannes and, subsequently, the attempts on his part – as well as those of other male researchers with young children – to navigate his sense of masculine self in the gendered hierarchies of scientific production.

Based on her research with unemployed tech workers in Dallas, Carrie M. Lane (2011: 125) suggests that men and women tech workers experience socio-economic uncertainties and the importance of paid employment differently. That is, she argues, “[w]hereas the grounding of masculinity in secure employment has weakened for middle-class men in recent decades, for women [...] professional identity and self-worth appear to have more closely intertwined [...]” Women, Lane continues, “have adopted the ideology of the independent provider – and its concomitant pressures – just as the white-collar men around them are disregarding it for an

alternative model that relieves them of the responsibility to provide for a dependent partner yet still manages to position them as autonomous, masculine agents” (Lane 2011: 126). While, considering their diverse backgrounds, I do not claim this to be the case for all of my interlocutors, the narratives of Laura, Calista and Elaine highlight the importance of successful professional identity to one’s sense of self among my female interlocutors. Equally importantly, Johannes’ reflections on his attempts to navigate both professional and domestic spheres suggest a turn to what Lane calls “alternative standards of masculinity, and alternative models of professional success” (2011: 120). Adding to Lane’s work, however, I want to suggest that the “alternative standards of masculinity,” as well the intertwinement between one’s professional identity and self-worth are highly fluid and situational when the bodies – either marked as feminine or masculine – move across space and face specific labor contexts that enable or, on the contrary, disallow particular imaginings of the self.

Due to the nature of their respective lines of scientific work, which demanded Elaine to be present at her lab and allowed Johannes to be absent, they had decided that Johannes would be the primary caretaker of their son Jamie. As sketched earlier in the chapter, his professor had been accommodating, allowing Johannes to bring their son to work and also paying a small salary for the hours he was present at the lab. In addition, the couple had an agreement that, as their move to Japan had been Johannes’ decision, it would be Elaine’s turn to choose the place to go next. During the time we met for conversations, Elaine had applied for two positions in North America and was waiting to hear if either of the labs would be ready to accept her. Due to these factors, Johannes had not applied to any other positions at the time and was contemplating his employment options while taking care of their son while Elaine was at work.

During our first meeting, I asked Johannes and Elaine what their daily routine looked like, and, while Elaine focused on her tasks at work and the pleasure of coming home to a prepared dinner, Johannes responded:

These days? [Laugh] Diaper, and then the bottle, then sleep, and then possibly another diaper. [Laugh] And another bottle. [Laugh] Personally, I try to work a bit on my computer when he [Jamie] is sleeping, but sometimes it's challenging. When he goes to daycare, I can go to the lab and work the whole day. Yeah, that's basically my routine.

For Johannes, as the short response suggests, his sense of masculine self was constituted by a fluid intersection of his role as the main caretaker of his and Elaine's son, his concerns about financially providing for the child in the future, and his desire to continue research work. Importantly, it was the configuration of transnational scientific labor regimes and the peculiarities of Japan's research institutions that, on the one hand, allowed Johannes to juggle the responsibilities and enabled him to imagine a multitude of ways of constructing "alternative masculinities" in the present, and, on the other hand, disallowed him this possibility in the future. While Johannes embraced the "alternative model of professional success" by bringing their son to the lab, navigating his research work around Jamie's nap-time, taking care of the couple's home, and conspicuously situating himself as a caring parent who invests time in creating the best possible environment for his child, this practice was enabled by several factors. Among others, Johannes' "alternative masculinity" was made possible the relative luck Johannes and Elaine had had in finding research positions so close to each other in the first place, the support from both Johannes' and Elaine's professors and coworkers, the specifics of Johannes' project and his position in the lab as a relative outsider that allowed him to accomplish certain research related tasks from home, and Elaine's ability and desire to return to work a few weeks after childbirth. Johannes was acutely aware that the present configuration of factors would not be able to last once they left Japan, and contemplated his options upon their leave. Importantly,

however, neither Johannes, nor Elaine wanted to prolong their stay in Japan. While their contracts had been extended for another year and Johannes' project was not finished, the couple considered Japan to be an unwelcoming place and did not wish to, as they put it, "integrate" in the country by staying there longer and learning Japanese language.

When I inquired Johannes how he imagined his work future, he was torn between the wish to complete his research project and finding a different kind of job to support his son. While by no means did he picture himself as the sole provider, Johannes was aware that Elaine may not be able to get either of the postdoctoral research positions for which she had applied and the couple may have to look for other options. Johannes was aware that the "alternative standards of masculinity" that he was able to embrace while working at his institution in Japan and that allowed him to develop a synergistic sense of masculine self as a researcher, provider and involved parent, would not be available anymore – at least not in the particular configuration and balance – once his family left the country. Considering care for his son both in terms of financial responsibility and parental presence and care work, and hoping to complete the research project in which he had got involved as a PhD student and had invested two years as a postdoctoral researcher, Johannes struggled to compose a masculine selfhood that would allow him to focus on these two aspects of his life that he found important. While he was passionate about his research – and also realized that the completion of the current project and the resulting publications would bring him closer to the possibility of an academic position in the future – Johannes realized that he may have to continue it in his free time and as unpaid work if he wanted to see it complete. As Johannes put it toward the end of one of our conversations:

Everybody needs a salary. I have a son. I'm in a special situation. Of course, I prefer to do it [research project] in a lab, but if I need a salary I'll go work for somebody and not do my project. It's a luxury. That I'm trying to entertain.

Ironically, as in the case of Karl, it was the entrepreneurial aspect of Johannes' self – the one that considered working as a sales representative “nine to five, Monday through Friday” to provide for his family – that seemed the easiest to achieve. Research, the work he had been trained to do and was enthusiastic about, was relegated to the sphere of luxury in the potential masculine selfhood that Johannes envisioned for himself after leaving his lab in Japan, marking a shift in the “alternative standards of masculinity” that were available for him.

For Johannes and Karl, as well as for many other foreign male scientists who worked in temporary positions at research institutions in Japan, their time in the country allows them to develop and embrace an alternative model of scientific masculinity – or a “composite masculinity” that grows out of a particular configuration of competing forms of masculinity. These developments are shaped by the context of transnational scientific labor regimes that promote global movements of scientific workers, and the structures of Japanese research organizations that situate short-term foreign researchers as residing partially outside the local hierarchies. Through references to the importance of family relationship, foreign male researchers fashioned their masculinities in opposition to those they often witnessed at their workplaces: absent husbands and fathers staying at the workplace for long hours in the name of science and their future careers. By claiming to be different from this model and highlighting the importance of family life, foreign male scientists made sense of their liminal position within the structure of scientific production to which they belonged only temporarily.

However, as I have highlighted in the first part of the chapter, the liminal positionality of foreign women scientists does not necessarily render them willing to develop and claim their own alternative femininities. Rather, female scientists need to construct and position themselves as scientists-on-the-move, unaffected by their gender and even residing – or at least working –

outside it: evaluated only on the merit of their research work and unaffected by the gendered inequalities and insecurities that permeate the structures of scientific production around them.

6.0 HOME AND HOPE AT WORK

The Japanese government policies in the 1990s contributed to a sharp increase in the number of young Japanese researchers with advanced degrees and, at the same time, decrease in permanent positions and funding opportunities. In addition, the more recent science and technology policies have encouraged the influx of foreign researchers into the labor pool, which provides scientific workers for mostly temporary positions. This chapter discusses two sides of the same coin: state policies that, in an increasingly global context, both facilitate scientific production and keep it under control, and the diverse ways researchers make sense of and respond to the new demands of transnational mobility that the state engenders. Suggesting that, due to the strict government oversight over scientific production and its labor force, Japan emerges as a site where global trends are intensified and rendered highly visible, I focus on the strategies of hope early career foreign researchers in Japan employ to make sense of their work and personal futures – that is, finding immobility in an increasingly mobile world.

6.1 TRANSNATIONALLY MOBILE SCIENTISTS AND THE STATE

That scientists constitute a highly specific group of vulnerable workforce was persuasively argued by Chandra Mukerji (1989) more than twenty-five years ago, in her work on the relationship between scientists and the state. It is crucial to understand, she points out, that “[t]he

successful use of science by the state give *science* a potential value so great that it cannot be ignored. But *scientists* are rarely given much power” (Mukerji 1989: 85; emphasis in original). Focusing on scientific production in the United States during the Cold War and the relationships of structural dependency that scientists build with various government institutions, that is, the state, Mukerji argues that scientists emerge as a group of what she refers to as “an elite reserve labor force” (1989: 6). That is, scientists – particularly those on research grants – “are supported by governments and industries so their honed skills will be available when they are needed (by, for instance, the military in the case of war, by industry in case there are major changes in the direction of the economy, or by the medical community if there is an outbreak of some new and threatening illness)” (Mukerji 1989: 6). Continuation of their funding and, by proxy, employment, Mukerji points out, does not necessarily depend on scientists’ intellectual contribution or scientific accomplishments; rather, it reflects their availability, “hidden within the ‘reward structure’ of science” (Mukerji 1989: 11), for mobilization for state and also private interests. However, due to a sense of control over their intellectual lives, scientists themselves often feel autonomous in their relationships with the state and fail to notice the structural vulnerability built in the relationship – even as they consider themselves to have earned the “right” to stability. Importantly, as Mukerji points out, “[e]ven belief in their autonomy itself serves the state as well as scientists,” as it makes researchers “more politically disengaged and more creditable as detached advisors” (1989: 87-88).

Even though Mukerji’s use of the “elite reserve labor force” has military connotations, infused by the Cold War context, and even though the specific state interests may have transformed as a result of the geopolitical changes over the past twenty-five years, her focus on scientists as a group of inherently vulnerable workers, dependent on state “patronage,” adds

another dimension to the question of the transnational mobility of science workers. In a global context that witnesses ever-increasing movements of knowledge workers, their relationships of dependence with the state take new forms that, in turn, render the dependency increasingly more visible and, as the voices of my interlocutors show, questioned and contested. In addition, the local context of Japan as a country the research organizations of which, in comparison to other advanced capitalist economies, host a comparatively very low percentage of foreign-born scientists⁸ renders the relationships with the state that they are encouraged or discouraged to build even more complicated, highlighting the socio-economic vulnerabilities and revealing cracks in the ideal of intellectual independence. For my interlocutors, scientific autonomy was quite explicitly more of an ideal rather than practice. They discussed “the Japanese taxpayer” to whom they felt responsible for spending a fraction of the country’s science and technology budget; they talked about the ministry or funding agency officials visiting their workplaces to receive project updates; and they openly mused about research misconduct cases that they at times suspected happening around them. That is, in comparison to Mukerji’s interlocutors in the United States of the late Cold War period, my research participants were quite aware that their work at Japanese institutions had been made possible by state policies and state interests – both those listed under the slogan of “internationalization” and “globalization,” as well as those reflected in science and technology policies.

Sharon Traweek’s work on the strategies Japanese physicists employ to negotiate their position within the political landscape of Japan, as well as to join “the international political economy of science” reveals that, in multiple ways, the Japanese researchers’ engagement with

⁸ Only 5% of the scientific community in Japan are constituted by foreign scientists. In comparison, 57% of the scientific workforce in Switzerland, 38% in the United States, and 23% in Germany are foreign-born (Noorden 2012).

local and international power structures is conspicuously ingrained in scientific practice (1992; 1996; 2005; 2012). As she remarked on the community of her research in mid-1990s, “Japanese physicists are divided by region, gender, generation, subfield, institution, national and international politics, ties to government agencies, and conceptual and linguistic ways of representing their subject to each other. [...] Certainly one could say the same about American physicists, but the distinctions would be trivial by comparison” (1996: 181). Traweek suggests that Japanese scientists – physicists in the case of her study – are more attuned to power negotiations and political bargaining than their American counterparts who would express their surprise at the oftentimes deep engagements Japanese physicists had with ministry officials – and the power these officials possess as representatives of their institutions.

Thus, for instance, the intricacies, details and stories of planning and building Tsukuba Science City, Traweek argues, are erased and submerged in the grand narrative of Japan’s Ministry of Education, Culture, Sports, Science, and Technology (MEXT). Rather than scientists, technicians, or people living in the region for generations, it is the bureaucracy and the state it serves that claim the responsibility for the process and, by proxy, the scientific advancements that have been made at Tsukuba Science City. As Traweek (2005: 379) points out,

Clearly, *Monkasho* [short for the Ministry of Education, Culture, Sports, Science, and Technology in Japanese] is far more pervasively influential within Japanese universities and research institutes and laboratories than most American academics could imagine. It is easy to see how their enormous power to either resist or deliver change could have strongly influenced any group of academics or researchers in Japan. So what do such massive, hierarchical, extensive, highly centralized, and very powerful national bureaucracies accomplish with their genealogies of convergence, their construction chronicles, and their erasure of names? They affirm that they, and they alone, have built Tsukuba.

What Traweek’s accounts suggest is that in Japan the structural dependency of scientists on the state is more visible and straightforward than that in the United States; engagements with

government officials and the institutions they represent are conspicuous and engendered in the everyday activities of science workers. They shape the work and personal life choices of both Japanese scientists and foreign researchers in Japanese institutions. Tsukuba Science City set the precedent in Japan of a campus-based research organization (Traweek 2005; 2012). The new type of project-based and – at least in the name – interdisciplinarity-oriented research organizations, established by the MEXT over the past few decades, in turn, create new types of project-based employment for science workers; they exist in parallel to the more established system of striving for secure full-time employment. Similarly, the establishment of highly competitive multi-year project-based grants such as *Sakigake* that every funding cycle call for applications addressing a specific government-chosen theme, alongside smaller grants available to larger numbers of scientists, also participates in the production of a particular kind of scientific work and science worker.

The state, thus, is actively involved in creating specific kinds of choices for its science workers – including foreign researchers. For instance, those of my interlocutors who had arrived in Japan on MEXT scholarships to enroll in PhD programs were highly aware of the repercussions for not finishing their degrees in the set timeframe of three years. Even though theoretically it was possible to extend their stay and aim to graduate at a later semester, cancellation of the MEXT scholarship would mean incredibly precarious living conditions, unless the student's professor would provide some funding from the resources of his or her lab. While there was always a risk of one's experiments not yielding the expected results or the relationship with one's "boss" going sour, or any other unexpected event happening that might jeopardize the completion of the program, it was the government scholarship timeframe – rather than that of the university requirements – that guided my interlocutors throughout the programs

of their study. They all knew or had heard of people who had not managed to complete their PhD work on time and were left in the limbo of trying to accomplish some lab work and get by financially – usually by providing English lessons at English conversation schools or in private capacity. For my PhD student interlocutors, their intellectual endeavors were both facilitated and managed by the state; while the goals of their professors and relationships with them affected the work of doctoral students more directly, the timeframe of the Japanese government scholarships they received shaped their work at the state level as well. Importantly, it was the timeline set by the government scholarship that seemed to shape the way most of the PhD students in my study envisioned their next career steps.

Similarly, recipients of Japanese government scholarships at the postdoctoral researcher level, such as the Japan Society for the Promotion of Science (JSPS) research grant for overseas researcher, are also guided by the state in their work. As the English page of the international fellowship website states, “[t]o promote international scientific cooperation, the Japan Society for the Promotion of Science encourages highly qualified researchers from the worldover [sic] to come to and conduct joint research activities with colleagues at Japanese universities and research institutes” (JSPS 2010a). The presence of early career foreign researchers in Japan, then, is also enabled in large part by the Japanese government’s science and technology policies. While, undoubtedly, there are Japanese professors who are willing and even eager to accept foreign researchers in their labs, the state support to cover young foreign scientists’ salaries – just like MEXT scholarships in case of PhD students – provides a significant push for institutions to invite and accept scientific workers from abroad. Those of my interlocutors who had arrived in Japan on JSPS grants were aware that their presence was due in large part to the state initiative and funding (therefore the references to “the Japanese taxpayer” that some of them would often

make). For most of them, looking into information about funding opportunities in Japan and funding applications had come first; searching for specific labs where they might work and contacting potential supervisors came afterwards. Of course, there were postdoctoral researchers on JSPS and other Japanese government grants who had had previous connections with their “bosses” in Japan and had embarked on the application process with the notion that they were asking for funding to work in specific institutions and with specific scientists. Even in such cases, however, actually receiving the government fellowship was a crucial step in gaining employment in the chosen institution; it implied earning a salary that was higher than the one Japanese researchers at the same level received or the one available to other foreign researchers who were not on JSPS grants.

On the other hand, while the state funding ensured financial security for the duration of the grant period, my research participants were well aware that their options afterwards were restricted. Some of the postdoctoral researchers could count on their professors to hire them from the budget of their labs or larger project grants; others were clearly informed that there were limitations to the period of their employment. In both cases, however, institutional restrictions and the requirements of the funding source often came to be conflated. Thus, my interlocutors would often speak of the timeframe they saw as available for them to remain at their current institutions or in Japan in general. Some of them knew that they had to leave the country within a few days upon the completion of their contracts, and there were no other options available; they would count the days – happily or sadly, depending on their overall experiences in the country – until the departure and either get ready for their next position in a different part of the world or keep looking for a job. Others knew that the terms of their contracts were more flexible. For instance, one might speak of “a three-year contract with a possibility of extension for two more

years,” but it remained ambiguous whether this period was imposed by the funding source, institutional requirements, or a combination of both. (After all, at times even the fate of entire research institutions was unclear for the future beyond a few years.) Nevertheless, these timeframes were crucial points of departure for the ways my interlocutors envisioned their future possibilities; just like PhD students on MEXT scholarships, the intellectual endeavors of postdoctoral researchers were both made possible and, at the same time, regulated and limited by state projects.

The state involvement was also directly experienced by more senior scholars – and their teams – who had received government funding for larger research projects. They had to attend and participate in regular review meetings with government officials, attempting to explain and rationalize their research to bureaucrats who, as they suspected and as one of my interlocutors suggested, “don’t understand what’s going on.” The same scientist saw grant review meetings as “walking through a mine-field.” He knew that reviewers’ questions would be future and output-oriented, but did not feel comfortable talking openly if the research was “difficult” and not much had been published; he could not be sure about what and whose interests were also represented in each review meeting, apart from those of Japanese taxpayers. Both his scientific work and what this researcher saw as the “PR” aspect of it – the review meetings – were clearly shaped by state policies and the specific ways they were implemented.

That even seemingly minor details of the financial aspects of one’s scientific work were overseen and managed by state regulations emerged in a conversation with an associate professor towards the end of the fiscal year. He was a recipient of several government grants. When we met, the scientist had just returned from a university shop where he and one of the postdoctoral researchers on his team had spent several hours trying to calculate how many paperclips and

post-it notes the lab should purchase in order to spend the allocated research budget to the very last yen. Leaving any money unspent, he said, would cause more trouble than that it was worth.

Looking slightly harassed, he said:

These are little hiccups like these [that] happen in Japan. And it's part of the deal where everyone says you can't do anything about it. Things like that. And I almost agree now. I don't know how you'd even start changing that – except destroying everything.

One of the themes throughout the dissertation chapters has been the notion that, among foreign researchers, “Japan” emerges as an explanatory mechanism for a wide variety of at times drastically different practices and experiences. What I want to suggest with the accounts and experiences described in the paragraphs above, is the idea that the state – intertwined with intuitional practices, relationships of dependency, and experiential divisions along the gender lines – is deeply entrenched in the very fabric of the ways young scientists imagine their present and future as shaped by their work in Japan. On the one hand, as Traweek points out, the MEXT leadership and oversight over scientific processes and intellectual endeavors in Japan may indeed be more powerful and influential than in other advanced capitalist economies. On the other hand, I want to suggest, the state control is also more visible: unlike Mukerji's interlocutors in the Cold War United States, my research participants were acutely aware of the state involvement in shaping their lives. In addition, it is not only one's supposed intellectual autonomy, but also its intertwinement with the choices one can make in his or her personal life as well. For my interlocutors, these considerations are submerged in their “Japanese” experience. That is, their experiences are explained as having specifically “Japanese” characteristics even though, as I want to suggest, they reflect trends in scientific production, mobility of science workers, and their labor conditions that are relevant in other advanced capitalist economies as well. Japan offers intensification of experience: it renders visible the aspects of scientific work – state

control, institutional and personal structures of hierarchy, demarcations by gender, the push toward mobility and project-based employment – that shape the work and personal lives of scientists around the world.

It is crucial to keep in mind, however, that state projects, such as those of the MEXT and other Japanese government policies, are not engineered in a vacuum: *gaiatsu* (“foreign pressure”) has often been used as a point of reference and a measure to transform the country’s socio-economic landscape. As Sharon Traweek suggests, in science as well as other spheres of Japan’s socio-economic and political life, *gaiatsu* has been an important strategy to implement, for instance, legislative changes. Thus, Traweek points out, the establishment of Tsukuba Science City can be partially attributed to eminent Japanese scientists persuading government officials that, in order for Japan to gain proper entry into the club of world economic powers, it needed to prioritize basic research and build institutions for that purpose – because that, they claimed, was a common practice in North American and European countries (1996). Funding for specific large scale physics projects, she adds, was also secured through negotiations among various factions of bureaucrats and physicists through strategic use of *gaiatsu*.

Since the collapse of Japan’s “bubble economy,” however, *gaiatsu* as a strategic tool has gained an increasingly neoliberal face. As Tomiko Yoda asserts in her assessment of Japan in early 21st century, “the ideology of economic globalization has given further clout to the Japanese state’s conventional tactics of using foreign pressure (*gaiatsu*) as a shield to push reform measures that benefit select economic sectors and businesses while muffling the complaints of interest groups that oppose them” (2006: 23). Scientific production has not escaped this trend. The establishment of project-based and interdisciplinarity-oriented institutions, as well as the gradual restructuring of the funding system to provide large, set-term

grants for individual projects and encourage university-industry cooperation reflect this direction. Similarly, attempts to quantify and measure the research output by aiming towards a higher fraction of *Nature*, *Science*, and *Cell* (that is, high impact factor) publications by Japan-based scientist emerge both in Japan's science policies and my interlocutors accounts of their practices.⁹

What interests me here is the notion that for the past decade or so, Japan has been particularly admonished for its low numbers of women researchers and foreign scientists. That these problems are often paired together is reflected in the "Japan highlights" of the 2015 OECD Science, Technology and Industry Scoreboard (OECD 2015) that states the following:

Despite a large, but declining, volume of scientific production, the "quality" of research in Japan is below most OECD countries as measured by top-cited publications. Japan has *a low share of internationally mobile researchers and relatively low levels of international collaboration*. These indicators point to Japan as being among the least connected economies in the OECD. Another key challenge for Japan is *fostering participation rate of women in science*. (Emphasis added.)

Intriguingly, while, for instance, anthropologists have long argued that scientific production in Japan is a highly gendered enterprise in ways that are more visible and straightforward than in other advanced capitalist economies (Traweek 1988; Coleman 1999), most of the recent admonitions are phrased in terms of Japan's failure to tap into the potentially

⁹ Again, such a trend is not unique to Japan. For instance, in their account of the shifting language of European Union science indicators, Mads P. Sorensen, Carter Bloch, and Mitchell Young (2015) observe

a distinct shift in the understanding of excellence and how success in the knowledge-based economy should be achieved: in the early period, excellence is a fuzzy concept, intrinsically embedded in research and researchers and revealed by peer review. In the later period, excellence is more sharply defined and connected with a particular sort of knowledge that which produces breakthroughs; the result is that policy-makers have turned their focus towards directly steering and controlling what is increasingly considered to be the key element for success in the knowledge-based economy.

available labor pool. Thus, an editorial in *Science* (Nagata & Yamanaka 2013: 407) – one of the authors of which is Yamanaka Shinya, a recent Nobel prize laureate – refers to Japan’s low employment of female researchers as “vast underutilization of female talent.” A *Nature* editorial (2013), in turn, draws a direct link between scientific production, economic concerns, and the employment of women scientists:

With competition growing, especially from China and South Korea, Japan’s position as a scientific power is no more secure than its status as an economic power. The Japanese government seems to be waking up to *women’s potential importance to the economy*. Making the most of their talent could be just as potentially transforming for Japanese science. (Emphasis added.)

The Japanese government, taking into consideration the outside pressure – or, as Yoda sharply suggests, making use of it – lists the increase in the percentage of female scientists and various forms of international cooperation among its goals (Council for Science and Technology Policy 2010; Cabinet Office 2016). While bureaucrats attempt to transform the environment of scientific production and institutional actors, in turn, resist or embrace the change (see also Poole 2010), those who are mobilized to improve the country’s socio-economic situation and global appeal attempt to make sense of their professional and personal lives as transnationally mobile science workers.

6.2 THE IMMOBILITY DREAMS OF MOBILE SCIENTISTS

In previous chapters, I outlined the ways and contexts in which foreign researchers in Japan understand their engagements with the country and its research institutions as practices that are shaped by their experiences of gender, relationships of dependency, and self-affirmation as

“foreigners.” Here, I turn to the discussion of their hopes for the future and elaborate the ways in which my interlocutors embrace or resist the global mobility discourse that, in many cases, brought them to Japan in the first place.

I want to suggest that it is useful to conceptualize both Japanese and foreign scientists as drawn into the cycle of what anthropologist Biao Xiang (2006) calls “virtual shortage” of labor. In his discussion on the global migration of Indian IT workers, Xiang argues that, as opposed to a real labor shortage, in the late 1990s there existed a virtual shortage of IT labor. According to Xiang (2006: 14–15), the global IT industry defined “skills shortage” as the estimated demand for workers with a very particular skill set at a very particular moment and did not take into account the number of unemployed IT workers whose skill sets could have been updated and redirected to meet the requirements. That is, despite the rhetoric otherwise, the actual gap between labor supply and demand mattered less than the corporate employers' desire for “an ever enlarging labor supply to maintain the momentum in their expansion” (Xiang 2006: 17).

While it may seem counter-intuitive to compare the exploitative systems of transnational labor mobility of IT workers in the 1990s to contemporary movements of scientific workers, it is illuminating to examine the similarities between the practices. First, Xiang (2006: 14–19) points out that a high level of labor mobility has not always been an inherent element of the industry, but was born out of a very specific set of political, economic and technological circumstances. Similarly, as Terri Kim (2009; Kim and Brooks 2012) argues, there has been a sharp increase in the scale and speed of academic mobility since the 1990s. While movements between institutions of higher learning have long since been common practice in the Euro-American world, contemporary political and economic regimes have systematized and normalized mobility of researchers to the extent that it seems inherent to knowledge production itself. Second, like the

rhetoric of “skills shortage” in the IT industry, contemporary discourses would make us believe that “the global competition for the talent is growing” and many countries “aim to attract the same pool of highly skilled researchers and scientists” (OECD 2008: 16). Less touted are the contracts these scientists, especially early career researchers, are offered (Carrozza and Minucci 2014; Muller 2014; Muller and Kenney 2014), as well as the unpredictable global and regional shifts in research areas that receive most funding and require most scientific workers. Finally, Xiang elucidates that even though many of the transnationally mobile Indian IT workers found themselves in a perpetual loop of waiting and hoping for actual positions to open, many more young Indian men – and their families – kept devoting precious resources in earning professional credentials with hopes of leaving for work in the global IT industry. In a similar vein, social scientific research shows that young early career researchers around the world (Carrozza and Minucci 2014; Fahey and Kenway 2010; Leemann 2010; Muller 2014; Muller and Kenney 2014), and also Japan (Murakami 2010) invest hopes in transnational mobility. In many cases, they perceive the experience as an asset towards career advancement that may put them in advantage in the race for a very limited number of permanent positions or – that being the case with several of my research participants as well – as a “safety valve” (Carrozza and Minucci 2014) when other options seem to have dried out.

How, then, should we conceptualize mobility of scientific workers? In recent years, social theorists of mobility have called for an understanding of social life as inherently mobile. Mobility scholars' efforts to conceptualize human movements across space seem to be greatly invested in attempts to break down binaries and confuse boundaries of various kinds: those between migration and mobility (Castles 2010), mobility and stasis (Salazar and Smart 2011; Glick Schiller and Salazar 2013), or practices and meanings of mobility (Salazar 2011). They also question the usefulness of conceptual differences in analyzing various forms of movements

(Sheller and Urry 2006). At the same time, mobility scholars are greatly sensitive to what Mezzadra and Neilson (2013) have called “the proliferation of borders.” It refers to the unequal power relationships between those who are deemed to be worthy of mobility, and those whose movements are considered illicit by various national and transnational bodies of authority. As Mezzadra and Neilson (2013: ix) point out, borders – both those of the quite physical kind and the symbolic ones – “far from serving merely to block or obstruct global passages of people [...] have become central devices for their articulation.” That is, people on the move are defined by their relationships to borders or, as mobility theorists might suggest, their level of “the ease of travel” (Glick Schiller and Salazar 2013: 188).

What strikes me as particularly thought-provoking in the context of the lives-on-the-move of foreign scientists in Japan, is the convergence of two assumptions that seem to be shared by mobility scholars: first, that mobility is – and should be – normalized both on a conceptual and a political level; and, second, that, despite the dislike of binaries, there exists an assumed dichotomy between the “haves” and “have-nots.” For instance, while Salazar and Smart (2011: v) agree that “there is no clear cut separation between choice and constraint, between forced and voluntary mobility,” they argue that “[m]obility may well be the key difference and otherness producing machine of our age,” suggesting that immobility is necessarily problematic and restrictive. In addition, transnational movements of scientists tend to be considered to be those of the “haves.” That is, scientists – generally listed among “the highly skilled” (OECD 2008) – seem to be situated on the side of power because their mobility is not to be restricted. Quite the opposite: from a policy-oriented view, scientists require gentle, yet highly regulated encouragement to *keep moving* for the advancement of global economy (see OECD 2008).

I do not want to claim that scientists in their patterns of transnational mobility encounter equally harrowing constraints as manual laborers or asylum seekers around the world, or suggest that foreign researchers in Japan face the same difficulties as other groups of migrants in the country (Douglass and Roberts 2003; Faier 2009; Liu Farrer 2011). Rather, I want to examine the very particular set of mobility – and, importantly, immobility – related concerns that are experienced specifically by transnational scientific workers in Japan. After all, transnational mobility of scientists, as can be glimpsed from recent OECD reports (2008; see also Appelt et al. 2015), is considered to be crucial for global dissemination of knowledge which, in turn, is supposed to increase national and transnational capacity for innovation and lead to global economic development. The main concern of such narratives is to posit mobility of the highly skilled as a cornerstone of hope for national economic advancement; researchers themselves are relevant only to the extent that they alleviate national anxieties by productively participating in knowledge circulation. In contrast, my chapter aims to focus on individual hopes and aspirations, and serve as an examination of transnational scientific mobility from below. Investigating the meanings foreign researchers invest in their temporary stays in Japan, it sets out to elucidate the ways in which practices of mobility both engender and are enabled by the highly personal and individualized hopes of scientific workers themselves.

To tease out the relationship between mobility and hope, it is useful to remember Noel B. Salazar's (2011: 576) argument that mobility always involves “much more than mere movement.” Imaginaries of mobility and practices of mobility converge and cannot be separated. As Salazar points out (2011: 586), “[m]igration is as much about these imaginaries as it is about the actual physical movement from one locality to another and back.” Mobility imaginaries build on cultural contexts, as well as on individual aspirations and anxieties. Hence, hope constitutes a

powerful mobility imaginary; as such, it is also inevitably intertwined with the practice of mobility. At the same time, the images, messages and personal experiences that enable specific mobility imaginaries – including hope – are often contradictory (Salazar 2011).

Thus, similarly to Italian early career researchers in Carrozza and Minucci's study (2014), encouraged by popular and policy discourses on transnational mobility of the highly skilled, my research participants often regarded the idea of mobility *as such* to be positive. At the same time, they sensed the image to be in disconnect from their own practices of mobility and experiences in Japan. For instance, rather than conceptualizing their move to Japan as pursuit of knowledge or even a confidently hopeful step towards career advancement in their home countries, they spoke of economic necessity to accept a position at a Japanese lab, a forceful mentor in the home institution who pushed toward the move, or a failed job search in other parts of the world. In a similar vein, the image of global knowledge circulation as a desirable practice in the minds of my interlocutors competed with their own experiences of what they perceived to be lack of scientific discussions, abundance of unnecessary meetings, and social exclusion in their Japanese workplaces. Images of Japan as a country of high scientific and technological advancement and efficiency were often muddled upon experiencing first-hand the institutional and social mechanisms of scientific production in place; in turn, “everywhere else in the world” or “the West” came to substitute Japan as the mythologized locales where innovation practices and human relationships are supposed to “work better.”

Mobility as a configuration of practices and imaginaries, as well as the dissonance between different imaginaries and practices enable and, at the same time, rely on hope as a personal and social resource. Hirokazu Miyazaki (2006: 149) argues that “hope lies in the reorientation of knowledge” and shows how, for instance, certain economic concepts, supported

by their associations with rationality and logic, may serve as sources of hope in uncertain times. Even as his notion of what constitutes “rationality,” “trust” or “logic” shifts over time, Miyazaki's interlocutor continues to draw on these ideas to situate himself within the larger socio-economic context of recessionary Japan. While Jarret Zigon (2009) distinguishes between hope for a better life and the more existential hope for a “sane life,” characterized by attempts to make sense of one's place in the social world, Miyazaki's interlocutor's method of hope serves as means of maintaining both. I want to suggest that my research participants are engaged in similar personal projects: in order to make sense of mobility practice, they invest meanings and hopes into mobility imaginaries whose content changes over time. That is, hopes that many young scientists direct towards their future lives – such as dreams of a permanent position, departure from Japan or, quite the opposite, finding a way to stay in the country longer – help them deal with the uncertainty-ridden present.

While allowing for the fact that hopes are generally put to work to project a more stable future, it is crucial to keep in mind Sara Ahmed's (2010) suggestion that there might also exist a relationship between hope, injustice, and temporal orientation towards the past. Arguing that “[h]ope could be described as stubborn attachment to a lost object, which stops the subject from moving on,” Ahmed (2010: 188–189) points to a more complicated potentiality of hope or, rather, “hopeful subjects.” Hopefulness, she suggests, may disguise unjust configurations of power which remain invisible due to the absence of immediate suffering, thus rendering hope a “technology of control.” I want to suggest that it is precisely the immediate invisibility of power, disguised in rhetoric of transnational mobility as an inherently good process, that prompts young scientists to enter the regime of virtual shortage of scientific labor and accept transnational mobility as an important part of scientific subjectivity. As I wish to show in the next part of the chapter, encounters with Japanese

institutions prompt the young foreign scientists of my study to question the practices and imaginaries of transnational mobility, envision their lives in Japan embracing or rejecting this ideal, and devise various strategies of hope – thriving, trying to adapt, making it work, resigning, and quitting – the foreign scientists employ to make sense of their position within the larger global regimes of scientific production, as well as the particular practices of scientific work at Japanese research institutions.

Scientists, suggested Bill, a very energetic principal investigator at a neuroscience lab in Osaka, should take risks not only in science, but also in order to get out of their comfort zones. They should know their value and participate in the free market, he continued. For Bill, transnational mobility was an opportunity to do just that: to assert his value within the global scientific labor regimes. In his late 30s and from a European country which prides itself to be one of the global centers in his field of research, Bill was very, as he called it, “brand sensitive.” Claiming to possess a global perspective of the ways science should be done and offering a highly structured narrative of the aspects in which he saw Japan as still lacking in this enterprise, Bill was invested in improving the image of his host institution. During our first conversation, he proudly pointed out that the research center's newly upgraded website had been his project. The website, indeed spectacular in comparison to its older version, had been a topic of conversations among the researchers working at the center, as Bill had employed a professional photographer to capture interesting pictures of the institution's scientists to add to the website. The photos had to be appealing, Bill explained to me, and show the researchers happily working in the newly built and spacious institute. There had been only one professor, he noted with both pride and slight disappointment, who had refused to smile for the camera. For Bill, the new website represented an attempt to “market” the institution to potential international collaborators and postdoctoral researchers. While highly organized in his criticism of

the practices of scientific production in Japan (he even brought a couple of *Nature* and *Science* articles outlining these issues to our first meeting), Bill defined the purpose of the new website as a project of “mak[ing] science *seem* international.” That is, on the one hand, Bill saw his host institution's efforts to seek out and hire foreign scientists to be merely perfunctory. He ironically regarded himself as the “token overseas person” in his research organization, thus expressing criticism of the ways Japan's scientific mobility oriented policies were actually enacted. On the other hand, Bill hoped to present an exciting image of the institution and attract “enthusiastic” postdoctoral researchers through the polished new website, thus participating in the development of images whose purpose was to create specific mobility imaginaries in potential applicants abroad. Despite the increasing numbers of graduate students and early career researchers in the country, Bill did not find them fitting for the work he envisioned at his institution. He felt there was “no free market of junior scientists” in Japan and hoped for the “enthusiasm” of young foreign researchers to fill the void. Thus, paradoxically, while critical of scientific production practices in Japan, Bill was not only engaging in his own mobility project, but also participating in creating mobility imaginaries and enabling mobility practices of others within a system he considered inefficient.

While his critical assessment of the unfamiliar ways science is “done” in Japan was a sentiment shared by several of my interviewees, Bill's narrative lacked the frustration many others felt. After all, as he pointed out, this was a temporary appointment for him; a permanent one was waiting back home where he would return in a year. Thus, for Bill, the move to Japan was to be embraced and to be enthusiastically enjoyed, as it constituted a temporary, rather than a permanent break from his institution in Europe. At the time we met, he did not consider prolonging his stay in the country either. Bill was thriving, and his mobility practices most resemble those of an ideal-type

transnationally mobile scientist (Leemann 2010) who embraces flexibility and applies his research skills to any position he finds beneficial to his career advancement.

A more complicated take on mobility and hopes associated with it can be glimpsed from the narrative of Daniel. A bioscientist in his late 30s, he had been living in Japan for more than eight years when we met. Critical of the state of research in his field in his home country and fascinated by Japanese culture, he had arrived in Japan from southern Europe to work as a postdoctoral researcher at a lab in one Kansai city; after several years there he moved to a lab in a different city in the Kansai region. While he found the environment in the new lab toxic and was clearly frustrated with his “boss” during our conversations, he was determined to “make it work.” After all, he said, he was married and had two children. His wife – herself half-Japanese – was working part-time as a language instructor, and Daniel felt that he was not well positioned to find a new job, as he and his family were not ready to leave the Kansai region. Therefore, he told me, he would try to not let the frustration he felt at the lab every day affect his work. Instead, Daniel emphasized, he would focus on mastering the language to reach a level of proficiency that would allow him to apply for Japanese government grants in Japanese, thus making him stand out – that is, be more competitive – among other foreign researchers in the country.

While Daniel and I used to meet for conversations quite regularly, I had not seen him for two months when we met again at a local coffee shop. Very excited, he told me that, first, his “crazy” boss had quit, leaving the lab in disarray and Daniel's own position in the institution quite uncertain, and, second, that he had bought a house. He showed me pictures of the purchase and pondered remodeling plans. Confused, I asked if he felt safe buying a house that tied him to a particular place, considering the recent upheaval at work. After all, Daniel himself had explained to me before that not only was his lab at a constant risk of being dismantled, but also the future of the research institution

itself was uncertain, as it had been established by the Japanese government in mid-2000s with a specific end date in sight. His response to my baffled inquiries was: “If I waited to have a stable job to buy a house, I would never actually do that.” It is clear that Daniel's mobility imaginaries and practices are quite different from those of Bill's, pointing to the problematic aspects of transnational scientific mobility and the discursive attempts to naturalize it.

In her article on the destabilization of the notion of citizenship and the mutating forms of belonging in Asian megacities, anthropologist Aihwa Ong (2007: 89) has argued that “professional nomads,” including scientists, “are at once situated and circulating, and they embody a kind of market citizenship – occupation-driven, mobile, temporary residence, here today, gone next year – bodies that express the sign value of the extraterritorial reach of the global city itself.” According to Ong (2007: 91), the global nomad is “an ultimate ‘city resident,’ a betwixt and between figure” whose body and skills are crucial for the reconfiguration of the fabric of the city to which he or she has been temporarily drawn. While Ong theorizes the ways in which the notions of citizenship transform along with the flow of foreign bodies circulating through the city, I want to ask what happens at the moment when the bodies of “nomads” – young scientists in my case – attempt to become less “nomadic” and take the risk of turning immobile. That is, what happens when one prefers immobility and, more concretely, how is this preference experienced and realized by foreign scientists in Japan? Thus, Daniel's family circumstances and a desire to see his children grow up in a place they can call home for an extended period of time entail a loss of mobility – one of his main assets as a transnationally positioned scientist – that renders him less competitive in what Bill referred to as the “free market of science.” While his skills might be transferable transnationally, his body is much less so.

It is difficult to characterize the experiences of scientists like Daniel as those of “professional nomads,” globe-trotting and flexible in the movements of their skilled bodies. Daniel and others among my research participants who found themselves unwilling or unable to leave Japan and/ or scientific research for personal reasons felt extreme pressure to publish in high-ranking scientific journals in order to keep their high-impact publication count as high as possible and thus maintain their marketability – no longer transnationally, but rather within a limited geographical area. As the Japanese government's policies explicitly state that they aim to “considerably increase” the number of researchers “whose research papers are ranked within the top one percentile in the world's citation ranking in their individual research areas” (Council for Science and Technology Policy 2010: 26), the number of publications in high impact factor journals – along with successful prestigious grant applications – becomes the main measure of a scientist's skills and worth in the minds of institutions and researchers themselves. Hope as reorientation of knowledge for scientists like Daniel is available in very specific and quite limited directions: as they are trying to adapt, they have to rely on notions such as productivity and competitiveness of a very restricted scope to project a hopeful future.

However, the pressure to publish – and hopes for career advancement associated with it – was not shared equally among all the foreign researchers in my study. The mobility practices and imaginaries of Andrej, a close friend by the end of my fieldwork, greatly resonate with the “everyday mobility” described by Jamie Coates (2013).

In his discussion on Chinese youth in Japan, Coates (2013: 8) suggests that, rather than necessarily a sign of success, mobility may also be conceptualized as “a practical choice made within a range of options which are created by wider institutional forms” and enabled by both successes and failures. Andrej's mobility practices and imaginaries are reflective of this pattern. He had arrived in Japan as a postdoctoral researcher on a two-year contract at a bioscience lab, encouraged by his

former mentor at the institution in his home country in Central Europe and driven by the financial incentive offered. While in Japan, Andrej managed to secure extension of the contract for two more years, as he and the principal investigator of his lab came to be convinced that his project would take longer time to complete. However, for many reasons Andrej felt unable to write up and submit for publication the data he had gathered during his experiments. He confessed that he would be happy doing lab work without the pressure of publishing or expectations to produce what my interlocutors referred to as “output.” Indeed, Andrej would often stay in the lab until very late on weekdays and sometimes on weekends as well, conducting and checking up on experiments. While he knew that he was hired precisely to produce the “output,” he found the practices of scientific production at his institution to be disingenuous and felt discouraged by this observation.

However, even though he kept making self-deprecating remarks about his own inability to produce the required “output,” unlike Daniel, Andrej was not anxious about the necessity to have a research job or look for work in Japan in particular. Having taken a resigned stance towards his current position, Andrej allowed himself to have a multiplicity of mobility imaginaries and future-oriented strategies of hope. He often pondered what he might do if he decided to “quit” science; while working for a biotechnology company was the seemingly obvious answer, Andrej entertained other possibilities as well. Half-jokingly, he relished in the idea of becoming a gardener or a pastry chef. On the one hand, as an ideal-type transnationally mobile scientist, Andrej planned to stay in Japan for the length of his contract and then move on to the next locale where his research skills might be required. On the other hand, he subverted this image by subtly refusing to publicly and institutionally perform his skills through publications and grant applications. While often frustrated about what he perceived as his inability to write up his data in a manner that he himself would find satisfying, Andrej was less anxious about his future in Japan than Daniel. Even though, trying to

account for the shifts in his own mobility imaginaries over time, Andrej grew deeply curious about Japanese society, he did not perceive his mobility practices to be hindered by deep personal attachments to Japan and hopes of staying in the country.

The narrative of Yue adds another dimension to the picture. In her early 40s, Yue has been living and working in Osaka for the past ten years. Born in Beijing, unlike most Chinese scientists working in Japan, she had earned her doctoral degree at a globally renowned research institution in the United Kingdom. Upon graduation, she had gained a postdoctoral research position at an equally famous university in the United States, but found life there unsettling and quit her appointment before the end of the contract. Yue arrived in Japan on a year-long research contract and met her future husband there, thus prompting her to prolong her stay in the country. She was hired as an assistant professor at the same institution where her husband worked at the time. When we met, Yue was still working at the same institution, had a son in elementary school and, throughout our conversations, pondered her commitment to science. She felt there was insufficient exchange of ideas – both scientific and social – at her institute and was unnerved by the lack of interest in research she observed in her master's student.

At the same time, Yue was still awaiting what she referred to as “scientific breakthrough” in her work. It would be exciting, she said, if there was an important breakthrough in her research; the possibility of it kept her motivated. On the other hand, Yue continued after a moment of deliberation during one of our conversations, it would put too much pressure and expectations on her. Yue felt that she had already “failed” her mentor in the UK by moving to Japan and not having become a principal investigator at a lab within a few years of finishing her PhD; what if, she wondered, she would become a principal investigator as a result of a “breakthrough” in her research and then find herself unable to sustain the lab scientifically or financially? As Yue contemplated these issues, she

also knew her current contract would be terminated in near future. The principal investigator of her lab would be retiring in a few months, and she would have to look for a different position. During our conversations, she was considering various options for the future, including the possibility of “quitting” science and becoming a preschool teacher, as communication with children fascinated and inspired her. At the same time, she also looked for open positions at other research institutions. Not finding a suitable position in the Kansai region, Yue applied for jobs farther away and pondered what would happen to her family if she was hired and had to move.

As she considered her options, Yue felt deep commitment to staying in Japan. While she thought it might be possible to work away from Osaka bringing her son along, she did not seriously consider leaving Japan. After all, her husband had a more stable research position and she felt settled in the country. Rather, as could be glimpsed from her narrative at times, Yue would be ready to leave scientific work temporarily or permanently. Despite transnational experiences of various kinds – having been born in China, attained her doctoral degree in the UK, worked in Japan – Yue's decision to prioritize her family and stay in Japan, that is, choose comparative immobility, rendered her less competitive under the conditions of virtual shortage of scientific labor. At the same time, making herself imagine a different kind of a career path – reorient her knowledge to possibilities outside scientific work – allowed her to “make it work”: to be hopeful about the future, as both mobility and immobility provided potential imaginaries and practices. As Yue came to realize, when she considered “quitting science,” with most pleasure she entertained the idea of teaching children English through magic tricks. That is, a different mobility imaginary prompted her to shift the focus from immobility as a risk to the possibility of imagining it as opening space for a new personal adventure.

Karl, an Australian in his early 30s working as a postdoctoral researcher at a bioscience lab in Osaka, used to complain bitterly about the state of Japanese science as he saw it. He had moved to Japan following his fiancée who had also worked as a postdoctoral researcher at a lab in Osaka for some time. Having been in Japan for about one year by the time we met, during our conversations Karl with scathing humor bemoaned the way his lab was set up, the attitude the principal investigator took toward his graduate students and employees, the lack of communication and the long hours his colleagues spent at work. Karl was disillusioned by what he saw as lack of proper reward system in public research organizations as such and his Osaka lab in particular. As a postdoctoral researcher whose mobility imaginaries were not oriented toward Japan, Karl felt he could speak his mind with no restraint. He openly set himself apart from Daniel to whom he later introduced me. Daniel, Karl sighed, would do anything to stay in Japan and continue academic research, despite already being in his late 30s and with little chance of ever setting up his own lab. Unlike Daniel, Karl continued, he himself wanted more certainty and security in his life. Ironically, an industry job was where he saw it possible. At a company, Karl said, one knows what the evaluation criteria are and is compensated for performing well. He was frustrated by the attempts of foreign scientists like Daniel to “make it work” in Japan. Karl did not see Daniel's efforts as a rational choice and framed his own intention to find a corporate job not as “quitting” (that is, the way Daniel would frame it), but as the most appropriate way of having a hope for good life in the future.

A few weeks after our conversation, Karl had accepted a job offer at a company in Australia and quit his postdoctoral position mid-contract. While he had temporarily engaged in the practice of transnational scientific mobility, Karl rejected the hope it seemed to offer. Rather, he perceived attempts to gain a permanent research position in Japan in the sense of Ahmed's

(2010) hope as a technology of control: for Karl, such a hope was attachment to something that does not exist and hinders more fruitful reorientation of knowledge. Like Andrej's subtle refusal to produce "output" in the form of publications the integrity of which he found unacceptable, Karl's decision to leave his postdoctoral position mid-contract subverts the larger global discourse of transnational scientific mobility and refuses to engage with the imaginaries it offers. Such a course of action also rejects the more local efforts to temporarily incorporate foreign researchers in Japan's institutions and thus increase the country's profile as a "global research center" through the presence of transnationally oriented brains and bodies.

In this chapter, I have examined the mobility-oriented hopes and aspirations of foreign scientists in contemporary Japan against the background of their structural dependency on the state and, in turn, the state's participation in the global circulation of research policies and practices. I have highlighted the necessity to discuss scientists' strategies of hope in the context of global regimes of transnational mobility of scientific workers. In the wake of its economic recession, Japan has come to both rely on scientific innovation for the country's socio-economic continuity, and increasingly participate in transnationally oriented scientific processes. It attempts to tap into the labor pool of foreign researchers while retaining the workforce of Japanese scientists. Meanwhile, both groups experience increasing insecurities and uncertainties in their work lives.

As an examination of mobility from below, this chapter has inquired into the lived experiences of transnational scientific mobility. Focusing on the narratives of foreign life scientists based in Osaka, it has engaged with the ways early career researchers see themselves in relation to the larger processes of transnational mobility. The chapter has emphasized the importance of the relationship between mobility practices and individual strategies of hope as

mobility imaginaries. The five scientists whose sense-making practices and mobility-oriented hopes have been recounted and discussed in the second part of the chapter represent particular configurations of this relationship. While overlapping at times, they point to several strategies – such as thriving, trying to adapt, making it work, resigning, and quitting – the foreign scientists employ to make sense of their position within the larger global regimes of scientific production, as well as the particular practices of scientific work at Japanese research institutions.

Importantly, the lived experiences of on-the-move scientists reveal the importance not only of the practices and imaginaries of mobility, but also those of immobility. Complicating the tendency to conceptualize mobility as inherently positive and indicative of power, hopes for immobility among foreign researchers in Japan reflect aspirations toward stability, and provide a critique of transnational scientific mobility as an unquestionable good.

7.0 CONCLUSION

Throughout the dissertation, there have been two main questions that lie underneath my focus on the experiences and narratives of young foreign scientists in Japan. First, what do the strategies of sense-making that early career foreign researchers in Japan employ to account for their work experiences in the country tell us about the global scientific labor regimes? Second, how do they shed light on practices, processes, and changes in Japan's structures of scientific production? The two themes are deeply interrelated, and, as I show in the dissertation, it is precisely the analytical focus on everyday experiences, moments of anxiety, uncertainty, and misapprehension that show the profoundly human face – and brain, body, and heart – of the transnational mobility of science workers.

It is people with hopes and dreams, fears and uncertainties, with, yes, indifference, annoyance, and exasperation that are at the very basis of not only national science policies but also those that span out transnationally. Global circulation of research policies and national attempts – especially in advanced capitalist economies – to facilitate and maintain competitive institutions of knowledge production absorb increasing numbers of knowledge workers and experts, including scientists and other types of researchers. Yet, as I noted in the introduction and aimed to emphasize throughout the dissertation, the “wild card” that sometimes seems to be forgotten is the fact that, first, science workers are more than scientists and, second, they are undeniably workers. That is, they are “more” than scientists in the sense that they are also,

among other things, husbands and wives, fathers and mothers, sons and daughters, table tennis and guitar aficionados, political and social beings. At the same time, scientific production is a sphere to which they are drawn not necessarily because of some inner calling or dedication to uncovering the workings of the universe, but also because it provides prospects of employment and employability in increasingly competitive labor markets.

Of course, by no means do I mean to dismiss the importance of intellectual curiosity or the desire to be close to the centers where groundbreaking discoveries may happen. Rather, what I wish to highlight is the necessity to conceptualize scientists as workers who, just by the proxy of having earned a doctoral degree and attained their first research position, do not reside outside the labor market and the inequalities and differences it contains and increasingly intensifies. Young scientists in particular have to learn to navigate, to follow Sigl (2015), both epistemic and social uncertainties, and they have to manage to make sense of both. After all, social uncertainty may be lessened by solving epistemic problems, publishing the results, and thus, through easily quantifiable articles in high impact factor journals, producing future employability. At the same time, inability to solve epistemic questions – or do so in the allotted time – may easily lead to social uncertainty, as one's employment future is called into question when epistemic problems remain uncracked. This concern, as I show throughout the dissertation, takes different shapes. Importantly, while the conundrum of epistemic and social uncertainty is shaped by both transnational and local scientific labor regimes, my dissertation research shows that, in the case of young foreign life scientists in Japan's public research institutions, it is rationalized and explained by references to mainly local practices, processes, and structures.

However, as I have also shown throughout the dissertation, some of the practices and processes of scientific production that my interlocutors explain through the lens of “Japanese

culture” are deeply ingrained in the global regimes of scientific production. When my interlocutors discuss the labor-intensive dependency relationships they build – or fail to – with their higher-ups, when they position – or refuse to – themselves as gendered beings at their workplaces, when they construct their “foreignness” by building exclusionary affinities with other young professionals, when they crave for immobility but cannot afford it, the young scientists of my study participate in global structures of scientific production that tout research excellence, yet refuse to acknowledge its human cost, that is, the disposability of its workers. Chandra Mukerji’s (1989) characterization of scientists as an elite reserve labor force has never been more apt: graduate programs produce more PhDs than ever before and institutions around the world tap into a vast pool of just-in-time science workers who are ready to travel great distances in order to gain temporary employment in hopes of retaining future employability.

Thus, my dissertation has aimed to speak to both local and global concerns, showing the conceptual and lived murkiness of the two levels. I have aimed to highlight the locally specific in transnational trends (for instance, the deep involvement of the Japanese state in guiding and facilitating the recruitment of foreign science workers), as well as the more universal scientific labor regime patterns in seemingly local experiences (that my interlocutors tended to frame in terms of “Japanese culture”). Balancing between the particular and the trends that circulate transnationally has been a conscious choice in my dissertation. The focus on the narratives of foreign science workers in the country has allowed me to capture the tensions that emerge at moments when the local and the global meet in unanticipated ways. When my interlocutors express work-related anger, disappointment, scorn, fear and uncertainty, at times underlined with future-oriented hope, and when they explain these dispositions in terms of their presence in Japan and the presence of Japan around them, it is quite easy to fall into one of the two patterns

in trying to account for these narratives: that is, either to view the young scientists as not open-minded and culturally sensitive enough, or treat the practices of work and relating to each other in Japan's scientific institutions as highly peculiar and therefore somehow outside transnational trends.

However, my dissertation suggests that the experiences of foreign scientists in Japan cannot be separated from the larger context of transnational research employment patterns. A specific global scientific labor regime is enabled by national research policies and institutional decisions aimed at the production and circulation of science workers. It informs Japan's science and technology policies, enables the mobility of young international researchers to the country, and triggers the socio-economic uncertainty scientists experience as part of their research stays there. It produces science workers who take transnational mobility for granted, yet rely on cultural explanations and multi-layered networks of dependence and affinity to make sense of the socio-economic insecurities entailed by it.

Explanations of Japan through stories of one's own or one's peers' suffering, incredulity about Japanese colleagues' behavior, perusing of English-language books and blogs about Japanese society – ironically, often resorting to narratives spouted by *nihonjinron* (“theories of Japanese uniqueness”) discourses – are mechanisms employed for active production of certainty. What they do not reveal, however, are the structures that brought the young people to Japan in the first place: both at the state level, for instance, through scholarship and research grant programs, and at a more global level, through shifts in employment patterns that limit the number of permanent positions and situate scientific work as an inherently mobile enterprise.

As a result, the presence of young science workers in Japan is filled with tensions and ambiguities. Thus, it is crucial to remember that, for most of my interlocutors, the initial choice

to go to Japan was not one of excitement; rather, it presented a work or study opportunity – for some of them even at times when other options had dried out. At the same time, in many cases it also offered a chance of not only geographical, but also social mobility, as Japanese institutions often enabled access to resources not available to young science workers elsewhere. This access, however, was ridden with tensions of its own: while foreign researchers often bemoaned their access to resources – mostly in terms of social capital – to be limited, their partial marginality also gave them more freedom to navigate lab hierarchies and unwritten rules, especially in comparison to their Japanese colleagues. Equally importantly, my interlocutors had to navigate the push for continued mobility (once their research contracts or PhD programs ended) and, at times, the desire for immobility; a fraction of the young scientists of my study had made the decision to remain in the country for personal reasons, even if their refusal to continue participation in the transnational circulation of knowledge workers implied geographically limited employment opportunities.

What these tensions and ambivalences highlight, I suggest, is the notion that Japan emerges as a place where transnationally prevalent trends are deeply intensified and rendered visible. Importantly, however, as long as such patterns are experienced as highly local and specific to Japan, they hide the socio-economic uncertainties ingrained in them, shape the lives of science workers, and, unavoidably, affect research directions, practices and outcomes at research institutions around the world.

While I do not explicitly elucidate this last point in the dissertation, it is a question that scientists themselves have started discussing more openly over the past few years. As I was completing and revising my dissertation, a post on the *Facebook* page of *Nature* caught my eye. With the title “Young, Talented and Fed-Up: Scientists Tell Their Stories,” the article focuses on

the experiences of three young scientists, suggesting that young researchers today face unprecedented pressure to publish, gain funding and secure permanent positions (Powell 2016). Intrigued, I perused further and realized that the article that had first grabbed my attention was part of a special issue of *Nature* on young scientists – and the implications their working realities have on scientific production. That the two concerns are deeply interrelated is quite unceremoniously stated in the first line of the editorial of the special issue: “Academia is more difficult than ever for young scientists. That’s bad for them, and bad for science” (Nature 2016). One of the reasons for the “badness” is the growing understanding that reliance on metrics (for instance, the focus on the quantity over quality of scientific output) may be detrimental to science as an enterprise that is supposed to tackle the world’s big questions one small research project-step at a time. The special issue of *Nature* highlights the fact that this pattern is deemed problematic not only by early career researchers but also by scientific practitioners in positions of relative power, suggesting that discussions and conversations on the topic should expand and engage all the various actors involved in producing and reproducing the current global scientific labor regime.

More than a year after I had left Japan and was in the midst of dissertation-writing, I was chatting with Andrej, one of my interlocutors who had also become a good friend by the end of my fieldwork. Soon after my departure from Japan, Andrej, while still a postdoctoral researcher at a well-known institution in the Kansai region, had applied for a position at a large company in his Europe. The company had been very enthusiastic about having him, and Andrej was hired without much delay. In what seemed like a very short time, he had left Japan, quit academic

research, and begun the life of what we laughingly called “a young professional.” As we were chatting, Andrej told me that he had been offered a promotion at the same company; the salary would be slightly higher, but he would also be responsible for a small team of people. Andrej was not sure he would accept the promotion, as he did not feel ready for the responsibilities it entailed. Mischievously, he wrote to me: “I want to go to Japan and live a careless life. Only care about whether I would publish or not.”

We both laughed, and the conversation shifted to a different topic. However, I was struck by the tinge of nostalgia for his life in Japan that emerged in Andrej’s short sentences. While, knowing him, it was clear that there was also a hint of irony in these lines, they did evoke a certain sense of uncertainty that I had noticed in the narratives of some other researchers who had left Japan and were reminiscing about the country on social media. This uncertainty was of a slightly different kind than the socio-economic insecurity that I highlight throughout the dissertation. The same scholars who had raised at times vicious complaints about their labs and people there were surprised to learn that they missed Japan and life “elsewhere” was not necessarily less stressful. Arguably, part of what is being missed are the networks of friendship and sociality, and, equally persuasively, it can be suggested that there is nothing particular about Japan that triggers such a response. They do, however, suggest that the ambivalence and uncertainty that my interlocutors associated with Japan, as well as the importance of the strategies of sense-making that they employed while they were in the country, did not disappear upon their departure from Japan.

BIBLIOGRAPHY

- Ahmed, Sara. 2010. *The Promise of Happiness*. Durham: Duke University Press.
- Allison, Anne. 1994. *Nightwork: Sexuality, Pleasure, and Corporate Masculinity in a Tokyo Hostess Club*. Chicago: University of Chicago Press.
- Allison, Anne. 2009. "The Cool Brand, Affective Activism and Japanese Youth." *Theory, Culture and Society* 26 (2-3): 89-111.
- Allison, Anne. 2013. *Precarious Japan*. Durham: Duke University Press.
- Allison, Anne. 2015. "Discounted Life: Social Time in Relationless Japan." *boundary 2* 42 (3): 129-141.
- Appelt, Silvia, Brigitte van Beuzekom, Fernando Galindo-Rueda, and Roberto de Pinho. 2015. "Which Factors Influence the International Mobility of Research Scientists?" *OECD Science, Technology and Industry Working Papers* 2015/02. Accessed July 10, 2015. <http://www.oecd-ilibrary.org/docserver/download/5js1tmrr2233.pdf>.
- Bartholomew, James R. 1989. *The Formation of Science in Japan: Building a Research Tradition*. New Haven: Yale University Press.
- Bartholomew, James R. 2010. "How to Join the Scientific Mainstream: East Asian Scientists and Nobel Prizes." *East Asian Science, Technology, and Medicine* 31: 25-43.
- Beauchamp, Edward R., and Akira Iriye, eds. 1990. *Foreign Employees in Nineteenth Century Japan*. Boulder: Westview Press.
- Befu, Harumi. 2001. *Hegemony of Homogeneity: An Anthropological Analysis of 'Nihonjinron.'* Melbourne: Trans Pacific Press.
- Benson, Michaela, and Karen O'Reilly, eds. 2009. *Lifestyle Migration: Expectations, Aspirations and Experiences*. New York: Routledge.
- Bijker, Wiebe E., and John Law, eds. 1992. *Shaping Technology/ Building Society: Studies in Sociotechnical Change*. Cambridge: The MIT Press.
- Birtchnell, Thomas, and Javier Caletrio, eds. 2013. *Elite Mobilities*. New York: Routledge.

- Borovoy, Amy. 2005. *The Too-Good Wife: Alcohol, Codependency, and the Politics of Nurturance in Postwar Japan*. Berkeley: University of California Press.
- Bourdieu, Pierre. 1975. "The Specificity of the Scientific Field and the Social Conditions of the Progress of Reason." *Social Science Information* 14 (6): 19-47.
- Bourdieu, Pierre. 1988. *Homo Academicus*. Stanford: Stanford University Press.
- Bourdieu, Pierre. 2004. *Science of Science and Reflexivity*. Chicago: University of Chicago Press.
- Boyer, Dominic. 2008. "Thinking through the Anthropology of Experts." *Anthropology in Action* 5 (2): 38-46.
- Bradley, William. 2009. "Administrative Work as Reform in Japanese Higher Education." In *Higher Education in East Asia: Neoliberalism and the Professoriate*, edited by Gregory S. Poole and Ya-chen Chen, 33-48. Rotterdam: Sense Publishers.
- Breaden, Jeremy. 2012. "Internationalisation and Paternalist Micromanagement in a Japanese University." *Japanese Studies* 32 (1): 21-37.
- Breaden, Jeremy. 2013. *The Organisational Dynamics of University Reform in Japan: Internationalisation Inside Out*. London: Routledge.
- Brown, Wendy. 2015. *Undoing the Demos: Neoliberalism's Stealth Revolution*. New York: Zone Books.
- Cabinet Office. 2016. *Dai go-ki kagaku gijutsu kihon keikaku* [The 5th science and technology basic plan]. Accessed June 16, 2016. <http://www8.cao.go.jp/cstp/kihonkeikaku/5honbun.pdf>.
- Carrozza, Chiara & Sara Minucci. 2014. "Keep on Movin'? Research Mobility's Meaning for Italian Early-Stage Researchers." *Higher Education Policy* 27: 489-508.
- Castles, Stephen. 2010. "Understanding Global Migration: A Social Transformation Perspective." *Journal of Ethnic and Migration Studies* 36 (10): 1565-1586.
- Checkland, Olive. 1989. *Britain's Encounter with Meiji Japan, 1868-1912*. Houndmills: Macmillan.
- Clarke, Adele E., and Joan H. Fujimura, eds. 1997. *The Right Tools for the Job: At Work in Twentieth-Century Life Sciences*. Princeton: Princeton University Press.
- Coates, Jamie. 2013. "Everyday Mobility: The Normalization of China-Japan Migratory Flows and their 'Everyday Practice.'" *International Review of Social Research* 3 (1): 7-26.

- Coates, Jamie. 2015. "Unseeing" Chinese Students in Japan: Understanding Educationally Channelled Migrant Experiences." *Journal of Current Chinese Affairs* 44 (3): 125–154.
- Coleman, Samuel. 1999. *Japanese Science from the Inside*. London: Routledge.
- Collins, Steven W. 2004. *The Race to Commercialize Biotechnology: Molecules, Markets and the State in the United States and Japan*. London: Routledge Curzon.
- Constable, Nicole. 2014. *Born Out of Place: Migrant Mothers and the Politics of International Labor*. Berkeley: University of California Press.
- Cook, Emma. 2016. *Reconstructing Adult Masculinities: Part-Time Work in Contemporary Japan*. New York: Routledge.
- Cooper, Marianne. 2014. *Cut Adrift: Families in Uncertain Times*. Berkeley: University of California Press.
- Council for Science and Technology Policy. 2010. *Japan's Science and Technology Basic Policy Report*. Accessed January 10, 2015. www8.cao.go.jp/cstp/english/basic/4th-BasicPolicy.pdf.
- Cabinet Office. 2016. *Dai go-ki kagaku gijutsu kihon keikaku* [The 5th science and technology basic plan]. Accessed June 16, 2016. <http://www8.cao.go.jp/cstp/kihonkeikaku/5honbun.pdf>
- Cummings, William K, and Ikuo Amano. 1977. "The Changing Role of the Japanese Professor." *Higher Education* 6 (2): 209-234.
- Dearing, James W. 1995. *Growing a Japanese Science City: Communication in Scientific Research*. London: Routledge.
- DeWolf, Christopher. 2014. "In Hong Kong, Just Who Is an Expat Anyway?" *The Wall Street Journal* blog, December 29. Accessed January 5, 2015. <http://blogs.wsj.com/expat/2014/12/29/in-hong-kong-just-who-is-an-expat-anyway/>.
- Doi, Takeo. 1973. *The Anatomy of Dependence*. Tokyo: Kodansha.
- Douglass, Mike, and Glenda Roberts, eds. 2003. *Japan and Global Migration: Foreign Workers and the Advent of a Multicultural Society*. London: Routledge.
- Downey, Gary Lee. 1998. *The Machine in Me: An Anthropologist Sits among Computer Engineers*. New York: Routledge.
- Droney, Damien. 2014. "Ironies of Laboratory Work during Ghana's Second Age of Optimism." *Cultural Anthropology* 29 (2): 363-384.

- Elyachar, Julia. 2010. "Phatic Labor, Infrastructure, and the Question of Empowerment in Cairo." *American Ethnologist* 37 (3): 452-464.
- Fahey, Johannah, and Jane Kenway. 2010. "Introduction: International Academic Mobility: Problematic and Possible Paradigms." *Discourse: Studies in the Cultural Politics of Education* 31 (5): 563-575.
- Faier, Lieba. 2009. *Intimate Encounters: Filipina Women and the Remaking of Rural Japan*. Berkeley: University of California Press.
- Farrer, James. 2010. "New Shanghailanders or New Shanghainese? Narratives of Emplacement of Western Expatriate Settlers in Shanghai." *Journal of Ethnic and Migration Studies* 36 (8): 1211-1228.
- Fechter, Anne-Meike. 2007. *Transnational Lives: Expatriates in Indonesia*. Farnham: Ashgate.
- Fechter, Anne-Meike, and Katie Walsh, eds. 2010. "Special Issue: Examining 'Expatriate' Continuities: Postcolonial Approaches to Mobile Professionals." *Journal of Ethnic and Migration Studies* 36 (8): 1197-1357.
- Feher, Michel. 2009. "Self-Appreciation; or, the Aspirations of Human Capital." *Public Culture* 21 (1): 21-41.
- Ferguson, James. 2013. "Declarations of Dependence: Labour, Personhood, and Welfare in Southern Africa." *Journal of the Royal Anthropological Institute* 19: 223-242.
- Franzoni, Chiara, Giuseppe Scellato, and Johna Stephan. 2012. "Foreign-born Scientists: Mobility Patterns for 16 Countries." *Nature Biotechnology* 30 (12): 1250-1253.
- Fujimura, Joan H. 1987. "Constructing 'Do-Able' Problems in Cancer Research: Articulating Alignment." *Social Studies of Science* 17 (2): 257-293.
- Gaillard, Jacques, and Anne Marie Gaillard. 1997. "Introduction: The International Mobility of Brains: Exodus or Circulation?" *Science, Technology, and Society* 2 (2): 195-228.
- Gaillard, Jacques, Anne Marie Gaillard, and V.V. Krishna. 2015. "Return from Migration and Circulation of Highly Educated People: The Never-ending Brain Drain." *Science, Technology, and Society* 20 (3): 269-278.
- Genda, Yuji. 2005. *A Nagging Sense of Job Insecurity: The New Reality Facing Japanese Youth*. Tokyo: International House of Japan.
- Genda, Yuji, and Masako Kurosawa. 2001. "Transition from School to Work in Japan." *Journal of the Japanese and International Economies* 15 (4): 465-488.

- Gieryn, Thomas. 1999. *Cultural Boundaries of Science: Credibility on the Line*. Chicago: University of Chicago Press.
- Gill, Rosalind, and Christina Scharff. 2011. *New Femininities: Postfeminism, Neoliberalism, and Subjectivity*. Houndmills: Palgrave Macmillan.
- Glick Schiller, Nina, and Noel B. Salazar. 2013. "Regimes of Mobility across the Globe." *Journal of Ethnic and Migration Studies* 39 (2): 183–200.
- Goodman, Roger. 2009. "The Japanese Professoriate." In *Higher Education in East Asia: Neoliberalism and the Professoriate*, edited by Gregory S. Poole and Ya-chen Chen, 15–32. Rotterdam: Sense Publishers.
- Goodyear, Dana. 2016. "The Stress Test: Rivalries, Intrigue, and Fraud in the World of Stem-Cell Research." The New Yorker website, February 29. Accessed March 2, 2016. <http://www.newyorker.com/magazine/2016/02/29/the-stem-cell-scandal>.
- Graburn, Nelson, John Earlt, and R. Kenji Tierney. 2008. *Multiculturalism in the New Japan: Crossing the Boundaries Within*. New York: Berghahn Books.
- Graeber, David. 2015. *The Utopia of Rules: On Technology, Stupidity, and the Secret Joys of Bureaucracy*. Brooklyn: Melville House.
- Graham, Lauren. 2013. *Lonely Ideas: Can Russia Compete?* Cambridge: The MIT Press.
- Green, David. 2015. "Japan's Highly Skilled Professional Visa: Too Little, Too Late? Working Paper." SSRN website. Accessed July 19, 2016. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2669273.
- Grieneisen, Michael L., and Minghua Zhang. 2012. "A Comprehensive Survey of Retracted Articles from the Scholarly Literature." *PLoS ONE* 7 (10): 1–15.
- Gusterson, Hugh. 1998. *Nuclear Rites: A Weapons Laboratory at the End of the Cold War*. Berkeley: University of California Press.
- Haines, David W., Keiko Yamanaka, and Shinji Yamashita, eds. 2012. *Wind over Water: Migration in an East Asian Context*. New York: Berghahn Books.
- Hannerz, Ulf. 2004. *Foreign News: Exploring the World of Foreign Correspondents*. Chicago: University of Chicago Press.
- Hannerz, Ulf. 2007. "Foreign Correspondents and the Varieties of Cosmopolitanism." *Journal of Ethnic and Migration Studies* 33 (2): 299–311.
- Haraway, Donna. 1989. *Primate Visions: Gender, Race, and Nature in the World of Modern Science*. New York: Routledge.

- Hardt, Michael. 1999. "Affective Labor." *boundary 2* 26 (2): 89-100.
- Hayden, Cori. 2003. *When Nature Goes Public: The Making and Unmaking of Bioprospecting in Mexico*. Princeton: Princeton University Press.
- Henke, Christopher R., and Thomas F. Gieryn. 2008. "Sites of Scientific Practice: The Enduring Importance of Place." In *The Handbook of Science and Technology Studies*, edited by Edward J. Hackett, Olga Amsterdamska, and Michael E. Lynch, 353-376.
- Hindman, Heather. 2013. *Mediating the Global: Expatria's Forms and Consequences in Kathmandu*. Stanford: Stanford University Press.
- Hoang, Kimberly Kay. 2010. "Economies of Emotion, Familiarity, Fantasy, and Desire: Emotional Labor in Ho Chi Minh City's Sex Industry." *Sexualities* 13 (2): 255-272.
- Hoang, Kimberly K. 2015. *Dealing in Desire: Asian Ascendancy, Western Decline, and the Hidden Currencies of Global Sex Work*. Berkeley: University of California Press.
- Hochschild, Arlie. 2003 [1983]. *The Managed Heart: Commercialization of Human Feeling*. Berkeley: University of California Press.
- Holden, Kerry. 2014. "Lamenting the Golden Age: Love, Labour and Loss in the Collective Memory of Scientists." *Science as Culture* 24 (1): 24-45.
- Huang, Futao, Martin Finkelstein, and Michele Rostan, eds. 2014. *The Internationalization of the Academy: Changes, Realities and Prospects*. Dordrecht: Springer.
- Immigration Bureau of Japan. 2015. *Points-based Preferential Immigration Treatment for Highly Skilled Foreign Professionals* website. Accessed August 12, 2016. http://www.immi-moj.go.jp/newimmiact_3/en/index.html.
- Inhorn, Marcia C., and Emily Wentzell. 2011. "Embodying Emergent Masculinities: Men Engaging with Reproductive and Sexual Health Technologies in the Middle East and Mexico." *American Ethnologist* 38 (4): 801-815.
- Jöns, Heike. 2015. "Talent Mobility and the Shifting Geographies of Latourian Knowledge Hubs." *Population, Space, and Place* 21: 372-389.
- Jöns, Heike, Elizabeth Mavroudi, and Michael Heffernan. 2015. "Mobilising the Elective Diaspora: US-German Academic Exchanges since 1945." *Transactions of the Institute of British Geographers* 40 (1): 114-127.
- JSPS. 2010a. *JSPS Postdoctoral Fellowship for Overseas Researchers* website. Accessed August 10, 2016. <https://www.jsps.go.jp/english/e-fellow/>.

- JSPS. 2010b. *World Premier Research Center Initiative* website. Accessed August 10, 2016. <http://www.jsps.go.jp/english/e-toplevel/>.
- Jūichi Jigen. 2014a. “Obokata Haruko no giwaku ronbun 1 [First suspicious paper of Haruko Obokata].” In *Obokata Haruko no STAP saibō ronbun no giwaku* [Suspensions about Haruko Obokata’s STAP cell paper] blog. Accessed January 17, 2015. <http://stapcells.blogspot.com/2014/02/nature-article.html>.
- Jūichi Jigen. 2014b. “Obokata Haruko no hakase ronbun no giwaku matome [Summary of the suspicions about Haruko Obokata’s PhD thesis].” In *Obokata Haruko no STAP saibō ronbun no giwaku* [Suspensions about Haruko Obokata’s STAP cell paper] blog. Accessed January 17, 2015. http://stapcells.blogspot.com/2014/02/blog-post_2064.html.
- Kawano, Satsuki, Glenda S. Roberts, and Susan Orpett Long, eds. 2014. *Capturing Contemporary Japan: Differentiation and Uncertainty*. Honolulu: University of Hawaii Press.
- Keller, Evelyn Fox. 1985. *Reflections on Gender and Science*. New Haven: Yale University Press.
- Kelsky, Karen. 2001. *Women on the Verge: Japanese Women, Western Dreams*. Durham: Duke University Press.
- Kikuchi, Tashirō. 2010. *Insei, posudoku no tame no kenkyū jinsei sabaibaru gaido* [Survival guide for graduate students and postdocs]. Tokyo: Burūbakkusu.
- Kikuchi, Yoshiyuki. 2013. *Anglo-American Connections in Japanese Chemistry: The Lab as Contact Zone*. New York: Palgrave Macmillan.
- Kim, Hoi-eun. 2014. *Doctors of Empire: Medical and Cultural Encounters between Imperial Germany and Meiji Japan*. Toronto: University of Toronto Press.
- Kim, Terri. 2009. “Shifting Patterns of Transnational Academic Mobility: A Comparative and Historical Approach.” *Comparative Education* 45 (3): 387–403.
- Kim, Terri. 2010. “Transnational Academic Mobility, Knowledge, and Identity Capital.” *Discourse: Studies in the Cultural Politics of Education* 31 (5): 577–591.
- Kim, Terri, and Rachel Brooks. 2012. “Internationalisation, Mobile Academics, and Knowledge Creation in Universities: A Comparative Analysis.” *Society for Research into Higher Education* website. Accessed September 1, 2015. <https://www.srhe.ac.uk/downloads/TerriKimReport.pdf>.
- Kitanaka, Junko. 2012. *Depression in Japan: Psychiatric Cures for a Society in Distress*. Princeton: Princeton University Press.

- Knorr-Cetina, Karin. 1995. "Laboratory Studies: The Cultural Approach to the Study of Science." In *Handbook of Science and Technology Studies*, edited by Sheila Jasanoff, Gerald E. Markle, James C. Peterson, and Trevor Pinch, 140-166. Los Angeles: Sage.
- Knorr Cetina, Karin. 1999. *Epistemic Cultures: How the Sciences Make Knowledge*. Cambridge: Harvard University Press.
- Knowles, Caroline, and Douglas Harper. 2009. *Hong Kong: Migrant Lives, Landscapes, and Journeys*. Chicago: University of Chicago Press.
- Kondo, Dorinne. 1990. *Crafting Selves: Power, Gender, and Discourse of Identity in a Japanese Workplace*. Chicago: University of Chicago Press.
- Koutonin, Mawuna Remarque. 2015. "Why Are White People Expats when the Rest of Us Are Immigrants?" *The Guardian* website, March 13. Accessed March 14, 2015. <https://www.theguardian.com/global-development-professionals-network/2015/mar/13/white-people-expats-immigrants-migration>.
- Kurotani, Sawa. 2005. *Home Away from Home: Japanese Corporate Wives in the United States*. Durham: Duke University Press.
- Kurotani, Sawa. 2007. "Middle Class Japanese Housewives and the Experience of Transnational Mobility." In *Going First Class? New Approaches to Privileged Travel and Movement*, edited by Vered Amit, 15-32. New York: Berghahn Books.
- Lampland, Martha, and Susan L. Star, eds. 2009. *Standards and Their Stories: How Quantifying, Classifying, and Formalizing Practices Shape Everyday Life*. Ithaca: Cornell University Press.
- Lane, Carrie M. 2011. *A Company of One: Insecurity, Independence, and the New World of White-Collar Unemployment*. Ithaca: Cornell University Press.
- Latour, Bruno. 1993. *The Pasteurization of France*. Cambridge: Harvard University Press.
- Latour, Bruno. 1999. *Pandora's Hope: Essays on the Reality of Science Studies*. Cambridge: Harvard University Press.
- Latour, Bruno, and Steve Woolgar. 1979. *Laboratory Life: The Social Construction of Scientific Facts*. Beverly Hills: Sage Publications.
- Lawson, Cornelia, and Sotaro Shibayama. 2015. "Appointment, Promotion, and Mobility of Bioscience Researchers in Japan." In *Global Mobility of Research Scientists: The Economics of Who Goes Where and Why*, edited by Aldo Geuna, 239-268. Amsterdam: Academic Press.

- Leemann, Regula Julia. 2010. "Gender Inequalities in Transnational Academic Mobility and the Ideal Type of Academic Entrepreneur." *Discourse: Studies in the Cultural Politics of Education* 31 (5): 609–625.
- Lehmann, Angela. 2014. *Transnational Lives in China: Expatriates in a Globalizing City*. Houndmills: Palgrave Macmillan.
- Leonard, Johnine. 2010. *Expatriate Identities in Postcolonial Organizations: Working Whiteness*. London: Routledge.
- Lie, John. 2001. *Multiethnic Japan*. Cambridge: Harvard University Press.
- Liu Farrer, Gracia. 2011. *Labor Migration from China to Japan: International Students, Transnational Migrants*. New York: Routledge.
- Livingstone, David N. 2003. *Putting Science in its Place: Geographies of Scientific Knowledge*. Chicago: University of Chicago Press.
- Lorenz-Meyer, Dagmar. 2012. "Locating Excellence and Enacting Locality." *Science, Technology, and Human Values* 37 (2): 241-263.
- Low, Morris. 2005. *Science and the Building of a New Japan*. New York: Palgrave Macmillan.
- Low, Morris, Shigeru Nakayama, and Hitoshi Yoshioka. 1999. *Science, Technology and Society in Contemporary Japan*. Cambridge: Cambridge University Press.
- Lukacs, Gabriella. 2010. *Scripted Affects, Branded Selves: Television, Subjectivity, and Capitalism in 1990s Japan*. Durham: Duke University Press.
- Lukacs, Gabriella. 2013. "Dreamwork: Cell Phone Novelists, Labor, and Politics in Contemporary Japan." *Cultural Anthropology* 28 (1): 44-64.
- Lukacs, Gabriella. 2015a. "Labor Games: Youth, Work, and Politics in East Asia." *positions* 23 (3): 381-409.
- Lukacs, Gabriella. 2015b. "The Labor of Cute: Net Idols, Cute Culture, and the Digital Economy in Contemporary Japan." *positions* 23 (3): 487-513.
- Lukacs, Gabriella. 2015c. "Unraveling Visions: Women's Photography in Recessionary Japan." *boundary 2* 42 (3): 171-184.
- Lundstrom, Katrin. 2014. *White Migration: Gender, Whiteness and Privilege in Transnational Migration*. Houndmills: Palgrave Macmillan.
- Masco, Joseph. 2006. *The Nuclear Borderlands: The Manhattan Project in Post-Cold War New Mexico*. Princeton: Princeton University Press.

- Mauss, Marcel. 2011 [1954]. *The Gift: Forms and Functions of Exchange in Archaic Societies*. Eastford: Martino Fine Books.
- MEXT (Ministry of Education, Culture, Sports, Science and Technology). 2011. *The 4th Science and Technology Basic Plan of Japan*. Accessed 17 November 2014. http://www.mext.go.jp/component/english/___icsFiles/afieldfile/2012/02/22/1316511_01.pdf.
- MEXT (Ministry of Education, Culture, Sports, Science and Technology). 2015. *Kokusai kenkyū kōryū no gaikyō: Heisei 25-nendo* [Overview of international research exchange 2013]. Accessed March 18, 2015. http://www.mext.go.jp/a_menu/kagaku/kokusai/kouryu/___icsFiles/afieldfile/2015/03/04/1355626_01_1.pdf.
- Mezzadra, Sandro, and Brett Neilson. 2013. *Border as Method, or, the Multiplication of Labor*. Durham: Duke University Press.
- Mirowski, Philip. 2004. *The Effortless Economy of Science?* Durham: Duke University Press.
- Miyazaki, Hirokazu. 2006. "Economy of Dreams: Hope in Global Capitalism and its Critiques." *Cultural Antropology* 21(2): 147–172.
- Miyazaki, Hirokazu. 2013. *Arbitrating Japan: Dreams of Capitalism at the End of Finance*. Berkeley: University of California Press.
- Mizukami, Tetsuo. 2007. *The Sojourner Community: Japanese migration and Residency in Australia*. Leiden: Brill.
- Mizuki, Shōdō. 2007. *Kōgakureki wākingu pua: furītā seisan kōjō toshite no daigakuin* [Highly educated working poor: The graduate school as a freeter factory]. Tokyo: Kōbunsha.
- Mizuki, Shōdō. 2010. *Hōmuresu hakase* [The Homeless PhD holder]. Tokyo: Kōbunsha.
- Mizuno, Hiromi. 2009. *Science for the Empire: Scientific Nationalism in Modern Japan*. Stanford: Stanford University Press.
- Morris-Suzuki, Tessa. 1988. *Beyond Computopia: Information, Automation and Democracy in Japan*. New York: Routledge.
- Mukerji, Chandra. 1990. *A Fragile Power: Scientists and the State*. Princeton: Princeton University Press.
- Muller, Ruth. 2014. "Postdoctoral Life Scientists and the Supervision Work in Contemporary University: A Case Study of Changes in the Cultural Norms of Science." *Minerva* 52: 329–349.

- Muller, Ruth, and Martha Kenney. 2014. "Agential Conversations: Interviewing Postdoctoral Life Scientists and the Politics of Mundane Research Practices." *Science as Culture* 23 (4): 537–559.
- Murakami, Yukiko. 2010. *Zunō wa doko ni mukau no ka* [Where is the brain headed?]. Tokyo: Nihon Keizai Shinbun Shuppansha.
- Nader, Laura. 1971. "Up the Anthropologist – Perspectives Gained from Studying Up." In *Reinventing Anthropology*, edited by Dell Hymes, 284–311. New York: Pantheon Books.
- Nader, Laura, ed. 1996. *Naked Science: Anthropological Inquiry into Boundaries, Power, and Knowledge*. New York: Routledge.
- Nagata, Naoki, and Shinya Yamanaka. 2013. "Young Researchers in Japan." *Science* editorial, April 26. 407.
- Nagy, Raluca. 2015. "English Teaching as Lifestyle Migration or Precariat?" Paper presented at *Japan's New Immigrants: Capturing the Changing Ethno-scape in a Globalizing Society* workshop, February 14–15, Tokyo.
- Nakano, Masashi. 2011. *Isshō hyakubai* [One win, hundred losses]. Tokyo: Kōbunsha.
- Nature. 2013. "Still Less Equal." *Editorial*, May 30. 535–536.
- Nature. 2016. "Early-career Researchers Need Fewer Burdens and More Support." *Editorial*, October 26. Accessed October 28, 2016. <http://www.nature.com/news/early-career-researchers-need-fewer-burdens-and-more-support-1.20863>.
- Negra, Diane, and Yvonne Tasker, eds. 2014. *Gendering the Recession: Media and Culture in the Age of Austerity*. Durham: Duke University Press.
- OECD. 2008. *The Global Competition for Talent: Mobility of the Highly Skilled*. Accessed July 10, 2015. <http://www.oecd.org/sti/sci-tech/theglobalcompetitionfortalentmobilityofthehighlyskilled.htm>.
- OECD. 2015. *OECD Science, Technology, and Industry Scoreboard 2015: Japan Highlights*. Accessed July 22, 2016. <https://www.oecd.org/sti/Japan-CN-EN-Scoreboard.pdf>.
- OECD. 2016. *Main Science and Technology Indicators* 1. Accessed July 14, 2016. http://www.oecd-ilibrary.org/science-and-technology/main-science-and-technology-indicators_2304277x.
- Ogasawara, Yuko. 1998. *Office Ladies and Salaried Men: Power, Gender, and Work in Japanese Companies*. Berkeley: University of California Press.

- O'Malley, Pat. 2015. "Uncertainty Makes Us Free: Insurance and Liberal rationality." In *Modes of Uncertainty: Anthropological Cases*, edited by Limor Samimian-Darash and John Rabinow, 13-28. Chicago: University of Chicago Press.
- Ong, Aihwa. 1999. *Flexible Citizenship: The Cultural Logics of Transnationality*. Durham: Duke University Press.
- Ong, Aihwa. 2007. "Please Stay: Pied-a-terre Subjects in the Megacity." *Citizenship Studies* 11 (1): 83-93.
- Otake, Tomoko. 2016. "Obokata Breaks Silence, Suggests Colleague Bears Blame for STAP Debacle." *The Japan Times* website, January 27. Accessed September 3, 2016. <http://www.japantimes.co.jp/news/2016/01/27/national/obokata-breaks-silence-suggests-colleague-bears-blame-for-stap-debacle#.WANPZo-LSUk>.
- Peacock, Vita. 2016. "Academic Precarity as Hierarchical Dependence in the Max Planck Society." *HAU: Journal of Ethnographic Theory* 6 (1): 95-119.
- Poole, Gregory S. 2009. "Faculty Members at a Japanese Private University: Professors as Conservative Actors in an Era of Reform." In *Higher Education in East Asia: Neoliberalism and the Professoriate*, edited by Gregory S. Poole and Ya-chen Chen, 49-56. Rotterdam: Sense Publishers.
- Poole, Gregory S. 2010. *The Japanese Professor: An Ethnography of a University Faculty*. Rotterdam: Sense Publishers.
- Poole, Gregory S. 2016. "Administrative Practices as Institutional Identity: Bureaucratic Impediments to HE 'Internationalisation' Policy in Japan." *Comparative Education* 52 (1): 62-77.
- Poole, Gregory S., and Ya-chen Chen, eds. 2009. *Higher Education in East Asia: Neoliberalism and the Professoriate*. Rotterdam: Sense Publishers.
- Powell, Kendall. 2016. "Young, Talented and Fed-Up: Scientists Tell Their Stories." *Nature* website, 26 October. Accessed October 28, 2016. <http://www.nature.com/news/young-talented-and-fed-up-scientists-tell-their-stories-1.20872>.
- Pratt, Mary Louise. 1992. *Imperial Eyes: Travel Writing and Transculturation*. New York: Routledge.
- Prentice, Rachel. 2012. *Bodies in Formation: An Ethnography of Anatomy and Surgery Education*. Durham: Duke University Press.
- Rabinow, John. 1996. *Making PCR: A Study in Biotechnology*. Chicago: University of Chicago Press.

- Rabinow, John. 1999. *French DNA: Trouble in Purgatory*. Chicago: University of Chicago Press.
- Rasko, John, and Carl Power. 2015. "What Pushes Scientists to Lie? The Disturbing but Familiar Story of Haruko Obokata." *The Guardian* website, February 18. Accessed February 19, 2015. <https://www.theguardian.com/science/2015/feb/18/haruko-obokata-stap-cells-controversy-scientists-lie?>
- Redfield, Peter. 2012. "The Unbearable Lightness of Ex-pats: Double Binds of Humanitarian Mobility." *Cultural Anthropology* 27 (2): 358-382.
- Redfield, Peter. 2013. *Life in Crisis: The Ethical Journey of Doctors without Borders*. Berkeley: University of California Press.
- Retraction Watch. 2015. "The Retraction Watch Leaderboard." Accessed August 13, 2016. <http://retractionwatch.com/the-retraction-watch-leaderboard/>.
- Roberson, James E., and Nobue Suzuki, eds. 2003. *Men and Masculinities in Contemporary Japan: Dislocating the Salaryman Doxa*. London: RoutledgeCurzon.
- Roberts, Glenda S. 1994. *Staying in the Line: Blue-Collar Women in Contemporary Japan*. Honolulu: University of Hawaii Press.
- Robertson, Jennifer. 2010. "Gendering Humanoid Robots: Robo-Sexism in Japan." *Body and Society* 16 (2): 1-36.
- Rohlen, Thomas P. 1974. *For Harmony and Strength: Japanese White-Collar Organization in Anthropological Perspective*. Berkeley: University of California Press.
- Said, Edward W. 1978. *Orientalism: Western Conceptions of the Orient*. New York: Pantheon Books.
- Sakai, Naoki. "'You Asians': On the Historical Role of the West and Asia Binary." *South Atlantic Quarterly* 99 (4): 789-817.
- Salazar, Noel B. 2011. "The Power of Imagination in Transnational Mobilities." *Identities: Global Studies in Culture and Power* 18: 576-598.
- Salazar, Noel B., and Alan Smart. 2011. "Anthropological Takes on (Im)mobility." *Identities: Global Studies in Culture and Power* 18: i-ix.
- Samimian-Darash, Limor, and John Rabinow. 2015. "Introduction." In *Modes of Uncertainty: Anthropological Cases*, edited by Limor Samimian-Darash and John Rabinow, 1-9. Chicago: University of Chicago Press.

- Samuels, Richard J. 1994. *"Rich Nation, Strong Army": National Security and the Technological Transformation of Japan*. Ithaca: Cornell University Press.
- Satsuka, Shiho. 2015. *Nature in Translation: Japanese Tourism Encounters the Canadian Rockies*. Durham: Duke University Press.
- Scharff, Christina. 2012. *Repudiating Feminism: Young Women in a Neoliberal World*. Farnham: Ashgate.
- Shear, Boone W, Susan Brin Hyatt, and Susan Wright. 2015. *Learning Under Neoliberalism: Ethnographies of Governance in Higher Education*. New York: Berghahn Books.
- Sheller, Mimi, and John Urry. 2006. "The New Mobilities Paradigm." *Environment and Planning* 38: 207–226.
- Shore, Cris, and Susan Wright. 2015. "Audit Culture Revisited: Rankings, Ratings, and the Reassembling of Society." *Current Anthropology* 56 (3): 421-444.
- Sigl, Lisa. 2015. "On the Tacit Governance of Research by Uncertainty: How Early Stage Researchers Contribute to the Governance of Life Science Research." *Science, Technology, and Human Values* 41 (3): 1-28.
- Smaldino, John E., and Richard McElreath. 2016. "The Natural Selection of Bad Science." *Royal Society Open Science* 3 (9): 1-17.
- Sorensen, Mads P., Carter Bloch, and Mitchell Young. 2015. "Excellence in the Knowledge-Based Economy: From Scientific to Research Excellence." *European Journal of Higher Education*: 1-20.
- Star, Susan Leigh. 1985. "Scientific Work and Uncertainty." *Social Studies of Science* 15 (3): 391-427.
- Star, Susan Leigh. 1995a. "Introduction." In *Ecologies of Knowledge: Work and Politics in Science and Technology*, edited by Susan Leigh Star, 1-35. New York: State University of New York Press.
- Star, Susan Leigh. 1995b. "The Politics of Formal Representations: Wizards, Gurus, and Organizational Complexity." In *Ecologies of Knowledge: Work and Politics in Science and Technology*, edited by Susan Leigh Star, 88-118. New York: State University of New York Press.
- Strathern, Marilyn, ed. 2000. *Audit Cultures: Anthropological Studies in Accountability, Ethics and the Academy*. London: Routledge.
- Taussig, Karen-Sue. 2009. *Ordinary Genomes: Science, Citizenship, and Genetic Identities*. Durham: Duke University Press.

- The Rising Wasabi. 2016. "Asian Gaijin Awareness Day Announced in Japan." Accessed April 18, 2016. <http://www.therisingwasabi.com/asian-gaijin-awareness-day-announced-in-japan/>.
- Traweek, Sharon. 1988. *Beamtimes and Lifetimes: The World of High Energy Physicists*. Cambridge: Harvard University Press.
- Traweek, Sharon. 1992. "Border Crossings: Narrative Strategies in Science Studies and among Physicists in Tsukuba Science City, Japan." In *Science as Practice and Culture*, edited by Andrew Pickering, 429-465. Chicago: University of Chicago Press.
- Traweek, Sharon. 1996. "Kokusaika, Gaiatsu, and Bachigai: Japanese Physicists' Strategies for Moving into the International Political Economy of Science." In *Naked Science: Anthropological Inquiry into Boundaries, Power, and Knowledge*, edited by Laura Nader, 174-197. New York: Routledge.
- Traweek, Sharon. 2005. "Generating High Energy Physics in Japan: Moral imperatives of a Future Pluperfect." In *Pedagogy and the Practice of Science: Historical and Contemporary Perspectives*, edited by David Kaiser, 357-392. Cambridge: The MIT Press.
- Traweek, Sharon. 2012. "Keizu to Nendaiki: Making and Erasing History in Tsukuba Science City at the Edge of Empire." In *The City as Target*, edited by Ryan Bishop, Gregory Clancey, and John Philips, 224-258. New York: Routledge.
- Tronto, Joan. 2013. *Caring Democracy: Markets, Equality and Justice*. New York: NYU Press.
- Vora, Neha. 2013. *Impossible Citizens: Dubai's Indian Diaspora*. Durham: Duke University Press.
- Vabo, Agnete, Laura Elena Padilla-Gonzalez, Erica Waagene, and Terje Naess. 2014. "Gender and Faculty Internationalization." In *The Internationalization of the Academy: Changes, Realities and Prospects*, edited by Futao Huang, Martin Finkelstein, and Michele Rostan, 183-205. Dordrecht: Springer.
- Van Noorden, Richard. 2012. "Science on the Move." *Nature*, October 12. 326-329.
- Wendland, Claire. 2010. *A Heart for the Work: Journeys through an African Medical School*. Chicago: University of Chicago Press.
- Wentzell, Emily. 2013. *Maturing Masculinities: Aging, Chronic Illness, and Viagra in Mexico*. Durham: Duke University Press.
- Xiang, Biao. 2006. *Global Body Shopping: An Indian Labor System in the Information Technology Industry*. Princeton: Princeton University Press.

- Yamamoto, Shinichi. 2012. "Higher Education and Its Relation with Economy: From Japan's Experience of Higher Education Policy." In *University Reforms and Academic Governance Reconsidered: Report of the Six-Nation Higher Education Research Project*, edited by Akira Arimoto, 107-122. Hiroshima: Research Institute for Higher Education.
- Yarime, Masaru. 2015. "Integrated Solutions to Complex Problems: Transforming Japanese Science and Technology." In *Possible Futures: Japan: Precarious Future*, edited by Frank Baldwin and Anne Allison, 213-235. New York: NYU Press.
- Yeoh, Brenda, and Katie Willis. 2005. "Singaporean and British Transmigrants in China and the Cultural Politics of 'Contact Zones.'" *Journal of Ethnic and Migration Studies* 31 (2): 269-285.
- Yoda, Tomiko. 2006. "A Roadmap to Millennial Japan." In *Japan after Japan: Social and Cultural Life from the Recessionary 1990s to the Present*, edited by Tomiko Yoda and Harry Harootunian, 16-52. Durham: Duke University Press.
- Yoshino, Kosaku. 1992. *Cultural Nationalism in Contemporary Japan*. London: Routledge.
- Yurchak, Alexei. 2006. *Everything Was Forever, Until It Was No More: The Last Soviet Generation*. Princeton: Princeton University Press.
- Zigon, Jarret. 2009. "Hope Dies Last: Two Aspects of Hope in Contemporary Moscow." *Anthropological Theory* 9 (3): 253-271.