

A Statistical Distance: Examining the Experiences of Chinese Graduate
Instructors and Their Undergraduate Students in Statistics Courses

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ABSTRACT

Warren E. Christian: A Statistical Distance: Examining the Experiences of Chinese Graduate Instructors and Their Undergraduate Students in Statistics Courses
(Under the direction of James Trier)

Chinese graduate students are the largest contingent of international students in the United States, and many STEM (Science, Technology, Engineering, and Math) departments in American research universities rely on large numbers of Chinese graduate students to maintain a high-level of research. At the same time, China is quite frequently imagined as the United States' main competitor, both economically and educationally. A main point of contact for Chinese graduate students with Americans is in their role as Teaching Assistants (TAs) charged with teaching American undergraduates.

These interactions are sometimes contentious as undergraduate students complain that they cannot understand or learn from their Chinese instructors. Undergraduate complaints have resulted in legislation regarding instructor fluency, training programs for international TAs (ITAs), and a whole body of research that examines the 'ITA problem.' It is often assumed that Chinese graduate students do not possess the English language skills to effectively teach undergraduates in the United States. In my own experience with Chinese graduate students, I have found their English to be, in almost all cases, perfectly intelligible.

This dissertation focuses on Chinese graduate students teaching Statistics to undergraduates at a large research university in the southeastern United States. Through a case study methodology, this dissertation attempts to answer three research questions: 1) How do

undergraduate students in Statistics courses experience Chinese TAs? 2) How do Chinese graduate students experience teaching Statistics to undergraduates? 3) How does context affect the experiences of Chinese TAs and their students?

Most of the ITA problem literature reaches two unsatisfactory conclusions: either the international graduate students have deficiencies that impede undergraduate learning, or the undergraduates' racism and xenophobia negatively affect their learning. Through regular observations of courses taught by three Chinese graduate instructors and interviews with the instructors, their undergraduate students, and professors in the Statistics department, I found that the structure of the courses played a major role in the experiences of the instructors and students. I also situated the case study into the larger contexts of race/racism in the United States, representations of China, undergraduate education at research universities, and the ITA problem literature.

To my parents, Melinda and Bill, and my wife, Sadie.

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LIST OF ABBREVIATIONS

| | |
|-------|---|
| ATA | American teaching assistant |
| ITA | International teaching assistant |
| JET | Japan Exchange and Teaching |
| NNEST | Nonnative English Speaking Teachers |
| PPT | PowerPoint |
| RU | Research University |
| STEM | Science, Technology, Engineering, and Math |
| TITA | Training for International Teaching Assistant |

CHAPTER 1: INTRODUCTION

“This class sucked . . . and I LOVE math.”

“My professor barely spoke a lick of English.”

-Students in Deming’s Statistics 101 Course

In 2001, the complaints of Research University (RU) undergraduate students prompted a parents’ group to donate \$10,000 to the University with the expressed goal of improving the communication of international graduate students who provide instruction to undergraduates.¹ The donation spawned the Training for International Teaching Assistants (TITA) program. Other universities have developed similar programs for international graduate students in an attempt to quell undergraduates’ complaints that they cannot understand and cannot learn from their international teaching assistants (Constantinides, 1989; Shi, 2006).

In 2009, I was hired as a teaching assistant by TITA to co-teach two courses at Research University: Teaching in the American University Classroom and Advanced Teaching in the American University Classroom. International graduate students enroll voluntarily in the two-credit pass/fail courses, except for international graduate students in statistics who are required by their Department to enroll in the courses. The majority of TITA students are Asian, primarily from mainland China.

¹ University, course, and program names are pseudonyms.

Having gone to a college without graduate students, I never experienced firsthand being taught by a graduate instructor. It was not until I was a master's student at RU that I was introduced to the "ITA problem" in a course examining politics and culture in second language education. In fact, that course also marked my first experience with an instructor from overseas, outside of foreign language courses. In the course, we read an article by Donald Rubin (1992), who asked American undergraduates at a large southeastern university to evaluate a pre-recorded lesson. Students heard a talk recorded by a native English speaker in standard American English. One group of students was shown a picture of an Asian woman meant to represent the speaker. The other group of students was shown a White woman judged to be of the same level of attractiveness as the Asian woman. Immediately after hearing the lecture, students were given a transcript of the talk with every seventh word missing and were instructed to fill in the blanks. Next, students were asked to complete a brief survey about the speaker. Even though all students heard the same recording spoken by a native English speaker, students who were shown the image of the White woman were better able to fill in the missing words and perceived less of an accent, even though the audio was identical. Rubin (1992) writes:

[P]articipants stereotypically attributed accent differences – differences that did not exist in truth – to the instructors' speech. Yet more serious, listening comprehension appeared to be undermined simply by identifying (visually) the instructor as Asian. The pessimistic conclusion warranted here is that ... even vigorous pronunciation training for [ITAs] will matter little. Ethnically Asian instructors who speak [standard American English] apparently confront similar dysfunctional attitudes as those who do speak with marked nonnative accents. (p. 519)

This article was enough to convince me that the so-called "ITA problem," where students complain that they cannot understand their foreign-born instructors, is rooted in racism and xenophobia on the part of undergraduate students.

Working with international graduate students in TITA confirmed my belief about the nature of undergraduate complaints. All but two of the over ninety international graduate students I have met through my work with TITA possessed English language skills I felt would be more than adequate to provide effective instruction to undergraduate students. The disconnect or contradiction between the relative ease with which I could understand the language of international graduate students and the undergraduate complaints about ITAs' language, which led to creation of TITA, led me to this study. I wanted to account for the contradiction.

I observed undergraduate statistics courses taught by Chinese graduate instructors and interviewed the students and instructors in an effort to find out what was happening. I did not want to assume that I would find a problem and that the undergraduates would complain, so I settled on three broad research questions that are descriptive in nature: 1) How do undergraduate students in statistics courses experience Chinese TAs? 2) How do Chinese graduate students experience teaching Statistics to undergraduates? 3) How does context affect the experiences of Chinese TAs and their students?

In the 1980s, an academic literature emerged that named and attempted to explain an "ITA problem" (then a "foreign TA problem;" Bailey, 1982, 1983; Fisher, 1985; Orth, 1982). The amount of time that I spent in ITAs' classrooms distinguishes this dissertation study from those early studies and subsequent research on the ITA problem. As part of a case study methodology, I spent over 50 hours in the classrooms of three Chinese graduate instructors teaching Statistics to undergraduate students at Research University, a large research university in the southeastern United States. I also held multiple interviews with the three instructors I observed: Bingwen, Cheng, and Deming.² Additionally, I conducted five email interviews with undergraduate students in Bingwen's, Cheng's, and Deming's classes. In order to widen the

² All names are pseudonyms.

scope of the case study, I interviewed five other statistics graduate students from China who had experience teaching undergraduates at Research University.³ Finally, I interviewed two long time RU statistics professors.

The research questions for this dissertation all inquire about experience, the students' experience, the instructors' experience, and how context affects those experiences. Experience is a broad term, so I will briefly explain what I mean by experience. John Dewey (1958[1925], 1997[1938])⁴ wrote at length about the importance of experience in Education. Dewey (1997[1938]) states, "The quality of any experience has two aspects. There is an immediate aspect of agreeableness or disagreeableness, and there is its influence upon later experiences" (p. 27). Dewey goes on to explain that while it is relatively easy to judge whether an experience is pleasant or not, it is much harder, but no less important, to judge the impact of an experience on an individual's future. Dewey (1997[1938]) writes, "[E]very experience affects for better or worse the attitudes which help decide the quality of further experiences by setting up certain preference and aversion, and making it easier or harder to act for this or that end" (p. 37). This study is interested in the Chinese graduate instructors and undergraduate students' experiences because these experiences can shape both attitudes and future experiences. Only the first aspect of Dewey's bipartite conception of experience is readily observable. The second part relies largely on speculation.

Dewey's concept of experience helps to show the importance of what could otherwise be written off as trivial. If students are bored and apathetic in classes, then that will necessarily affect their future experiences. In this case study, the positive or negative experiences of students

³ Two of the five graduate students had led tutorials for undergraduate students but did not have experience leading a class of undergraduates. Talking with them about their experiences was very helpful, but I have not included them in my analysis.

⁴ [Brackets] are used to denote original year of publication.

and instructors are important in and of themselves, but also, because of their implications for the future. In two words: experience matters.

I chose the specific case of Chinese graduate students teaching Statistics to undergraduates for three reasons. First, I intend this research to represent a typical or “common case” (Yin, 2013, p. 52). Second, I had access to this particular group of graduate students. Third, I think that contextual factors make this case particularly interesting. I explain each of these briefly below.

While the overall percentage of international students in graduate programs has remained relatively stable at around 10% since 1990 (National Center for Educational Statistics [NCES], 2013c), the percentage of students from Asian countries has steadily increased. In 2012 students from Asia made up 64% of international students (NCES, 2013b). China sent the most students to the United States making up 25% of international students, a figure well above that of the next country, India at 13%. At Research University, about one-third of international graduate students are from China. International students are well represented in the STEM (Science, Technology, Engineering and Math) fields (NCES, 2013a). The highest percentages of doctoral degrees awarded to foreign students in 2012 were Engineering (56%), Computer and Information Sciences (51%), Mathematics and Statistics (49%), Agriculture (41%), Architecture (41%), and Physical Sciences (40%).

All of the Chinese statistics graduate students who took part in this study had been students in the Training for International Teaching Assistant (TITA) program. I taught all but one of them. The greatest sub-group of international students I have taught is Chinese students in the Statistics Department. Having prior contact with many Chinese graduate students in the Statistics Department at RU afforded me access that I would not have enjoyed in other

departments or in other universities. Without our prior contact, I do not think Bingwen, Cheng, and Deming would have allowed me to observe their course, conduct multiple interviews, and grant me access to interview their students.

The first two reasons why I selected the particular case of Chinese graduate students in Statistics are related. The numbers of Chinese graduate students in Statistics increased my contact with these students affording me access. The first two reasons are also related to the third. China plays a special role in the American imagination. After the fall of the Soviet Union, China emerged as the United States' idealized competitor (Pan, 2012). A recent Gallup poll asked Americans what country is the United States' greatest enemy. At 20%, China was the most listed, above Iran and North Korea, which each received 16% of the responses (Gallup, 2014). Universities are not immune to this fear of China. A 2008 article in *The Chronicle of Higher Education* reports that students with bachelor's degrees from Tsinghua University, in Beijing, earn more PhDs in the United States than students from any other school in the world, including those in the United States. Peking University, also in Beijing, and University of California, Berkeley, in that order, round out the top three. The *Chronicle* article also notes "a growing concern among American educators and policy makers that China and other Asian nations are likely to produce large numbers of scientists and engineers who will help them out-compete the United States technologically" (Brainard, 2008). The very presence of Chinese graduate students can raise concerns about the United States' future.

Alongside the fear of China, there is also a discourse of hope. Where "China hawks and protectionists" see a threat, Donald Gross (2013) sees opportunity (p. 238). Gross argues that by engaging China, the United States will reap security, political, and economic benefits. Chief among the potential economic benefits is access to China's growing middle class consumers as

outlined in the recent books, *One Billion Customers: Lessons from the Front Lines of Doing Business in China* (McGregor, 2007) and *The China Dream: The Quest for the Last Great Untapped Market on Earth* (Studwell, 2003). Chengxin Pan (2012) argues that threat and opportunity are the two dominant paradigms that inform a larger narrative of a rising China.

Chinese graduate students are caught in the double narrative of opportunity and threat. For American universities, Chinese undergraduate and master's students represent a valuable source of revenue, and Chinese PhD students provide a cheap source of labor as research and teaching assistants (Altbach & Knight, 2007). A longtime faculty member declared that the Statistics Department at Research University could not continue to conduct innovative and high quality research without PhD students from China. He also assured me that if it wanted, the Department could easily fill its ranks exclusively with excellent PhD students from China. The Department chooses not to do that in the name of diversity. About half of the RU Statistics Department's PhD students are from China, one quarter are from other foreign countries, and another quarter are PhD students from the United States.

While universities in the United States welcome graduate students from China, especially in the STEM fields, the fear of being out-competed is also present in the academy. Economist George Borjas (2004) has given voice to that fear, coming to the xenophobic conclusion that international graduate students are crowding out American White males from graduate studies. Borjas (2004) writes, "The evidence is consistent with the hypothesis that foreign students limit the opportunities available to white native men in graduate education, particularly at the most elite institutions" (p. 14). Where Borjas sees foreign students crowding out White American men, others have argued that Americans', especially White males', ability to get high paying

jobs without advanced degrees account for the relative lack of American White males in certain graduate programs (Kaplan, 1989).

Another more readily voiced concern, referenced above, is that international, especially Chinese, graduate students may be negatively affecting undergraduate learning through their roles as teaching assistants. In addition to taking courses and conducting research, international graduate students, like many graduate students, are expected to serve as teaching assistants (TAs) as a means of funding their schooling and/or to help a limited number of faculty teach a large number of undergraduate students. Most of the ITA problem literature reaches two unsatisfactory conclusions: Either the international graduate students have deficiencies that impede undergraduate learning, or the undergraduates' racism and xenophobia negatively affect their learning. The next chapter will provide an overview of the so-called "ITA problem" literature with special attention to the methodologies utilized in order to highlight the uniqueness of this research.

In the third chapter, I describe the descriptive case study design, influenced by case study authority Robert Yin (2013) that guided data collection. The chapter ends with a consideration of my positionality.

I present the results in the fourth chapter. I describe the observed classes and then summarize the student experience, the instructor experience, and how the local context of the courses affected those experiences. I report undergraduate complaints that have been used elsewhere as proof of an ITA problem.

In the fifth chapter, I depart from the relatively straightforward presentation of the literature, methodology, and results. During data collection, I noticed three contradictions that warranted further examination and also related to the broader contradiction, between my views

of ITAs and students' views of ITAs, that initially drew me to conduct this research. Finding the methodology described in the third chapter lacking in its ability to provide an account of the contradictions, I turn to postcritical ethnography and cultural studies for help. Drawing from postcritical ethnography (Noblit, Flores & Murillo, 2004), I return to my positionality and address concerns about representation, objectivity, and reflexivity. Drawing on cultural studies' emphasis on radical contextuality (Grossberg, 1997), I explore three larger contexts: 1) race and racism in the United States paying special attention to the racialization of Asians, 2) the related fear and opportunity that a rising China engenders in the United States (Pan, 2012), and 3) the state of undergraduate education at research universities and some particular pedagogical challenges faced by teachers of statistics.

In the sixth chapter, I examine three contradictions that emerged during data collection. I ask participants to account for the apparent contradictions and also discuss the contradictions in light of the ITA problem literature, outlined in the second chapter, and the larger contexts explored in the fifth chapter.

I summarize the findings and their relevance in the seventh chapter. I end by suggesting future research and ways to improve relations between Chinese graduate students and American undergraduates in statistics classrooms.

CHAPTER 2: PROBLEM SET - A REVIEW OF THE ITA PROBLEM LITERATURE

You are a professor in the History Department.
You don't think there really IS a problem. Not a real problem. You think most foreign TAs are competent teachers. You think that the problem has to do with student attitudes. You disagree with the idea that the problem has to do with an ITA's attitude. Some of the ITAs that you have known had perfectly GOOD attitudes. It is the attitudes of their undergraduate students that need adjustment!

-Role Card for an ITA Problem Simulation (Halleck, 2008, p. 145)

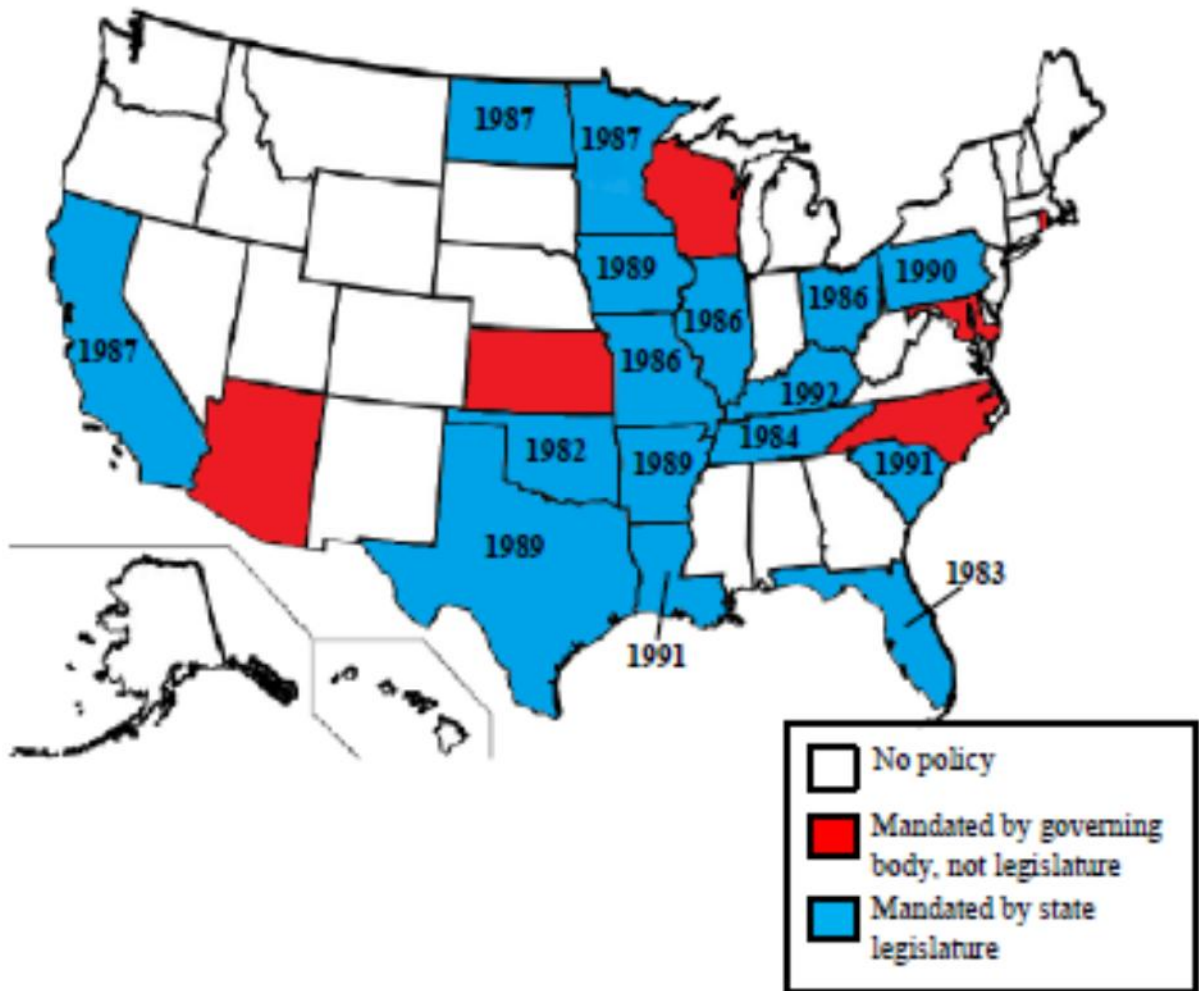
The above quote reasonably approximates my views about the ITA problem before I embarked on this research. The quote is taken from a role-playing simulation developed to probe “the cross-cultural competence of all the stakeholders involved” in the ITA problem (Halleck, 2008, p. 137). Indeed, the ITA problem is real enough to have its own simulation.

While the ITA problem begins with student complaints, it does not end there. There are material consequences to the ITA problem. The complaints of undergraduates have reached all the way to state legislatures. Sixteen states currently have legislation regarding the fluency of undergraduate instructors. Another seven states have resolutions from university governing bodies that address the fluency of undergraduate instructors. Figure 1⁵ below illustrates the states with such fluency laws or resolutions.

⁵ Created by the author with data from King (1998) and Brown, Fishman and Jones (1990).

Figure 1:

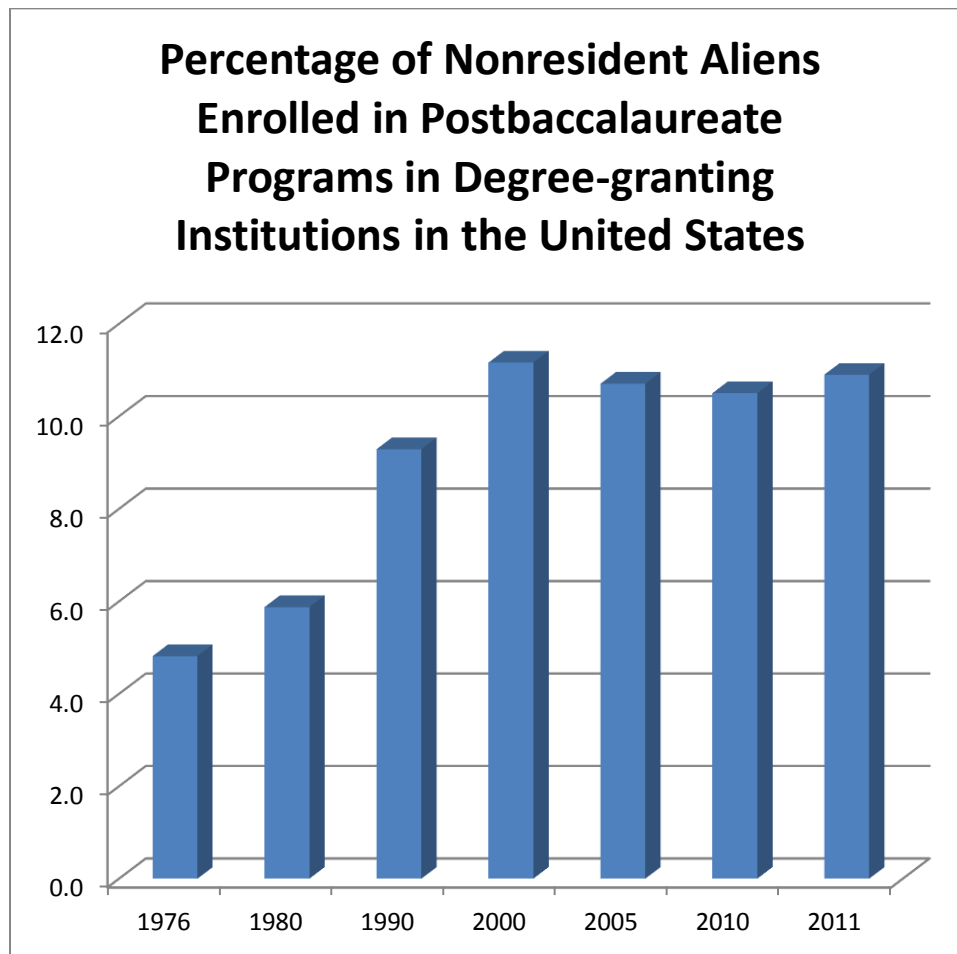
States Mandating Language Skills of Instructors in Higher Education with Year Passed



As can be seen above, the first fluency law was enacted in Oklahoma in 1982 and such laws continued to be passed through the 1980s into the early 1990s. The timing of the passage of these laws coincides with an increase in the percentage of foreign students enrolled in graduate studies (NCES, 2013c). Approximately 95,000 international students enrolled in graduate programs in the United States in 1980. By 1990, international graduate students enrollment grew to 172,000. Just over 318,000 international students enrolled in graduate programs in 2011. See

Figure 2⁶ to see the increase of the percentages of international students enrolled in graduate programs from 1976 to 1990 and the recent, relative stability.

Figure 2:



Programs designed to alleviate undergraduates' qualms with ITAs are now a common feature of American universities. These programs take many different forms ranging from a short orientation to teaching in the American classroom to semester-long courses (Constantinides, 1989; Shi, 2006).

⁶ Compiled by author with data from the National Center for Education Statistics (<http://nces.ed.gov/>).

In the early 1980s, the foreign TA problem (now the ITA problem) entered the academic literature (Bailey, 1982, 1983; Fisher, 1985; Orth, 1982). In this chapter I will begin by designating what is included and excluded from the ITA problem literature. Then, I will summarize the content of the literature. Finally, I will enumerate the methodologies utilized by the literature, which will enable me to then highlight the distinctiveness of this dissertation.

Distinguishing an ITA Problem Literature

ITA problem literature consists of academic research that examines the relationship between undergraduate students and their graduate teaching assistants from foreign countries. The literature focuses on ITAs who have some direct contact with undergraduates either as the primary or co-instructor, as the leader of a lab or recitation section, or during office hours. The ITA problem literature does not focus on assistantships where ITAs are only responsible for grading. For my purposes, I am focusing on research done in the United States with some relevant pieces from Canada also included. The ITA problem literature extends to TAs working in all fields of graduate and undergraduate study with two exceptions: English, for native and nonnative speakers, and ‘foreign’ languages, in which a foreign instructor is often viewed positively by students. There is another parallel but distinguishable body of work that describes Nonnative English Speaking Teachers (NNEST) interactions with American students.

There is much overlap between NNEST- and ITA-centered research. The label “Nonnative English Speaking Teachers” could be applied to many ITAs in a variety of departments; however, NNEST is most often used to refer to those involved in providing English instruction to both students who are native speakers of English and students who are nonnative speakers of English. NNEST refers to graduate students, professors, and elementary and

secondary teachers alike. The terms NNEST, as it is used in the NNEST literature, and ITA overlap when foreign-born graduate students who are nonnative English speakers offer English instruction in American universities in composition and literature courses, or as a second language to nonnative speakers. In the literature, when such foreign graduate student teachers are the object of study they are generally referred to as NNESTs rather than ITAs.

Despite the similarities, a number of differences warrant a distinction between NNEST and ITA problem literature. The NNEST research is conducted almost exclusively by those in the broad fields of Education, English, and Linguistics. While ITA literature is often composed by researchers in the same fields, it also draws in researchers from a variety of other fields such as Chemistry (Papajohn, 1999; Tanner, Selfe & Wiegand, 1993), Communications (Fitch & Morgan, 2003; Chiang & Mi, 2008), Economics (Borjas, 2000, 2004; Fleisher, Hashimoto, & Weinberg, 2002, Watts & Lynch, 1989), Engineering (Barber & Morgan, 1987), Geography (Alberts, 2008), Law (Brown, Fishman, & Jones, 1990; King, 1998), Mathematics (Damarin & West, 1979), and Psychology (Jacobs & Friedman, 1998).

In general, the NNEST literature is much more willing to contest the perception that Americans and Britons are the rightful owners of the English language and the troublesome distinction between native and nonnative speakers (Braine, 2010). Another difference between the terms ITA and NNEST is the centrality of teaching and the permanence of each term as an identifier. Teaching may be much more temporary for ITAs compared to NNESTs. ITAs may teach for only one or two semesters. While ITAs may go on to teach in a university as a professor, they could alternatively take a job focused primarily on conducting research or leave the academy altogether. The ITA label itself is more fleeting. When an ITA graduates or the teaching assistantship ends, they are no longer an ITA. While an NNEST may be a graduate

student and even, technically speaking an ITA, there is often an expectation that once they receive their degree, they will continue to be a NNEST. With the exception of NNESTs who leave the profession of teaching English, the NNEST label is more permanent than the ITA label.

Other related bodies of work not included in the ITA problem literature explored in this chapter deal with foreign instructors (not TAs) in American elementary, secondary and post-secondary classrooms (Florence, 2011; Li & Beckett, 2006). Another related field investigates TAs' interactions with undergraduates without focusing on ITAs (Shannon, Twale, & Moore, 1998; Nyquist, Abbott, Wulff, & Sprague, 1991). Lastly, some studies focus on international graduate students without concentrating on their teaching duties (Perrucci & Hu, 1995; Trice, 2003).

Just Complaints?

Earlier, I suggested that the ITA problem is based solely on undergraduate complaints. Undergraduates complain that they cannot understand and cannot learn from their ITAs. In much of the ITA problem literature, there not only is an acknowledgment of undergraduates' complaints, but also the assumption that the complaints are an indication of a larger problem: ITAs impede undergraduate learning or, at least, they do not facilitate undergraduate learning as well as American TAs. Even researchers who are skeptical of undergraduates' complaints regularly go on to suggest interventions to improve ITAs' teaching (Byrd & Constantinides, 1988; Holland, 2008; Orth, 1982). Relatively few studies have endeavored to compare the learning outcomes of undergraduates taught by American TAs and ITAs with varied results.

One such study was conducted by Lucy Jacobs and Charles Friedman (1988). They selected courses at a large Midwestern university that fit the following criteria: TAs were fully

responsible for all instruction, there were both foreign and American TAs (ATAs) teaching different sections of the same course, and all sections of a course used the same final exam. Jacobs and Friedman found five courses that met the criteria: four in Mathematics and one in Business covering 105 sections total. In an attempt to account for undergraduate student ability, the authors included high school rank, GPA, and SAT scores as control variables. Jacobs and Friedman (1988) found that final exam scores for students taught by the 16 ITAs were higher than the scores for students taught by 46 American TAs before and after controlling for student ability.

Four more “comparative” studies have examined the role of ITAs in undergraduate Economics instruction with mixed findings. Michael Watts and Gerald Lynch (1989) found that ITAs, when compared to American TAs, had a negative impact on undergraduates’ achievement in Economics courses as measured by pre- and post-tests, but Watts and Lynch found no effect on students’ grades at Purdue University. George Borjas (2000) found that at a large public university having an ITA negatively affected the grades of American undergraduates in Economics courses. Conversely, William Beckers and John Powers (2001) reported that students from a wide range of universities with a nonnative English speaking instructor made larger pre- to post-test gains in the Test of Understanding College Economics when compared to students of native English speaking instructors. Belton Fleisher, Masanori Hashimoto and Bruce Weinberg (2002) collected data for five years at Ohio State University in the Economics department and found that although ITAs received worse evaluations from students, ITAs did not negatively impact their students’ grades or their willingness to enroll in future Economics courses. Within the field of Economics, there is no consensus as to how ITAs may affect student achievement.

In a large-scale study, Timothy Norris (1991) examined 806 course sections at the

University of Wisconsin in 18 different departments where courses were taught by TAs, but TAs were not primarily responsible for assigning grades. Norris found that students taught by ITAs had significantly higher grades than students taught by ATAs. When ITAs were divided into Europeans, Asians, and other nonnative English speaking TAs, each ITA group's students received higher grades than students with American TAs. Further, the amount of prior teaching experience of TAs was found to be a greater explanatory factor than country of origin.

As can be seen above, the limited literature that looks at the quantitative success of students taught by ITAs presents mixed findings. However, of the six studies reviewed above only two (Borjas, 2000; Watts & Lynch, 1989) found that ITAs negatively affect student outcomes. Three of the four studies that found students of ITAs perform better or at least not differently from students of American TAs were careful to point out that the ITAs in their study had been screened for their language abilities before beginning a teaching assistantship (Fliesher, Hashimoto & Weinberg, 2002; Jacobs & Friedman, 1988; Norris, 1991). While this may explain some of the success of the ITAs, it should also be kept in mind that nearly all graduate programs in the United States require a minimum score on the Test of English as a Foreign Language (TOEFL) for international applicants to gain admission; so nearly all ITAs are screened for their English language abilities at some point. As measured by standardized tests and grades, it does not appear that ITAs, overall, have a negative effect on undergraduate student performance.

Who are ITAs and Where Do They Come From?

The six studies described above illustrate another common feature of the ITA problem literature: the failure or unwillingness to describe from where ITAs come. Much of the literature is willing to treat ITAs as a monolithic group with no differentiation between countries of origin.

Of the six studies described above, only two reported what countries the ITAs they wrote about came from (Fliesher, Hashimoto & Weinberg, 2002; Norris, 1991). Three of the six studies made no mention of the nationality of the ITAs (Beckers and Powers, 2001; Jacobs & Friedman, 1988; Watts & Lynch, 1989). Borjas (2000) relates anecdotally what is often assumed in the ITA problem literature: He writes, “Although the survey did not collect information on the ethnic background of the TAs, casual observation of the graduate student body indicated that most of the foreign-born TAs were also of Asian origin” (p. 8).

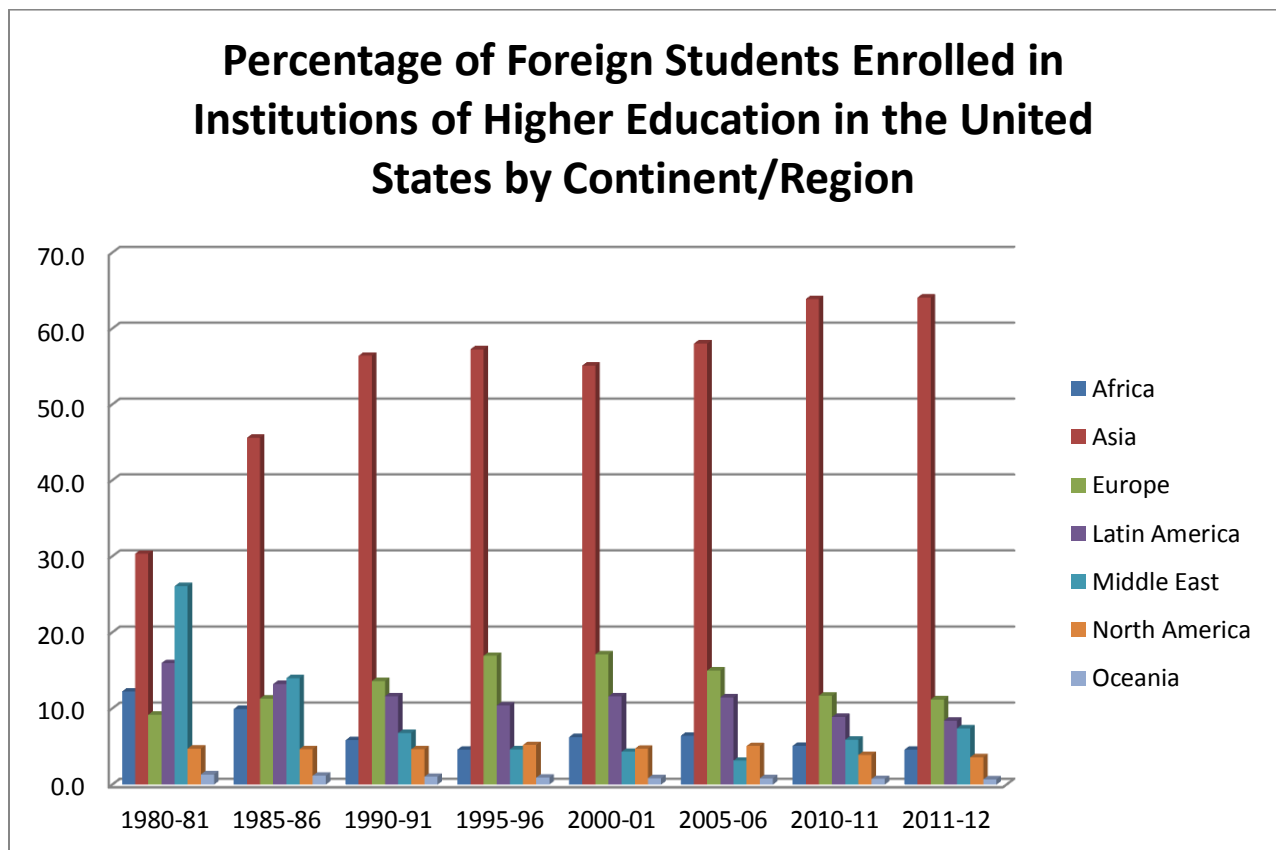
The failure to more specifically define what is meant by the term “ITA” is present throughout the ITA problem literature. Many authors are willing to let the ITA label stand on its own without any explanation or description about what it means. Other authors disclose exactly who they are talking about when they refer to ITAs. Kathleen Bailey (1983) describes a scenario in which an undergraduate realizes he is enrolled in a lab section with a foreign TA and immediately leaves the class in order to rearrange his schedule. She writes, “Recent research suggests that the typical TA in this drama is a male graduate student working toward a doctoral degree (e.g., in math, engineering, or the ‘hard’ sciences).” She goes on to add, “There is about a one-in-three chance that he is Asian” (p. 308). Looking at the Figure 3⁷ below it appears that the odds of the ITA being Asian have likely increased since the early 1980s.

Rubin and Smith (1990) argue that more specificity is needed when referring to ITAs. They write, “While the absolute number of international students in the United States has held fairly steady in recent years, there has been an appreciable shift toward Asian nations, with a particularly sharp increase in students from the People’s Republic of China.” They continue, “Thus one dimension of undergraduates’ encounters with [ITAs] is bound up not just with their instructors’ foreign-ness, but with their Asian-ness in particular” (p. 338). In alignment with

⁷ Compiled by author with data from the National Center for Education Statistics (<http://nces.ed.gov/>).

Smith and Rubin, I contend that “ITA” is a racialized term (in a similar vein as “urban” or “at-risk”) and often a discipline-specific term that refers, frequently implicitly, to Asian and especially Chinese graduate students in STEM fields. This dissertation deals specifically with Chinese graduate students in Statistics.

Figure 3:



The ITA Problem Literature: Whose Problem Is It?

Perhaps not surprisingly, the main objects of study in the ITA problem literature are ITAs. A smaller body of work examines the role that universities and undergraduate students

play in the ITA problem. In what follows, I will explore the position of ITAs, universities, and undergraduate students in the ITA problem literature.

The ITAs Did It

As I will show, without naming it as such, much of the ITA problem literature works from a deficit theory. According to this deficit theory, ITAs' deficiencies in language, pedagogical skills, and cultural awareness account for the communication problems between ITAs and American undergraduate students. While they are often treated as if they are three distinct categories, there is considerable overlap among language, teaching, and intercultural skills. Teaching styles and language are certainly aspects of culture. Additionally, much of teaching is dependent on language.

ITAs' insufficient language skills receive the majority of the scholarly attention. According to this literature, the ITAs' accented English causes confusion for undergraduates, and ITAs may lack the vocabulary to provide clear explanations (Alberts, 2008). ITAs' imperfect pronunciation patterns promote miscommunication with undergraduate students (Anderson-Hsieh, 1990; Molholt, 1988; Morley, 1991). ITAs place emphasis in the wrong areas if they place emphasis at all (Hahn, 2004; Pickering, 2004). ITAs often lack the correct tone needed to display sympathy and involvement (Pickering, 2001). ITAs do not make effective use of discourse markers that can be used to signal how ideas are related, draw attention to main points, transition between topics, and, in general, make speech more comprehensible (Tyler, 1992; Williams, 1992). According to the literature, there are many possible sources for undergraduates' inability to comprehend ITA speech.

Under the deficit theory, ITAs' teaching skills are also suspect. ITAs' fail to demonstrate the connections between different pieces of course content and do not provide the necessary context, which impedes students' learning (Byrd & Constantinides, 1992). They do not sufficiently elaborate their main points (Rounds, 1987; Williams, 1992). ITAs often lack knowledge of the appropriate non-verbal actions to aid in student understanding (Jenkins & Parra, 2003). Barbara Hoekje and Jessica Williams (1992) argue that ITAs need instruction in "teaching, managing the classroom, [and] advising" (p. 263). ITAs fail to direct students' attention to the most salient aspects of a lesson (Ard, 1987). Lastly, ITAs are not aware of the performative aspects of effective teaching (Stevens, 1989). The ITA problem literature indicates that ITAs fail to demonstrate many of the pedagogical qualities and skills of effective teachers.

Cultural differences are also interpreted as playing an important role in the ITA problem. ITAs may come from an education system where students are to be silent during class and may not deal well with American students who expect to actively participate in the classroom (Sarkisian, 2006). ITAs and students may have vastly different ideas about what constitutes appropriate classroom behavior (Alberts, 2008). ITAs are often unfamiliar with the secondary education experiences of their undergraduate students making it difficult to connect new information with students' prior knowledge (Williams, 2011). Shiao-Yun Chiang and Han-Fu Mi (2008) point out that while ITAs' language may be understood, the meaning is still lost due "partly to interactional procedures and partly to professional experiences that are both embedded deeply in one's sociocultural background" (p. 279). Finally, ITAs may be unaware of the roles that TAs or instructors in American university culture are expected to fill (Ard, 1989). According to the ITA problem literature, ITAs' inadequate cultural knowledge can cause problems for undergraduates.

The Curious Case of Intercultural Competence

An emerging trend among those who wish to emphasize the influential role that cultural differences play in the ITA problem is the utilization of “intercultural competence” (LaRocco, 2011, LeGros & Faez, 2012), which is defined as “the ability to communicate effectively and appropriately in a different culture, engage in behaviors influenced by the local culture, and achieve goals through sending and receiving messages that are appropriate to the host culture” (LeGros & Faez, 2012). One of the motivations for forming the concept of intercultural competence was to validate students who returned from study abroad experiences and claimed to be transformed while also validating the study abroad industry (Selby, 2008). Proponents of study abroad can point to intercultural competence as a benefit of the experience.

Intercultural competence has made connections outside of study abroad. Darla Deardorff (2009) claims that in addition to students, faculty, and study abroad advisers, “business professionals, senior-level postsecondary administrators . . . second-language acquisition instructors, public school teachers, and cross-cultural trainers” would potentially benefit from *The SAGE Handbook of Intercultural Competence* (p. xi). The use of intercultural competence in the ITA problem literature suggests that intercultural competence has succeeded in moving beyond study abroad.

Intercultural competence is a rather elusive concept. Deardorff (2008) conducted a Delphi study with intercultural experts in an attempt to bring some clarity to the term. Twenty-two elements of intercultural competence emerged, that were then grouped into five categories: attitudes, knowledge and comprehension, skills, desired internal outcomes, and desired external outcomes.

To provide an example of intercultural competence, Deardorff (2008) describes an idealized interculturally competent student “Pangea” (p. 40). She “has numerous friends from different cultural backgrounds” who she “accepts . . . without judging” (p. 40). Deardorff continues, “Pangea regularly visits local ethnic grocery stores and restaurants and enjoys attending and participating in events of local ethnic groups (concerts, festivals, and so on), even if it means she will feel uncomfortable as a minority” (p. 41). In this description of a model student, we can see that difference is something to be consumed. We can also surmise that Pangea is a part of the dominant, White culture as she may feel “uncomfortable as a minority” at local ethnic events. It seems a minority would, very likely, be more accustomed to being a minority.

In the example of Pangea and the elements of intercultural competence agreed upon by experts, there is no mention of race or racism. There is an emphasis on different backgrounds and cultures, but there is no notion that there is any prejudice or privilege attached to those differences. Pangea is accepting and reflective of her intercultural experiences, but she is not aware of privilege and oppression. Intercultural competence is painfully uncritical.

In the ITA problem literature, intercultural competence is another area where ITAs are deemed deficient. Enumerating ITAs’ difficulties in communicating with Canadian undergraduates Nadine LeGros and Farahnaz Faez (2012) write:

Moreover, in addition to the different cultural and educational expectations that international graduate students bring to Canadian universities, many arrive with little or no teaching experience, varying levels of English language ability, little if any intercultural experience, and, often, little awareness of the impact of pragmatics on instructional communication. (p. 8)

According to LeGros and Faez (2012), ITAs are lacking in many areas suggesting a deficit theory. Their most egregious assertion is that international graduate students have “little if any

intercultural experience.” It is hard to imagine an international graduate student that has no intercultural experience. Cultures do not exist in isolation. It is unfair to assume that international graduate students’ first intercultural experience occurs when they set foot in Canada or the United States especially given that globalization is often given as the reason why intercultural competence is so important.

LeGros and Faez’s (2012) assertion that international graduate students lack intercultural experience may help reveal what exactly is meant by ‘intercultural.’ Possibly, ‘interracial’ or ‘international’ experience would be more accurate descriptions. The majority of international graduate students are Asian. According to common racial classifications present in the United States (and Canada), Asia is full of Asians. This means that many countries, according to U.S. racial codes, are racially monolithic. It seems it could be a symptom of American (and Canadian) exceptionalism to think that America has a monopoly on multicultural.

The substitution of interracial or international for intercultural seems to be the only way that LeGros and Faez’s claim that international graduate students lack intercultural experience can be squared. In this case and generally, the ITA problem literature would benefit from more open, honest and specific confrontations with the racial assumptions that are, all too often, left unwritten.

Joseph Trimble, Paul Pedersen and Eduardo Rodela (2009) agree with Deardorff (2008) that intercultural competence is difficult to define. In an attempt to provide some clarity, Trimble et al. (2009) offer examples of intercultural *incompetence*. They give two examples about interculturally incompetent research: a case involving the Havasupai tribe in Arizona and the Tuskegee syphilis study. In the 1990s, members of the Havasupai tribe gave their blood to researchers at Arizona State University for a diabetes study. The researchers used the blood to

study diabetes, but they also used the blood to study inbreeding, schizophrenia, and migration patterns without the consent of the research participants. In the infamous Tuskegee syphilis study, Black men with syphilis went without adequate care for forty years so that researchers could study the effects of untreated syphilis. In their choice of examples, the authors succeed in recasting overt, and in the Tuskegee case violent, racist acts as intercultural incompetence

By not explicitly recognizing and confronting privilege and oppression, intercultural competence both ignores and downplays racism. Intercultural competence's failure to deal adequately with racism allows relatively minor offenses, such as failing to remove one's shoes when it is appropriate, and catastrophic offenses, such as watching as Black men needlessly suffer and die from a curable disease, as the same thing. Intercultural competence sees danger in encounters with difference. Race and nationality are often assumed to be the most salient sources of difference. Intercultural competence is part of a pervasive silence about racism that is discussed further in the fifth chapter.

The University Did It

While most of the ITA problem literature focuses on ITAs, some research focuses on the universities' role in the problem. Some argue that universities share some of the blame for the ITA problem by thrusting international graduate students into teaching assistantships soon after they arrive in the country without adequate preparation (Kaplan, 1989; Ross & Krider, 1992). Others blame universities for not adequately testing international graduate students' English language skills prior to offering them admission or before assigning them instructional roles and promote better testing methods, which also serves to highlight ITAs' language deficiencies (Halleck & Moder, 1995; Hoekje & Linnell, 1994; Xi, 2007; Yule & Hoffman, 1990). Michele

Fisher (1985) urges universities to conduct self-studies in order to gauge how many international students they can adequately support.

Another area of concern is the legality of requiring some but not all teaching assistants to demonstrate fluency. Kimberley Brown, Phillip Fishman and Nancy Jones (1990) advise universities that in order to avoid charges of discrimination based on race or country of origin all TAs, American or international, should be subject to the same screening, employment guidelines, and required trainings. Kenneth King (1998) offers similar advice to universities with the added warning that state legislation requiring the testing of international TAs or mandating grievance or termination procedures for international TAs but not American TAs may violate the Equal Protection Clause.

The Undergraduates Did It

Commendably, some authors insist that American undergraduate students share some of the communicative burden. Fred Fitch and Susan Morgan (2003) examined undergraduates' stories about ITAs. They found a common narrative structure that viewed the ITAs negatively, the student as victim, and the university as the villain. Fitch and Morgan (2003) postulate that stories that portray ITAs negatively circulate throughout universities and account for much of the undergraduates' apprehension towards ITAs. Barbara Plakans (1997) found that undergraduate students with experience living or travelling outside of the United States gave ITAs more favorable reviews when compared to undergraduates with no international experience. Donald Rubin and Kim Smith (1990) found that 40% of undergraduates actively avoided course sections taught by ITAs. Rubin's (1992) study, summarized in the introduction, found that the perceived

race of an instructor affects students' comprehension. The next section will look at the methodologies researchers have employed to study the ITA problem.

Methodologies

One thing that sets my dissertation apart from other ITA problem research is its methodology. Relatively few researchers have spent time in the classrooms of ITAs, and no other researchers have devoted as much time to observing ITAs' teaching in an actual classroom setting. Many of the authors of ITA problem literature are those devoted to working with international graduate students in ITA training programs. Accordingly, much of the literature focuses on or draws its data from such programs. Related literature focuses on improving screening of potential ITAs through testing. Instead of focusing on remediating ITAs, some researchers look into possible interventions with undergraduates. Researchers more directly involved in examining the ITA problem often rely on test results, surveys, student evaluations, interviews, or some combination thereof. Another common methodology asks undergraduates or others to evaluate audio or video recordings of ITAs. Lastly, some researchers actually get into the classrooms of ITAs. There is much overlap between these categories. All of these methods will be examined briefly below.

It's Training Men, and Women, from Abroad

Many researchers who study the ITA problem are, like me, charged with preparing international graduate students to teach undergraduates. It is not surprising then that much of the research examines these programs. Several studies surveyed universities to get an idea of the training programs they offer ITAs (Shi, 2006), the programs' use of technology (Crumley, 2006),

and their use of testing (Barnes, Finger, Hoekje & Ruffin, 1989). Other studies describe ITA training at a particular institution (Christian & Rybarczyk, 2013; De Rezende, 2012; Gorsuch, 2006; Jia & Bergerson, 2008; Kaplan, 1989; Smith & Ainsworth, 1987; Trebing, 2007).

Researchers have used pre- and post-tests to advocate for a particular method of training focused on drama (Stevens, 1989), pronunciation (Anderson-Hsieh, 1990), and language and teaching skills (Halleck & Moder, 1995). In an attempt to better align ITA training with departmental expectations, two authors interviewed faculty, staff and/or administrators (Ernst, 2008; Toler, 1998).

Other researches have collected their data during ITA training when international graduates students perform teaching demonstrations (LeGros & Faez, 2012; Liu, 2001; Tyler, 1992), enact office hour role plays (Reinhardt, 2007), and keep journals during the training (Capraro, 2002).

Testing Testing

In related studies, researchers have focused on screening tests that usually involve pre-service ITAs delivering a short lecture to evaluators. The research has compared the ratings of English as a second language (ESL) specialists to the ratings of undergraduates (Hsieh, 2011), examined how topic choice affects scores (Papajohn, 1999), analyzed how paralinguistic features affect assessment (Jenkins & Parra, 2003), investigated the relationship between different aspects of a single evaluation (Choi, 2013), and tested the validity of tests by comparing students' performance on multiple tests (Halleck & Moder, 1995; Hoekje & Linnell, 1994; Xi, 2007; Yule & Hoffman, 1990).

Several studies compared international graduate students' scores on screening tests and other measures including subsequent student evaluations of ITAs actual teaching (Whitacre, 1994), a measure of ITAs' communication styles (Inglis, 1993), TOEFL scores and demographic surveys (Kamara, 1994), and two standardized tests and ITA surveys (Witt, 2010).

We Need to Talk: Undergraduate Intervention

Rather than training pre-service ITAs, some researchers conducted intercultural training with undergraduates and then examined students' evaluations of ITAs (Jensen, 2007; Yook & Albert, 1999). Jennifer Lucas-Uygun (1996) exposed undergraduates to intercultural training and then gave the students surveys and observed them in ITAs' classes. Donald Rubin (1992) had students listen to and rate recordings of ITA speech after receiving intercultural training. In these studies, none of the outcome measures showed that the training led to significant advantages (Jensen, 2007; Rubin, 1992; Yook & Albert, 1999), but Lucas-Uygen (1996) did observe that students who received the training appeared more engaged and asked more questions of their ITAs than their peers who did not receive the training.

Interview, Survey, Compare and Evaluate

All of the studies above focused on testing and training ITAs or undergraduate students. The following studies inquired more directly about ITAs and their undergraduates. Many researchers interviewed ITAs; interviewed ITAs about their teaching experiences (Ross & Krider, 1992) and about conflict (Wilmot, 1997); interviewed ITAs along with their undergraduate students and instructors of a Sociopolitics of Language course (Yamazaki, 2010);

interviewed ITAs who scored highly on a test of intercultural competence (LaRocco, 2011); and interviewed ITAs who were recognized as outstanding instructors (Bresnahan & Cai, 2000).

Surveys abound in the ITA problem literature; surveys asking ITAs about language use (Cassell, 2007); surveys of native English speaking undergraduate and nonnative English speaking undergraduate students of ITAs (Chuang, 2010); and surveys of undergraduates paired with focus groups (Plakans, 1997). Fitch and Morgan (2003) held focus groups to elicit undergraduate stories about ITAs. Heike Alberts (2008) collected undergraduate papers about their experiences with foreign-born instructors and interviewed twelve international faculty in Geography.

The literature is rife with comparisons between TAs from the United States (ATAs) and TAs from abroad (ITAs); comparing their student evaluations and surveys filled out by their undergraduate students (Bailey, 1982); comparing course evaluations completed by students of ITAs and ATAs and the TAs themselves (Twale, Shannon & Moore, 1997); and comparing the responses of ITAs and ATAs on surveys about teaching (Luo, Grady & Bellows, 2000, 2001).

The A.V. Club

Many authors made use of video and audio recording equipment. Gayle Nelson (1992) screened lessons from an ITA that included personal cultural examples and the same ITA teaching the same lesson with hypothetical examples and found that the undergraduate students preferred the personal cultural examples. A study with a similar design asked undergraduates to evaluate and tested their comprehension of an example of ITA speech recorded with proper word stress, improper stress, and no stress (Hahn, 2004). Mei-hsia Chang (1993) showed undergraduate students videos of ITAs teaching demonstrations and measured their perceived

comprehension against their actual comprehension and found that students actually comprehended more than they reported. Nagesh Rao (1994) surveyed undergraduate students' attitudes about ITA's and then asked the undergraduates to evaluate a video of an ITA's lecture. Patricia Rounds (1987) videoed two American and three international TAs for 50 minutes and asked the TAs' supervisor and students to comment on the videos. A similar study asked undergraduate students and ESL specialists to evaluate recordings of ITAs' teaching demonstrations and samples of ATAs' teaching (Williams, 1992). Donald Rubin (1992; Rubin & Smith, 1990), discussed above, played lessons recorded in standard American English and compared undergraduates' reactions when shown an Asian face versus a White face and gathered student reactions to audio with different levels of accented speech.

Classing It Up

None of the above studies included observations of ITAs' teaching as the primary means of data collection. Researchers who have ventured into the classrooms of ITAs are outlined below. Yvana Roepke (1998) observed four Chinese TAs and four American TAs' classes twice each and examined pronoun use. She observed that the pronoun use was similar between the two groups, but the Chinese TAs used second person plural pronouns more frequently, which could be a sign of greater cultural distance between Chinese instructors and their undergraduate students.

To evaluate an ITA training for chemistry graduate students, Tanner, Selfe, and Wiegand (1993) observed three ITAs classes twice, interviewed the ITAs, and collected undergraduate students' course evaluations. Susan Jenkins (2000) examined the apparent disconnect between Chinese TAs and faculty in a Mathematics department concerning the TAs motivation and

attitudes about learning English and teaching. Jenkins interviewed seven Chinese TAs and nine faculty members, and observed the teaching of the TAs and the faculty members. Jenkins does not disclose how many times she observed each interviewee teaching, but it appears that she observed each teacher once at most. Barbara Gourlay (2008) collected five hours of video in Biology labs led by ITAs and analyzed the communication patterns. Holland (2008) interviewed seven ITAs and observed five of the TAs teaching, twice.

Studying the role of humor in identity formation, Iryna Kozlova (2008) observed and taped four to five classes of two ITAs and two ATAs, interviewed the TAs and their students, and had the TAs complete epistemological surveys. Byrd and Constantinides (1992) observed, recorded and analyzed 12.5 hours of teaching by native speaking math teachers to inform their work with ITAs. Another study compared tone choice and intonation at a paragraph level of six ATAs and six Chinese TAs from two to four minute segments of recorded teaching (Pickering, 2001, 2004). One study interviewed twenty ITAs twice and observed and videoed one class of each (Williams, 2011). Chiang and Mi (2008) observed five Chinese TAs office hour interactions with undergraduates lasting from 25-45 minutes each.

In one of the earliest studies, John Orth (1982) spent a significant amount of time in classes as he observed “several” courses taught by ten ITAs in order to record speech samples. Orth had these recordings evaluated by English as a foreign language experts and gave questionnaires to the undergraduate students (p. 151). Orth (1982) writes, “The study concludes that students' negative evaluations of [ITA's] speech are often based in social mythology rather than linguistic reality” (p. ix).

For my dissertation study, I observed two Chinese TAs' classes twenty times and a third Chinese TA's classes eleven times for a total of over 50 hours of observation. I interviewed three

observed TAs three to four times in person, and I interviewed undergraduate students of the TAs five times via email. Additionally, I interviewed five other Chinese TAs and two faculty members all from the Statistics department. I will explain the methodology in more detail in the next chapter.

CHAPTER 3: STATISTICAL INQUIRY - METHODOLOGY

In this dissertation study, I employed a single descriptive case study with three embedded units of analysis (cases within a case) to answer the research questions: 1) How do undergraduate students in Statistics courses experience Chinese TAs? 2) How do Chinese graduate students experience teaching Statistics to undergraduates? 3) How does context affect the experiences of Chinese TAs and their students?

Three general criteria favor the selection of a case study methodology. Case study authority, Robert Yin (2013) writes, “Doing case study research would be the preferred method, compared to others, in situations when (1) the main research questions are ‘how’ or ‘why’ questions; (2) a researcher has little or no control over behavioral events; and (3) the focus of study is a contemporary phenomenon” (p. 2). My dissertation fits all of these points. First, the research questions listed above are all ‘how’ questions. Second, as the investigator, I had no control over how the teaching assistants and students acted and interacted. While my presence may have affected their actions, I did not exert control over their actions. Third, my dissertation is rooted in a contemporary, real-life context.

One of the most important parts of case study research is the selection of the case to be studied (Yin, 2013). In this dissertation, the case is Chinese graduate students teaching undergraduate students in the Statistics department at Research University, a large research university in the southeastern United States. I selected the case to represent a “common case” (Yin, 2013, p. 52). As mentioned earlier, Chinese graduate students make up the largest

percentage of international graduate students in the United States, and Statistics is one of several STEM fields that award almost half of their PhDs in the United States to international students (NCES, 2013a). Although certainly informed by contextual factors specific to the Statistics department at RU, the experiences of Chinese graduate students/instructors and their undergraduate students in this study may be similar to the experiences of Chinese graduate students/instructors and their undergraduate students in other universities and other departments, especially in other STEM fields.

Access also played a key role in case selection (Yin, 2013). Through my work with the Training for International Teaching Assistants (TITA) program at Research University, I have taught many international graduate students. The greatest sub-group of international students I have taught is Chinese students in the Statistics department. Having prior contact with many Chinese graduate students in the Statistics department at RU afforded me access that I would not have enjoyed in other departments and other universities. All of the Chinese graduate student/instructors interviewed participated in TITA, and I taught all but one of the student/instructor participants. As outlined by the three research questions, the main goal of this descriptive case study is to describe the experiences of Chinese TAs and undergraduates as they interact with each other in courses offered by the Statistics Department at Research University with special attention granted to contextual factors.

Three Chinese graduate students, Bingwen, Cheng and Deming allowed me to attend the undergraduate course they were teaching and interview them several times. They also provided me access to their students who I interviewed via email. These triads of instructor, student, and class observations make up three embedded cases that were the primary means of data collection.

Additional interviews with five other Chinese graduate students and two professors in the Statistics department served to provide context to the overall case and serve as a way to triangulate the data (Yin, 2013). I conducted a single interview with three Chinese PhD students, Fang, Mingzhi, and Ruan, who had taught undergraduates as a lead instructor in the past. I also conducted a single interview with two Chinese PhD students who had experience leading tutorial/drop-in help sections for undergraduates. Although these two interviews were informative, I have not included them in the results section.

All of the graduate students I interviewed are from mainland China. They were all in their mid-to-late twenties and were in their fourth or fifth year of graduate studies at the time of the interviews. Most PhD students in Statistics at Research University take five years to complete the program. Additionally, most Chinese graduate students do not teach undergraduates until their fourth year. All of the PhD students interviewed and observed were male. In the Statistics department at RU, there are almost twice as many male graduate students to female graduate students. A limitation of this study is that it did not include any female Chinese PhD students. Female PhD students were contacted to be a part of the study and either had no undergraduate teaching experience or declined to participate in the study. The experiences of female Chinese TAs and their students are likely different from the experiences of male Chinese TAs and their students. One Statistics professor speculated that female Chinese graduate instructors relate better to their undergraduate students. Unfortunately, this study does not capture those differences.

In addition to the eight Chinese PhD student participants, I interviewed two long-time Statistics faculty members, Dr. Tannenbaum and Dr. Sherman. All data collection including interviews and observations were conducted between the fall of 2011 and the spring of 2014. All

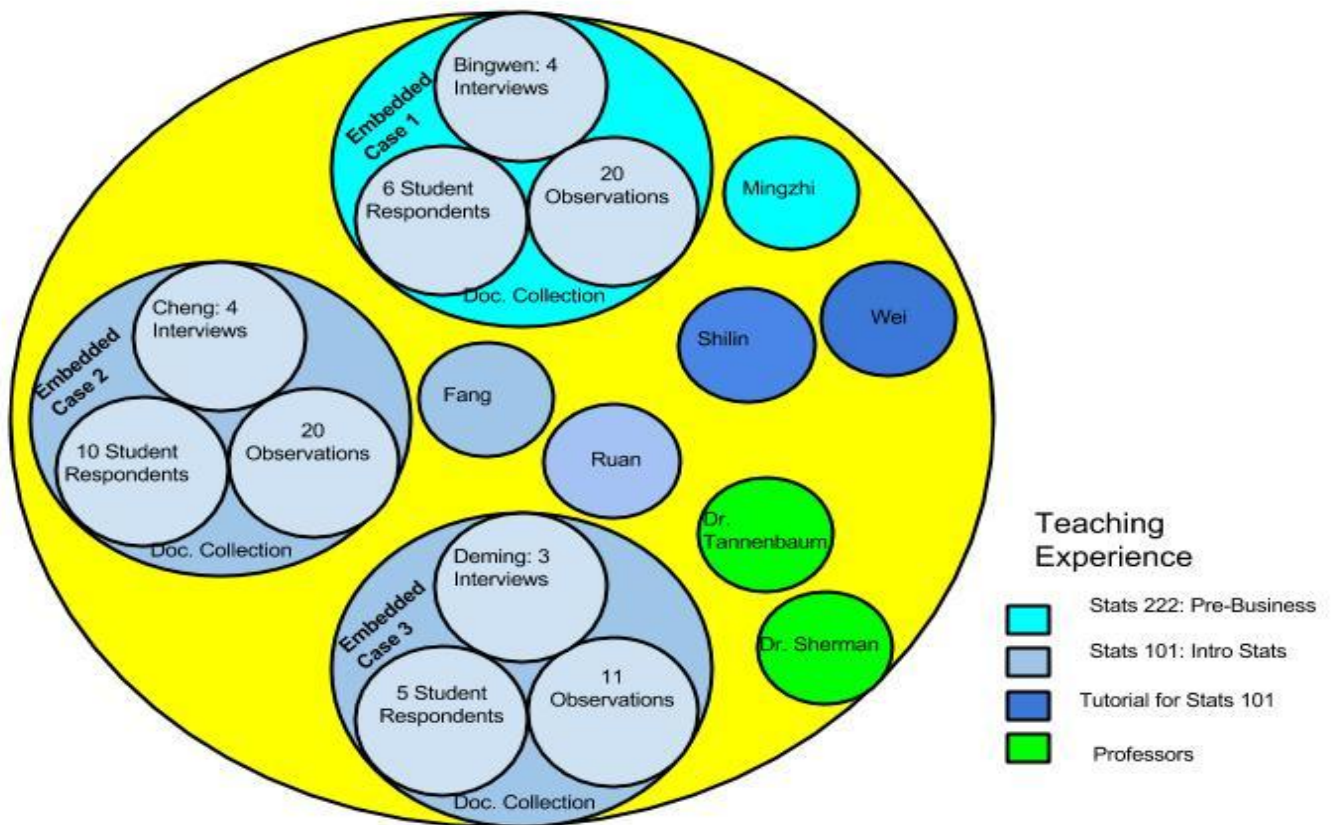
in-person interviews took place on the campus of Research University, usually in the participant's office. The interviews varied in length from 25 minutes to 2 hours, with the median length being roughly 40 minutes. In total, eighteen in-person interviews were conducted. All but one interviewee agreed to have their voice recorded.

The Embedded Cases

Data collection began with the three embedded cases. At the start of their semester of teaching, Bingwen, Cheng and Deming agreed to allow me to observe their class and interview them several times. They also provided me access to their undergraduate students. I interviewed Bingwen and Chen four times each, and I interviewed Deming three times. I conducted the first interview with each observed-TA soon after the beginning of the semester. The last interview with each observed-TA occurred after the end of the semester and after course evaluation feedback had been provided to the instructors. Bingwen, Chen and Deming were my main informants.

Cheng and Deming taught different sections of Statistics 101, an introductory Statistics course that is required by many majors and also fulfills general education requirements for undergraduates. About eight sections of Statistics 101 are offered each semester. Bingwen taught Statistics 222, a pre-business course required for undergraduate admission into the Business School. The other PhD students interviewed had experience teaching these same two courses. Mingzhi and Ruan had previously taught Statistics 101, and Fang had taught Statistics 222. See Figure 4 for a visual schematic of data collection.

Figure 4: Case Study Schematic



I observed Bingwen and Cheng’s classes twenty times each during the semester. I observed eleven of Deming’s classes. During observations I sat quietly among the students and noted the behavior of the students and the instructors. I was especially interested in the interactions between instructor and students.

Early in the semester, I invited undergraduate students in the observed courses to participate in my study. Each course started with an enrollment of around 45 students and ended with about 40 students enrolled. Each instructor granted me five minutes at the end of a class session to briefly explain my study to their students and ask for their consent to participate in the study. The instructors left the room to ensure that undergraduate students’ participation or non-

participation would not be known to the instructors. I collected consent forms at the time of solicitation and also before my next class observation. Nine students from Bingwen's class, sixteen students from Cheng's class, and six students from Deming's class agreed to take part in the study. I contacted participating undergraduate students through email five times during the semester. In each email, I asked the undergraduate participants to respond in writing to five questions regarding their experiences in the course. Among the 31 undergraduate participants, 21 responded to the email interviews for an overall response rate of 68%. Of the 21 undergraduate respondents, 6 completed all five interviews. Table 1 charts the participant attrition by class.

Table 1: Undergraduate Participation and Responses

| Instructor | Course | Agreed to Participate | Responded to Interview #: | | | | |
|------------|-----------|-----------------------|---------------------------|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 |
| Bingwen | Stats 222 | 9 | 6 | 5 | 4 | 3 | 1 |
| Cheng | Stats 101 | 16 | 10 | 9 | 7 | 6 | 4 |
| Deming | Stats 101 | 6 | 5 | 5 | 4 | 2 | 1 |

Due to the voluntary nature of participating in my study, there is likely a participation bias among undergraduate students. Students who chose to participate and then responded to email interview questions may be different from those students who chose not to participate and did not respond to interview questions. One obvious difference is that participants were present during one of the two days that I collected consent forms in each class. That is to say that students who did not attend class regularly were less likely to be involved in the study simply because they were more likely to be absent during the consent gathering process. Students who

did not attend class regularly most likely had different experiences than their peers who regularly attended class.

There could also be less obvious differences as a result of participation bias amongst undergraduate respondents and their non-participant/non-respondent peers. Undergraduate students who participated and responded may be more eager to please or have a desire to be seen as “good” students. Alternatively, students who felt especially aggrieved by the instructor could have been more likely to participate and respond.

For the very first email interview with undergraduate participants, I sent out a group email to all nine of the participants in Bingwen’s class. Unsatisfied with the initial response rate, I then re-sent individual emails to each participant, which resulted in a higher response rate. For all of the subsequent email interviews, I sent out individual emails to each undergraduate student. If an undergraduate participant failed to respond to a set of interview questions, then at the time of the next email interview I sent both the new interview questions as well as any interview questions that had not received a response. Participants in each class received the same twenty-five questions (five emails containing five questions each). The interview questions for each class were similar, but also reflected the differences noted in classroom observations. An additional method of gathering data included collecting course documents from each embedded case. As the instructor allowed, I collected syllabi, quizzes, and informal and formal course evaluations.

Throughout data collection, each mode of gathering data informed other modes of data collection. Within each embedded case, what I observed in class guided the questions that I asked to the instructor and the students. Discussions with the instructors led me to ask certain questions of the students and vice versa. To a lesser extent, interview responses sometimes

directed me to focus on certain aspects of the course during my observations. A similar process played out between the different classes. For example, I asked students in one class if they had a similar experience to those reported in another class.

The Remainder: Outside the Embedded Cases

After I conducted an initial interview with each observed-TA, corresponded with undergraduate participants, and observed each of the classes several times; I began to interview the five Chinese graduate students with teaching experience outside of the observed classes. The timing of this allowed me to ask those with prior teaching experience if what I observed in class was similar to their own prior teaching experiences. Being able to ask those graduate students not currently teaching about specific observations I had made in class made these interviews much more informative. This not only served as a means of triangulation but also helped to jog former TAs' memories about their prior teaching experiences. It also afforded me the opportunity to move from general to more specific questions. I could first see what the former TAs would be willing to speak about given broad questions and then could later ask more probing directed questions about what I had observed and heard from the embedded cases. The timing of the interviews with the former TAs also allowed me to take the information gathered from them and incorporate it into my concluding interviews with undergraduate students and observed-TAs.

The last piece of data I collected was through interviews with two professors in the Statistics department, Dr. Tannenbaum and Dr. Sherman. The professors interviewed had been at Research University for more than twenty years each. Being at the university considerably longer than the graduate students interviewed, the professors had access to more institutional knowledge. From their positions, they could speak more to the goals of the department and to the

changes that they had seen in their time as professors at the University. These interviews also gave me a space to float some possible explanations of what I had observed and learned through interviews and observations.

Plotting a Viewpoint: Researcher Positionality

In the next chapter, I present the results of my data collection. Several concerns or shortcomings regarding the above methodology will be discussed in the fifth chapter. Although Yin (2009) does not address the positionality of the researcher, I believe it can be productively included in a rigorous case study design. I present what I think are relevant parts of my biography here as it may help explain some of the results I will report in the next chapter. In the fifth chapter, I will speak more about the importance of positionality drawing on postcritical ethnography (Noblit, Flores & Murillo, 2004).

My whiteness, United States citizenship, and status as a native English speaker have been integral to my involvement in the ITA problem. Teaching English in Japan helped me to obtain my teaching assistantship with TITA and gain admission to graduate school. My time in Japan is also what initially sparked my interest in studying Education. My US citizenship, bachelor's degree, and status as a native English speaker qualified me to apply to the Japan Exchange and Teaching (JET) Program. Soon after our initial meeting, my Japanese supervisor, presumably speaking for the small town of Toyo, said, "We are very glad that you are American [I suspect this likely also meant White], young, and male." I also quickly learned that my whiteness and perhaps my gender were inextricably linked to my presumed expertise in English.

While in the JET Program, the young Asian American woman in the next town over complained of constantly having her knowledge of English questioned. While I am certain that I

made plenty of mistakes in my explanations of the English language leaving myself open to such questioning, my knowledge of the English language was, apparently, beyond reproach. When I could not provide justification for a certain grammar or stylistic point, which happened more often than I would like to admit, I could always just say, “Well, that’s just how we do it” or “It just sounds better this way.” These explanations worked, continue to work and they have never been questioned. These answers are deemed legitimate when offered by a White native speaker, but may or may not be accepted when offered by a person of color, and are not likely to be accepted when offered by a nonnative speaker. As a White American native speaker, I have access to these superficial explanations that are not open to all English teachers, and I, embarrassedly, continue to rely on them in my teaching.

The undergraduate students I taught in the Kingdom of Saudi Arabia also drew my attention to the connection between my White Americanness and my English teaching skills. The Saudi students were thrilled to have an American teacher even if just for a summer. They complained that they could not learn English from their Bangladeshi instructors. They claimed that they learned more from eight weeks of classes with me and my white American teaching partner than from two years of courses with their Bangladeshi instructors. They attributed the learning disparities to our status as native speakers as opposed to the Bangladeshis’ status as nonnative English speakers. In my mind, a better explanation could be that our classes averaged about ten students while the Bangladeshi instructors routinely had classes with over sixty students. Also, my foreignness was much different than the foreignness of the Bangladeshi instructors. Bangladeshis often occupy menial jobs in the Kingdom of Saudi Arabia while Americans are almost always found in much higher status positions.

One of the main reasons I was interested in the teaching assistantship with TITA was an attempt to pay back some of the kindness that was extended to me as a foreigner living in Japan and Saudi Arabia. My supervisor in Japan, Shingo Ogawa, was extremely concerned about my wellbeing. For the first two weeks of my stay, I ate every meal with Ogawa and his family. My students in Saudi Arabia were eager to get to know me outside of class. My lack of Japanese or Arabic language skills was never looked down upon. In fact, even mangling the most basic of Japanese or Arabic phrases was often met with delight from my Japanese and Saudi hosts.

I find my work with TITA rewarding and meaningful even as I realize that my position within the ITA problem is a product of racism, xenophobia and the dominance of the English language. While I see TITA as a remedial program designed to correct ITAs' deficiencies for the betterment of undergraduate instruction, I hope that our courses offer a space for international graduate students to reflect on the challenges they face as outsiders and form friendships with international students from various departments who they might not otherwise meet. In TITA, we do focus on teaching, language, and cultural skills as informed by the ITA problem literature, but I have also found small ways to incorporate discussions of racism. To give our international students a better idea of some of the characteristics of RU undergraduate students, we compare a fact sheet from RU to a fact sheet from a nearby historically black university. This comparison leads to a conversation about the segregation and integration of Research University and the surrounding town. Connections are made between racism, class, and SAT scores. Unfortunately, this is one of the few critical moments in an otherwise pragmatic course. I wish there was more room in the course for critical examinations of linguistic imperialism, xenophobia, and racism.

Comparing my experiences in Japan and the Kingdom of Saudi Arabia to my perceptions of what international graduate students in the United States experience disgusts me. I believe

international graduate students experience racism and linguistic imperialism on an ongoing basis. My almost complete lack of knowledge of Japanese and Arabic, or any other second language for that matter, was never seen as a cause for concern. In both countries, there were people devoted to my wellbeing in both professional and personal matters. I always had access to a ‘native’ friend who could offer help at a moment’s notice. I worry that this is not the case for international graduate students in the United States. Instead of being excited at the prospect of having a foreign TA, many American undergraduates immediately embark on a search for a new TA (Bailey, 1983; Plakans, 1997; Rubin & Smith, 1990).

In both Saudi Arabia and Japan, acquaintances would quite often apologize for their ‘poor’ English. I doubt very much that graduate students from China regularly hear contrition from Americans about their lack of Chinese language skills. A motivation for my research is an attempt to reconcile the differences in my experience as an American teacher living abroad, and the experience of Chinese teachers living in the United States.

CHAPTER 4: STATISTICAL FINDINGS - RESULTS

In this results section, I will present the data in several ways. First, classroom observations, interviews with instructors, email interviews with students, and students' formal and informal course evaluations are brought together to provide a description of each embedded case, or observed class. Through my descriptions of Bingwen's, Cheng's, and Deming's classes, I begin to answer the first two research questions: 1) How do undergraduate students in Statistics courses experience Chinese TAs? 2) How do Chinese graduate students experience teaching Statistics to undergraduates? After detailing each course, interviews with other Chinese graduate students with experience teaching undergraduate students will be added to the class descriptions to summarize the experiences of undergraduate students and graduate instructors. Table 2 provides an overview of the graduate student participants and their teaching experience.

I end this chapter by answering the third research question: How does context affect the experiences of Chinese TAs and their students? In this chapter, I focus on local contexts and how they affected student and instructor experiences.

Bingwen's Class

When I arrived to Bingwen's first class about half the seats were filled. I picked out a seat in the back corner. I walked past the first three rows of fixed seating and then squeezed in between the two students who were already seated and the plastic chair backs of the row ahead. I pressed down on the seat bottom as I lowered myself into the chair. It was pretty comfortable

with ample padding like something you might find at a newer movie theater. I reached down and pulled the wooden desk attachment over my lap. Students continued to file in, some by themselves, others in pairs or small groups. Students chatted as they pulled paper, books and pens from their backpacks. Right at the top of the hour Bingwen started in. Thirty-eight students and I filled all but eight seats in the classroom. Bingwen introduced himself, “Hello, welcome to Statistics 222. I’m Bingwen. I am a PhD student in the Statistics Department. I hope you will have an easy time with this course.” At Bingwen’s direction the students stated their names and their year in school. They were mostly sophomores with a few freshmen mixed in.

Table 2: Instructor Data Collected

| Instructor | Course | Observations | Interviews | Teaching Experience at time of Observations/Interviews |
|------------|-----------------------------------|--------------|------------|--|
| Bingwen | Stats 222: Pre-business/economics | 20 | 4 | First time teaching |
| Cheng | Stats 101: Intro Statistics | 20 | 4 | First time teaching |
| Deming | Stats 101: Intro Statistics | 11 | 3 | Second time teaching Stats 101 |
| Mingzhi | Stats 222: Pre-business/economics | 0 | 1 | Taught three semesters of Stats 222 |
| Fang | Stats 101: Intro Statistics | 0 | 1 | Taught one semester of Stats 101 |
| Ruan | Stats 101: Intro Statistics | 0 | 1 | Taught two semesters of Stats 101 |

After briefly going over the syllabus, Bingwen handed out a test containing fifteen multiple choice questions. I realized quickly I would have no business in this class as a student.

Although Bingwen assured us several times that this test was “not for a grade,” the sight of X’s raised to fractions all over square roots brought anxiety for me. I remembered last having seen similar problems no less than fifteen years ago. I also remembered how I struggled with these problems at the time. I felt pretty confident about my statistical knowledge before laying eyes on this test. In the more recent past, I had completed graduate level beginning and intermediate courses in Statistics and done pretty well. The numbers and symbols from this pre-test never made an appearance in my recent Statistics courses. It turns out there was good reason for this. I learned later that, although this course was offered by the Statistics department, its focus was on Calculus. Statistics 222 is a pre-business/economics course that has a focus on derivation and optimization problems.

My first day test anxiety eased when I reminded myself that I was not taking the class, but I was there to observe. I looked around the room. Some students seemed to be effortlessly breezing through the exam with shoulders relaxed, upright posture, continually writing down the page. Other students appeared to share my anxiety. They hunched over the test reading problems while mouthing the words. Some students held the test paper up, perhaps hoping a better angle would provide new insight.

In accordance with national trends, there are significantly more females than males at Research University (nearly 60/40), but there were almost twice as many male students than female students in Bingwen’s class (NCES, 2014). In line with the demographics of Research University, the students were mostly White, with a few Black, Asian and Latino students.⁸ Most of the students hoped to gain admission to the Business school’s undergraduate major. Unlike most majors offered at Research University whose prospective students need simply to declare their intention to major in a discipline, undergraduates wishing to major in Business must apply

⁸ Classroom demographics were based on my observations.

and be granted admission to Research University's business major. Statistics 222 is seen as a gatekeeper for the Business major.

As the students finished the pre-test, they turned in their papers and headed out the door. The first students handed in their paper and began to leave with about fifteen minutes left in the class period. Most students left with about five minutes to go. Two students stayed until the end. Bingwen reminded them once again that the test was "not for a grade." The students reluctantly handed in their papers and left the room. In addition to feeling anxiety about not knowing what to do with the variables and power terms on the test, I also felt nervous for Bingwen, asking myself, "Who starts with a test?"

Plug and Chug

The next class I observed was Bingwen's third class meeting. By this time, it appeared the course had already settled into a routine. Bingwen arrived a couple minutes early and divided the large blackboard into four sections by drawing vertical lines. He started with a quick overview of what he would cover that day, sometimes relating it to prior or future material. After these brief introductions, he would start in on the material. Moving left to right, he filled each section of the board with formulas, definitions, and example problems. After all the sections were filled, he returned to the left-most section, erased, and then continued on. Each class he filled the board about three or four times, left to right, new material then examples, new material then examples.

Bingwen would repeatedly turn from the board to the students, silently writing and then facing the students to offer explanation. The students followed a similar back and forth pattern. Their attention moved from their notebooks to Bingwen and the board as they copied everything

Bingwen wrote. They were with him. At one point, Bingwen erased something from the board and the room filled with the soft sound of erasers rubbing on papers as the students also erased. Occasionally, a student would focus on a cellphone held in his or her lap, but, for the most part the students paid attention to Bingwen.

Bingwen constantly peppered the students with questions. For example, during one seminar, he wrote a linear equation and asked, “What does this line look like?” After a few seconds, he asked again more emphatically, “What does this line look like?” A student responded, offering a slope and a y-intercept. Bingwen asked the class, “Right? Is this right?” Bingwen frequently asked students to confirm that they were with him, “Right? Ok? Do you agree with that? It’s right or it’s not right?” He solicited student questions, “Do you have any questions? Everyone ok with these two?” He continued, “If you don’t have any questions for me, I have a question for you...” With a little persuasion, Bingwen could usually coax an answer out of his students. The students also seemed comfortable asking Bingwen content-related questions.

Bored Stiff

Although Bingwen’s students appeared engaged, they also appeared bored. There were yawns and occasional deep sighs. In an informal midterm review one of Bingwen’s students suggested, “My only advice is to try and spice things up every once and a while. Not every lesson needs to be learned through repetitive examples on the chalkboard.” Bingwen was well aware of this. Also employing a food metaphor, Bingwen said, “One of the major complaints is that the course is a little bit boring. I try to add some sauce to it.” There was also a sense that the subject material may be inherently uninteresting to many of the students. Another student stated,

“My biggest complaint is that the class is a little boring but that is to be expected with this type of class I think.” Bingwen also agreed with this assessment. He said, “You know it’s math, so there’s really not so much you can do about it. So I will try to do better.”

Bingwen did make an effort to spice things up. Occasionally, he drew upon personal experiences in an attempt to enliven the examples he used. For example, while introducing the attributes of different functions, Bingwen discussed how China’s one-child policy affected population growth. In another class, Bingwen asked the students to consider how time and distance travelled interact as he recounted driving back to Research University from a trip to New York. He divulged that he got a speeding ticket but refused to say how fast he was going, only that he made really good time.

These personal examples were notable because most of the examples featured in the class were from a textbook and of a certain variety. Students were tasked with using derivatives to solve problems. How much chocolate and how much vanilla ice cream should the ice cream shop produce? How many chairs and how many tables should the carpenter make? How long does it take to earn \$9,600 in interest? How many salesmen should the computer store hire? What’s the optimal price for maximizing profit? Many of these questions afforded students the opportunity to imagine themselves as CEOs charged with maximizing corporate profits by manipulating different variables.

Bingwen also looked to add some sauce to the course by including some personal anecdotes in his introductions. He began one class by sharing an enlightening experience he had while going spelunking during a university break. He started another class by talking about a wedding he had attended over the weekend. On another occasion, he told students about Bachelors’ Day in China. Students seemed to enjoy these stories. One student wrote, “I

appreciate these stories because it allows us to feel some sort of personal connection to our professor. It makes me more comfortable to go to him with questions.” Although students enjoyed these stories, they were more ambivalent about their overall experiences in the course.

OK...I Guess

In email interviews students, I asked Bingwen’s students, “How is the course going so far?” One student said the course is “going okay.” Another of Bingwen’s students responded, “I’m neutral.” Students also quite commonly described their experience in terms of how well they felt they were doing in the course. Bingwen’s students commented on whether the course was easy or challenging, which seemed based, in large part, on their prior experiences and relationship with the subject matter. One student offered, “It has been fairly straightforward so far for me, as most of the information has been review from high school.” Another student stated, “I feel the course is going really well, I am familiar with all of the information presented in the course so far.” Conversely, another student in Bingwen’s class said “It is very challenging because the material is difficult.” On a midterm evaluation one student said, “This class has been pretty challenging for me. It takes me a harder time to understand math.”

One and only one student expressed that he had difficulty understanding Bingwen. He listed “difficulty understanding the professor” as one of the reasons why he was “not doing that good” in the course. Another student in Bingwen’s course claimed the opposite, writing, “Our teacher’s English is very good.” I agree that Bingwen’s English is very good. On several occasions, he seamlessly incorporated idiomatic expressions like, “It all boils down to...” or similes such as, “It’s like peeling an onion,” into his teaching. He was also comfortable enough with his English to sometimes ask students for help in pronouncing an especially difficult word,

like “elasticity.” Bingwen acknowledged his English aptitude and the importance of English language skills in an interview. He said, “[Possessing English language skills] definitely helps for a foreigner to teach in the U.S. classroom. I mean if you really suck at English, students will definitely complain about that, ‘Why don’t you give us a U.S. teacher? We pay so much money, don’t give me crap.’”

A Classroom Hiccup

Most days the course proceeded smoothly. However, one class in the middle of the semester stuck out in my mind. About fifteen minutes into class, Bingwen was well into the lesson working out an example problem. A student entered the classroom, walked past Bingwen, placed his homework on the desk, walked past Bingwen again, and then exited the classroom. It was not uncommon for students to turn in their homework and then not sit for the class. Usually, however, students did this during the commotion in between course changes either at the beginning or end of the class, to draw as little attention as possible. What made this episode particularly remarkable was that as the student passed in between Bingwen and the students, he wore what I can most politely describe as a smug smile. Bingwen was undaunted.

Bingwen genuinely seemed to enjoy teaching. Every day he came to class upbeat. He wanted to stay in the academy and looked forward to teaching as a professor. Bingwen felt a responsibility towards his students. He said, “I feel like [the students] are like my children, so I really want to take care of them and want them to know more about the materials and really try to make them understand what I am talking about.” Bingwen felt strongly that a caring relationship was necessary. In our last interview, he reiterated this belief saying, “I think it is very important that you show respect and also care for the students.... From the bottom of my

heart, I really want the students to know the material, to learn something from the course.”

Bingwen expressed his concern and care for his students and wanted to develop a relationship with his students.

Bingwen was pleased with his end of course evaluations. On our final interview, he had a copy of the results ready to share with me. He had highlighted the categories where he had outperformed the department mean. Bingwen pointed out that the departmental means listed also included graduate courses, which tend to be rated higher than undergraduate courses. In the final evaluation, several students commented on how Bingwen improved his teaching throughout the semester. One student wrote, “I know this was Bingwen’s first time teaching and as the course progressed he ended up being a great instructor.” Another student commented, “Bingwen became more comfortable with teaching the class as the semester progressed and became better at teaching the material.” Two other students agreed saying, “The instructor improved immensely over the course of the semester” and “You got a lot better as the semester went on showing a strong background in the material and were able to effectively teach.” The positive feedback in the final course evaluations gave Bingwen confidence and made him excited to teach again in the future.

Cheng’s Class

Cheng’s Statistics 101 course took place in the same room as Bingwen’s class with its four long rows of fixed seats with an aisle down the middle. Only three of the forty-seven seats were empty on the first day. After introducing himself and the syllabus, Cheng lowered the projector screen bisecting the large blackboard. He clicked through PowerPoint slides that read, “What is Statistics?” and “Why you should care:” This course helped to reaffirm my prior

coursework in Statistics. Probability, means, medians, p-values, and standard deviations were familiar. Statistics 101, Introduction to Statistics is required of many majors and fulfills some core requirements. Each semester Research University offers eight to ten sections of Statistics 101. Cheng's class had slightly more female than male students. The students were mostly White with a couple of Black and Latino students. The class also had seven students from China as well as a couple of Asian American students.

The Routine

Each class developed a familiar routine. Cheng relied heavily on PowerPoint. Before class he would lower the screen that covered the middle half of the blackboard. He would stand at the front desk as he clicked through slides that corresponded to chapters of the textbook. Occasionally, he would work out a problem on the parts of the blackboard that were still visible on either side of the screen. Like Bingwen, Cheng often solicited questions from students. He told them early in the semester, "Just ask questions if you don't understand. I just want to make sure you all understand. It is better if you understand in class." One student took this to heart and would routinely ask five to ten questions per class. Seated against the wall, the student would rest his palm against the wall above his head as if to be at the ready. By pushing off the wall he could signal his readiness to ask a question. At other times the student would sit with his arm draped over his head. From this position, extending his elbow would lift his hand into the air. Most of his questions started similarly, "Wait, so, um, like..."

By the second week of the semester, many of Cheng's students seemed to be annoyed by the frequent questions. When this student began to ask his third or fourth question of the class, some students would giggle, others would sigh heavily. The questions were not always very

articulate. Cheng tried his best to provide answers. At times though, Cheng seemed frustrated. After answering several questions in a row from the inquirer, the student asked a particularly circuitous question. Cheng stared at the student and then tilted his head slightly, suggesting that he, and I assume most of the class, may not have understood the question. Then, he simply said, “No,” and went back to explaining what was written on the PowerPoint slide. The other students in the class found this amusing and laughed. After another class when this particular student had asked many questions, one student turned to me and said, “I wish I could just get him a Twitter account and a book, so he could answer his own questions. I mean an inquisitive mind is one thing, but we have material we need to cover.” I did not see this aggrieved student very often in class after this encounter.

In our second interview, Cheng revealed that some of the other students had complained about the abundance of questions. We discussed the possibility of Cheng talking to the student about his questions. About halfway through the semester the questions from this particular student subsided. He would still ask a question on occasion, but with nowhere near the frequency he did at the start of the semester. In our third interview, I asked Cheng if he had confronted the student. Cheng had not, but he was thankful that the student’s questions abated.

Bored Silly

Like Bingwen’s students, Cheng’s students expressed boredom. Cheng’s students articulated this sentiment in interviews with varying degrees of deference. One student wrote, “His lectures are somewhat dry,” and another stated, “At times [the class] can be boring, but at others it can be interesting.” Other students were more direct. When asked how the course was

going so far, one student wrote, “Easy, but dull.” When asked, “What’s it like to be a student in this class?” another student replied only, “Boring.”

Unlike Bingwen’s class where most of the students appeared to pay attention, students in Cheng’s class often did not give that impression. Cheng said that at any given time, “About half of the students are listening to me.” My observations supported this conclusion. Seven to ten students would regularly use their laptops during class despite Cheng asking students to not bring their laptops at the beginning of the course and stating that laptops were not allowed in the syllabus. Cheng decided against enforcing this rule, especially after he advised one struggling student to leave her laptop at home only to then have the student stop coming to class. Of those with laptops, the majority were engrossed with everything but Statistics. Facebook, the news, sports, sorting I-tunes cover art and titles, massively multiplayer online games, and shopping filled their screens. Two to three laptop users would actively take notes or open the course PowerPoint slide show and have the ability to skip ahead to future slides or linger on slides past. These few students would occasionally stray to some of the online activity listed above, but they would usually switch back and forth or even split their screens between Statistics and other pursuits. Some students would regularly hold their cell phones low behind the seatback in front of them. Although they tried to hide their phone usage, Cheng was well aware, “I see some students playing with their cell phones.” The students that appeared to pay little or no attention to the class were split about evenly between those students off task on laptops, those engaged with cell phones, and a third group who would spend most of the class time dozing off or staring at different parts of the room.

Sitting in the classes, I could relate to the boredom the students expressed. One student said, “It is very difficult for me to stay awake.” I also fought sleep at times. At other times, I

came to class overly-caffeinated and struggled to focus on my observations. I remembered how utterly bored I had been in some of my high school and undergraduate courses. I remembered how ordinary and relentless the boredom felt. None of the students seemed surprised or caught off guard by their boredom. They had been bored before. They were ready with phones and laptops.

It's Alright...I Guess

Students in Cheng's class expressed similar ambivalence to those in Bingwen's class saying "[The course] is okay" and "being a student in this course is fine." Students in Cheng's class also described their experiences based on performance. One student explained "I feel the material is easy, not sure if its because I have taken Statistics before and this is basically a review." Another student said "I feel the course is going pretty well so far. It is easily manageable." Two more students agreed by stating, "I like [this class] very much because it is easy for me," and "I am doing fairly well in the course, so I feel that it is going well." This was not the case for all of Cheng's students. One student said the course is "hard and stressful." Two other students concurred saying, "The bottom line is it was not easy for me," and "I'm definitely struggling a little bit. Statistics is not my thing."

In our interviews Cheng expressed some frustration over students' reluctance to answer his questions and participate in the class. He said, "The atmosphere is ok. Some students are very enthusiastic to answer my questions. I think it's good, but only for those few students, not the whole class. Even if I ask whether they understand or not, if they have questions or not; if they don't understand, they still don't ask questions." After one class where students appeared especially hesitant to answer Cheng's questions, I asked the students how they would explain the

lack of participation. Some students believed it was simply because students did not know the answer to Cheng's questions. One student said, "I believe people are just lost and honestly do not know." Another student offered, "Maybe part of us don't remember the formulas that the instructor asked about." Another student offered several potential reasons. She wrote:

I think there are multiple reasons for this. I think some people are too afraid to shout out an answer in such a small-sized class, and do not want to be wrong. Other people simply may not know the answer, possibly due to a lack of understanding the professor or lack of understanding the material. Other people (a majority of the class I would say) simply do not want to answer the question. They know the answer, but they don't want to rise up and say it – laziness, perhaps?

Agreeing with Cheng's assertion that a few students answer questions enthusiastically, one student said, "I have noticed that it is usually the same few people that respond to questions, so I think that everyone else assumes that those people will eventually answer. In situations where those people don't know the answer, it can take a while for someone to speak up."

(Non)Mandatory Attendance

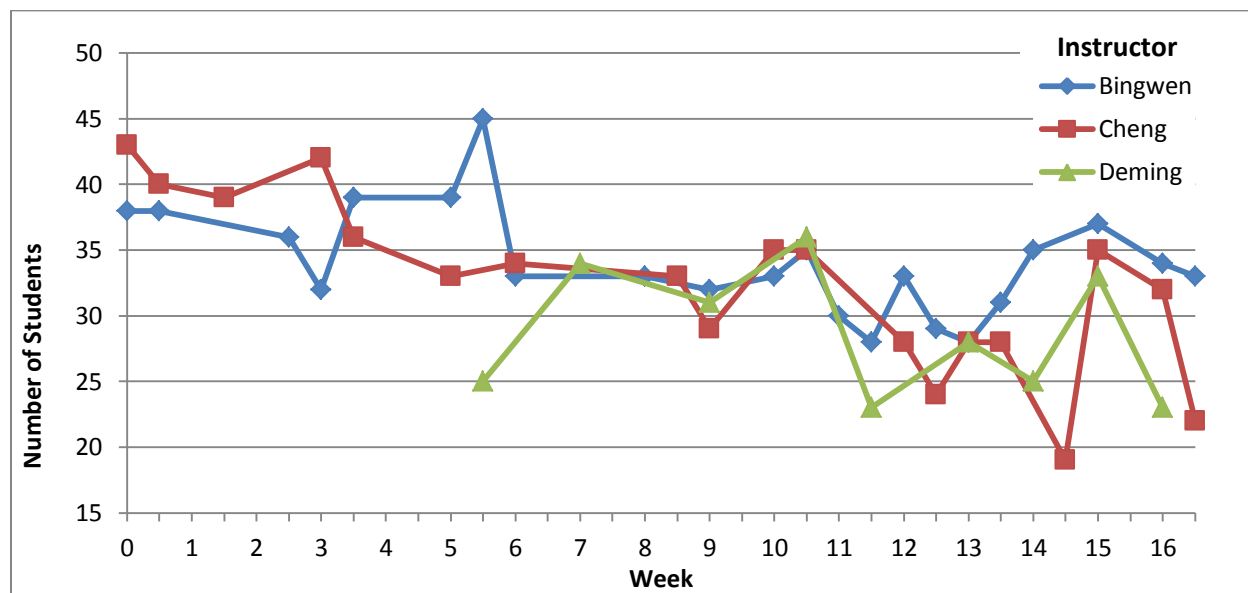
Cheng was also discouraged by the students' attendance. About midway through the semester, I asked him how the course was going. He responded, "I think its ok, but I'm not very satisfied with the number of students who come to class." Cheng's class started with about 45 registered students and ended with about 40 registered students, which was quite similar to the other observed classes. In Cheng's class, I observed a steady decline in students' attendance.

Figure 5 charts the attendance of the three observed courses.

Cheng attributed the lack of attendance to his teaching. He said, "I don't think I teach too well to attract so many students, and also I notice that some students who never appear in class, and they just hand in the homework in the folder outside my office and just take the exam, so I

don't know.” I asked the students how they would account for the decline in attendance. One student said, “People have given up because Cheng isn't big on attendance and his lectures are

Figure 5: Student Attendance in Observed Classes



somewhat dry.” Many of the students cited the availability of PowerPoint slides on course management website to be a factor. One student explained:

Well first of all the lectures are online which is responsible for a lot of the absences (even though its very helpful). But as we got into the semester I sometimes felt like what he lectured in class were things I could just pick up from reading the chapters. Sometimes I don't fully listen to his lecture and make my own notes on each section as he teaches, if I get lost I just wait for him to speak on that topic. I still attend because if I stayed home I wouldn't sit down and make my own notes.

Another student agreed, writing, “I think that students are realizing that they can simply look over the power points outside of class and learn the same material that we go over in class because all Cheng does is read off the power points.” A third student agreed with the PowerPoint

assessment, but also gave some credit to Cheng for attempting to have more interaction with students. She wrote:

There is a general consensus among all Statistics 101 classes that attendance and performance in this course have no correlation. I skipped some classes because I knew that all Cheng was going to do was read off the power point which I could do myself outside of class. When he started writing on the board and doing several practice problems, class attendance became more valuable for me.

While I observed that Cheng would sometimes read directly from the PowerPoint slides, in most classes he would work out a few problems as well. The frequency of board writing did seem to pick up as the semester progressed.

Language Issues

Students in Cheng's class were critical of his English. In an email interview, one student wrote:

Professor Cheng is extremely hard to understand (because of his foreign accent) and it is sometimes difficult to understand what he is saying. Also, because he doesn't have the largest English vocabulary, sometimes he is unable to explain things to us in a way that another professor who speaks English well would.

In an anonymous, informal midterm evaluation only one student mentioned Cheng's English advising him to "be more clear in speaking."

In the formal, anonymous final course evaluation, students were more critical about Cheng's English. Of the eleven students who included comments in their final evaluation, six were critical of his English. One student wrote, "It was hard to understand the instructor's accent when he was explaining." Another student said, "The professor did not know how to speak English which caused him to ignore over half of my emails." One student stated, "Language barrier is a challenge." Some students were critical of Cheng's English but still had positive things to say. Addressing Cheng, one student wrote, "Though there may have been limitations

due to language barriers, you still went out of your way to help us students learn the material.”

Another student said, “[Cheng] cares about his students and our understanding of the material. I think most people get caught in his thick accent.” Another student agreed, “The teacher is a very nice person. He cares about the students and their success; however, there is a very large language barrier that prevents his ideas from coming across clearly. He isn’t very fluent in English and it made the class very difficult.”

Not everyone in Cheng’s class agreed that his language presented a problem. One student said, “I don’t think I have a problem understanding what he is actually saying.” Some students admitted struggling to comprehend Cheng’s English at the beginning of the course but felt that it got easier as the semester progressed. One student stated, “Personally I had trouble understanding Cheng in the beginning of the year ... I think that Cheng’s english is very easy to understand now.” Another student expressed a similar experience writing, “The first week or so I had a little trouble understanding him but ever since then I haven’t had any trouble at all. He speaks slowly enough that I can process what he is saying very easily.”

Cheng related easily to his students regularly having informal conversations before class. For the most part, Cheng maintained a cheerful demeanor. However, as the course went on I would occasionally observe a deep sigh that hinted at frustration, perhaps over a lack of attendance or participation.

Deming’s Class

Like Cheng, Deming also taught a section of Statistics 101. His class took place in the same classroom as Bingwen and Cheng’s. At the beginning of the semester, it took me a little while to get in touch with Deming, so I was not able to attend his class until several weeks into

the semester. Deming's students reflected the demography of Research University. There were slightly more female than male students, and the students were mostly White with a few Black, Latino and Asian students. As with the other two courses, Deming's class started with about forty-five enrolled students and ended with close to forty.

Deming's class proceeded very similarly to Cheng's. Their PowerPoint slides were often, perhaps always, identical. Like Cheng, Deming would talk from the PowerPoint slides and occasionally work out problems on the board. Deming walked back and forth across the front of the room. Deming encouraged questions throughout his teaching, saying "We are going to use this property many times. You need to understand now. If you don't, raise your hand." Deming also asked lots of questions. When students were hesitant to respond, he was quick to offer bonus points. Sometimes students could get the points by answering from their seats. "Who knows the answer? Anyone? Two bonus points." Other times Deming asked students to come to the board, "Three points for writing down your answer on the board." "One more example for three points. Last chance, last chance for today." The same three students would regularly respond in order to get bonus points. Even then, they seemed less than enthusiastic. The student who received the most bonus points would usually scan the room for a few seconds; only after he saw that no one else was going to answer, he would raise his hand.

Bored and Ambivalent

As with the other observed classes, Deming's students expressed boredom. One student blamed the material suggesting, "I would try to make it less boring but I wouldn't know how considering what is needed to be learned." Students often appeared bored in Deming's class. Like Cheng, Deming could tell that many of his students were not engaged. He said, "You can

see today only half of the students are paying attention to the class. I have no idea what the others are doing.” This number seemed about right based on my observations. By my observations the half that were not paying attention could be placed into three relatively equal groups, the computer and cell phone users, sleepers, and those staring off into space. There was significant movement between these groups. This class took place in the morning, which I believe partially accounted for the sleepy students.

Like the students in the other two observed classes, Deming’s students expressed ambivalence about the course. One student said “I feel like the course is going alright thus far.” Deming’s class was also similar in that some students said it was easy: “Well, it has been very easy for me so far.” Another of Deming’s students found it to be difficult: “This class is a little challenging. Being a student in this course requires you to put in effort in and outside of class.” Student’s positive or negative feelings about the course seemed largely related to their performance and the ease or difficulty they experienced.

Concerning Language

Students in Deming’s class commented negatively on his English language skills. On his end of course evaluations four of the eight students who left comments mentioned his language in a negative light. One student stated, “I think some people have a hard time understanding him in class.” Another student wrote, “He has such a thick accent that makes him really hard to understand sometimes.” In end of course evaluations some students were harsh. One student wrote, “Wish the professors in this department were able to communicate more effectively in English.” Another student wrote, “It was really hard to understand the professor because English was not his first language.” Deming also gave me access to course evaluations from a class (also

Statistics 101) he taught the semester prior to the course I observed. The students in that course were even more critical in their complaints about Deming's English. On end of course evaluations for that semester, nine of twelve students who left written comments complained of his language. Two students expressed difficulty by writing, "He was very difficult to understand," and "The language barrier made it difficult" Three students blamed his accent 1) "I sometimes had trouble understanding his accent," 2) "The main problem I had with this class was that it was often very difficult for me to understand what the professor was saying because of his accent," and 3) "Deming was difficult to understand because of his accent." By my estimation, one student surely exaggerated the situation writing, "My professor barely spoke a lick of English."

Attendance Non Grata

Like Bingwen and Cheng, Deming did not require attendance. Similar to the other two classes, Deming's class started with about 45 students and ended with 40. As can be seen in Figure 3 above, Deming's class was often less than half full. Deming was discouraged by the attendance numbers. I asked him how the course was going, and he responded, "Pretty fine, except some of the students don't show up." Deming blamed the sometimes sparse attendance on himself. He said, "Some of [the students] say I'm not very clear. I know." He gave two reasons for a lack of clarity, "One reason is that sometimes I'm not very clear in my head. Also, another thing is my English, especially sometimes, is not very accurate."

I asked students to weigh in on this issue. One student agreed with Deming's assessment, saying "I think that some people have a hard time understanding him in class so they feel that coming to class is a waste of time and they can teach themselves better." She continued, "I also

think due to the class being [early] it is a struggle for some people to get up.” Another student echoed both of these points, saying:

I think attendance has decreased because the professor doesn't take attendance and since he has such a thick accent that makes him really hard to understand sometimes, a lot of people probably think it's useless to go to class so they just use the book or the internet to learn. It also doesn't help that it's an [early] class. College students don't like waking up early.

Deming's English language skills were referenced frequently in his formal end of year evaluations. Although Deming's evaluations improved from his first to his second experience he received, plenty of negative reviews from the semester I observed. Many of the negative reviews cited his language. One student that did not cite his language wrote, “This class sucked.. and I LOVE math. So it's not that I didn't like the class, but I really hated the way the class was taught.” Despite some of the harsh criticism, Deming was pleased that his scores on the final evaluation had increased from his first to his second semester of teaching. If Deming was ever frustrated in class, he never let it show. His energy and enthusiasm seemed constant throughout the semester.

Instructor and Student Experience

Above I have described the three courses that I observed taught by Bingwen, Cheng, and Deming. I hope that these course descriptions have started to suggest answers to the first two research questions: 1) How do undergraduate students in Statistics courses experience Chinese TAs? 2) How do Chinese graduate students experience teaching Statistics to undergraduates? Next, I will provide a summary of the undergraduate student experience and the instructor experience. In addition to the data collected in the classes described above, this section will also incorporate interviews with three Chinese graduate instructors with experience teaching

undergraduates (see Table 2). Like Bingwen, Mingzhi taught Statistics 222. Like Cheng and Deming, Fang and Ruan taught Statistics 101.

Student Experience Summary

Students in all of three of the classes expressed ambivalence about their experiences in the course. Students who found the course to be easy or a review of material they already knew reported more positive experiences. Students who found the course difficult or challenging reported less positive experiences. Fang, who had taught Statistics 101, felt like well-prepared students were successful. He said, “Some of [the students] are very good, but they are very good at the beginning, so they don’t learn anything from my class. If they are good, they are good at the beginning, and they keep doing good consistently.”

Students in all classes also reported that they were bored. Some students claimed the material was intrinsically boring. Students in Cheng and Deming’s classes often showed they were bored with their actions. They slept, stared into space, fiddled with their cell phones, and surfed the web. Some students complained that they could not understand their instructors, especially Cheng and Deming. Their harshest complaints were reserved for formal end-of-course evaluations.

Instructor Experience

Although the Chinese graduate instructors reported varied experiences in our interviews, there were a number of commonalities. Grading and the time demands of leading a course were common complaints. Interacting with students was often listed as a favorite aspect of teaching, but two instructors also spoke of a distance between themselves and their students. Although

other instructors did not talk explicitly about a distance, they expressed frustration at students' lack of participation and attendance. Each of these experiences is detailed below.

Ruan spoke of the time demands of teaching, saying, "That semester [teaching] I almost did nothing else, because I needed to go through the textbook and also prepare all those lectures." Deming had a similar experience. I asked Deming how his first semester of teaching had gone. He replied, "Let's say terrible. It took a lot of time each week... I would look over the material the day before and also the whole morning [before class]." Despite the time demands, Deming also had positive feelings about his first semester of teaching. He said "Actually, I feel it's good. There were four [students], I guess they really liked me. They always came to my office hours and asked me lots of questions." Likewise, most of the instructors listed interacting with students as one of their favorite aspects of teaching. Cheng commented, "Communicating with the students is a very good part [of teaching]." Mingzhi explained, "It was very rewarding. I really like teaching, ... interacting with young people and explaining things." Bingwen said, "Communicating with the students and interacting in class is the most rewarding part. You know what they are thinking and you try different ways to let them understand what they are supposed to know. That's the part that's tricky but also very rewarding." Although most of the instructors enjoyed interacting with students there was also an apparent distance between the students and the instructors.

Fang spoke directly to this distance commenting, "I have to say we are quite distanced." Fang explained the distance between himself and the students as a result of differences in age, language, and culture. He said, "I don't know the students too well because we have a big age gap. And you know I'm not a native speaker and most of the students are native speakers, so we don't talk that much." He continued, "You know we don't have the culture, the common things

to bring the distance closer.” For Fang this distance was not a problem. He said, “I cannot say I would like to bring that distance closer ... because I don’t know what this will bring us.... I pretty much liked the relationship between [me and the students] when I was teaching.” Bingwen also felt a distance between himself and the students. A couple weeks in to his first semester teaching Bingwen said, “[The students] are afraid to ask questions. I feel there is some distance between us. I’ll try to work on that.” Trying to account for the distance, Bingwen also offered a cultural explanation, “Maybe I’m too serious when I talk to [students]. And maybe because I don’t know too much about the American culture, so I can’t tell American jokes, so there’s maybe one reason why I can’t bridge the gap. I don’t know it’s tough.” Towards the end of the semester Bingwen and I revisited the notion of a distance between himself as the instructor and his students. Bingwen said:

I thought about that and I think that that’s probably like a characteristic of some instructors. I mean different instructors have different styles. Some instructors want to be, maybe one of the students, so they can blend in with the students, and they make very good friendships even after the class. But some are just, you know.... So basically, different people have different styles. It’s hard to say. I mean, definitely I appreciate those styles, but it may not be that simple for me to achieve that in a short time, So I’ll work on that, but I’ll also go with the fact that I mean, currently, I think it’s fine. Students can talk with me if they have questions, which means I’m not too scary to them. That’s my take on that. I’ll work on that, but I won’t struggle too much about that.

At the beginning of the semester, Bingwen seemed dissatisfied with the distance between himself and the students. By the end of the semester, Bingwen’s attitude had moved closer to Fang’s acceptance of the distance. Bingwen’s acknowledgement of the distance between himself and the students seemed especially remarkable because, of the three classes I observed, Bingwen’s students seemed the most engaged.

Both Bingwen and Fang had trouble defining exactly what they meant by “distance.” In a tangible sense, it seemed that they may be referring to students’ lack of interaction or even

withdrawal. In a less tangible sense, it seemed like they were also referencing an emotional distance between themselves and their students. While Fang and Bingwen were the only instructors to explicitly talk about a distance between themselves and the students, most of the other instructors talked about the students' lack of engagement and an apparent hesitancy to ask and answer questions.

All three of the instructors I observed regularly tried to engage their students with questions and solicited inquiries from the students. Bingwen's students were the only ones who would regularly reply. Both Deming and Cheng often seemed to wait for responses that never came. After asking a question Cheng was certain students could answer he would occasionally exhort, "C'mon guys!" Deming regularly resorted to bonus points, "Can someone tell me the answer? One bonus point. Ok, two bonus points." The majority of the bonus points went to one enterprising student. The rest of the points went to a couple of other regulars. Cheng was somewhat disturbed by the lack of participation. He said, "One concern is that the interaction is not so much . . . between me and the students. When I ask a question, not so many students are involved to answer the question." Cheng attributed some of the lack of participation to students being off task on their computers. He added, "for others [not on computers] maybe half of them are listening to me and several students are sleeping or something." I asked him how he felt about this, and he replied, "I don't know. So in class I cannot like force them to [pay attention]. It's like I feel terrible, but there's no good approach to solve it."

Students not attending class could be seen as a physical manifestation of the distance between students and instructors. Deming stated, "I'm not very satisfied with the number of students who come to class." Cheng expressed similar disappointment at students not attending class. This distance will be returned to in the sixth chapter.

(Local) Context Effect

The main local contextual factor that affected the experiences of the undergraduate students and the graduate instructors were the differences between the courses Statistics 101 and Statistics 222. Broadly speaking, it appeared that students in Statistics 222 were more engaged, had more positive experiences, evaluated the course and instructors more favorably (see Table 3 below), and attended class more regularly than students in Statistics 101. Correspondingly, graduate instructors who taught Statistics 222, Bingwen and Mingzhi, seemed to view their teaching experience and their students more favorably than those instructors who taught Statistics 101: Cheng, Deming, Fang, and Ruan. Structural differences in the nature of the courses likely accounted for some of the variations in students and instructors' experiences. The courses function within the university and the course content, which are by no means immutable but are outside the practical purview of undergraduate and graduate students, largely guided the experience of the students and instructors. However, pedagogical decisions also played a role in the experiences of the instructors and the students.

Of all the Chinese graduate students I interviewed, Bingwen possessed the greatest English language skills. All of the other Chinese graduate students I interviewed were at about the same level, only a step below Bingwen. Since Mingzhi's language skills were not any better than Cheng's or Deming's, I do not think language skills offer a sufficient explanation of the different students' experiences as evidenced by the ratings below.

Table 3: Student End of Course Evaluation Summaries

| Students were asked to choose whether they agree with the following statement (1=strongly disagree, 5=strongly agree): Overall, this instructor was an effective teacher. | | |
|---|---|---------------|
| Instructor | Course | Average Score |
| Department Mean | All courses, graduate and undergraduate | 4.04 |
| Bingwen | Statistics 222 | 4.09 |
| Mingzhi (self-reported) | Statistics 222 | 4.5 |
| Cheng | Statistics 101 | 2.92 |
| Deming | Statistics 101 (first semester teaching) | 2.35 |
| | Statistics 101 (second semester teaching) | 3.12 |

Before detailing the differences between the courses, I would like to start with some of the similarities. All of the courses taught by the graduate instructors I interviewed had at maximum 47 enrolled students, and all of the courses I observed ended with enrollments close to 40 students. Professors Tannenbaum and Sherman informed me that sections of Statistics 101 and 222 taught by faculty members may have over 100 students, but enrollment in sections taught by graduate students is purposefully kept lower. The students in both courses were mostly freshmen and sophomores. Statistics 101 trended more towards freshmen while Statistics 222 trended more towards sophomores.

The courses differed in a number of ways. Statistics 101 draws students interested in many different disciplines while almost all of the students in Statistics 222 hoped to gain admission to the Business School with a few students interested in Economics. Statistics 101 is required by many majors and fulfills general education requirements. Statistics 222 is required for admission to the Business major. The higher attendance rate and degree of participation in Statistics 222 could be a function of the students desire to be accepted into the Business major. Mingzhi noted that students really wanted to do well in the three sections of Statistics 222 he had

taught. Mingzhi recounted a sad story about a student who came to his office to plead for a higher grade. After leaving without a change in his grade, the student returned with tears because he feared his B-minus would ruin his chance for admission to the Business major. Due to the competitiveness of the Business major, the students in Statistics 222 may have been more motivated than students in Statistics 101.

Another structural difference was the course content. The instructors of both courses were free to decide how and in what order they would present the course content, but the overall content was fixed. Statistics 101 graduate instructors claimed that teaching Statistics 222 would be easier. This assertion was supported by both Dr. Tannenbaum and Dr. Sherman who had over 50 years of combined experience as statistics professors at Research University. Both professors had taught Statistics 101 numerous times but had never taught Statistics 222, though they were familiar with the course. Dr. Tannenbaum explained that Statistics 222 is a math course that focuses on Calculus and Statistics 101 is a more conceptual course that hopes to teach statistical literacy. Statistics 222 could be taught in a systematic, linear way while Statistics 101 required lots of back and forth movement between ideas. Dr. Tannenbaum advised his Statistics 101 students not to focus on the formulas, but, rather, to “treat the course like a Sociology or Psychology course.” Dr. Sherman explained the differences by saying, “[Statistics 222] is just mathy type stuff, and in 101 it is not just math. You have to get into the intuition, and statistical concepts, and ideas.... [In Statistics 222] all you’re doing is teaching students to be able to do some stuff as opposed to really be able to think.” Dr. Tannenbaum declared that Statistics 222 regularly received significantly better reviews than Statistics 101.

While all the instructors, including the professors, who had taught Statistics 101 and not 222 thought 222 was the easier course to teach; Bingwen, who taught Statistics 222, thought

there would be significant advantages to teaching Statistics 101 rather than 222. He said, “I think [Statistics 101] might be better since you can use more examples in that course. [In 222] for the past few weeks we have been talking about derivatives. There’s really not much real life examples you can give about the rules for taking the derivative. So, it’s like pure math.” While Bingwen saw including real world examples as an opportunity, the graduate instructors who taught Statistics 101 saw the inclusion of real world examples as a stumbling block.

This is where I think the pedagogical decisions of the instructors begin to interact with the structural differences in the two courses. Cheng stated that providing examples proved difficult. He said, “In Statistics 101 you have many examples, and you need to clarify those examples, what’s the point of those examples.” Ruan’s least favorite section of Statistics 101 to teach was experimental design. He said:

There is a certain chapter which talks about the philosophy of experimental design and also the sample survey. There are a lot of stories to be told for that part. Because there are a lot of examples to explain, I don’t think I taught that part well, so the students got bored. Those stories are kind of hard for me to explain and make attractive to [the students].

Deming also struggled with teaching that section. He said, “[To teach] experimental design or sampling I will need a lot of real life examples. I’m not aware of many experiments in America, so that is a hard part for me.” Deming continued explaining, “I’m not very good at explaining concepts about real life. Basically, because a lack of reading in American life, and so I prefer more mathematical stuff.” Statistics 101 instructors argued that their unfamiliarity with American culture made it difficult to provide and explain examples.

Mingzhi, who taught Statistics 222, had a different take. He viewed his different cultural background as a potential asset in teaching. He explained:

I have my own advantage, that is I am an international student. There are usually some cultural differences. Sometimes I use that as a basis for some stories. For example, I told

[the students] this one class, I was talking about linear equations, and there's an example about the temperature, one is Celsius scale the other is Fahrenheit scale. In the US people use the Fahrenheit scale, but in China we always use the Celsius scale. So I came here and check the temperature outside, and it's summer so I want to know what the temperature looks like. It's like 90 or 91. In Celsius degrees that is almost the temperature that water will boil, so I will tell some stories like that, and students like it.

Similar to what Mingzhi described above, Bingwen also worked several example from his personal life into his teaching. I did not observe this in Cheng or Deming's classes.

On PowerPoint

One reason for the lack of personal examples in the Statistics 101 courses could be the heavy use of PowerPoint. Certainly, some instructors can use PowerPoint while also incorporating their own examples. Dr. Sherman taught Statistics 101 using "completely PowerPoint," but it was a PowerPoint he created himself that drew on examples that intrigued him and he hoped would engage his students, like the history of political polls. Through PowerPoint, Dr. Sherman also told students about his own research. He said, "I'll share with [the students] some of my own work, so they can see my enthusiasm."

Rather than creating their own PowerPoints, all of the Statistics 101 graduate instructors I interviewed used PowerPoints that were created by faculty a number of years ago. Cheng said, "There are several PowerPoints used by the faculty, and I used one of them and then modified it. Actually, I used two of them and combined the good parts." The similarities I observed between Cheng and Deming's PowerPoint presentations led me to believe that any modifications were slight. In revealing his use of borrowed PowerPoints, Fang intimated that using others' PowerPoints may not have been the best pedagogical route. He revealed, "There's a little secret. We do have secret slides. We have previous slides from a professor. We do have to go through and pick out what we want to teach. For me, I would just add the answer."

After two semesters of teaching Statistics 101, Deming realized that this approach may not be ideal. I asked Deming what he would do differently if he taught the course again. He responded:

I would tend to use the blackboard more, and I'd change the slides and write the main part by myself. You know these slides are from an advisor that used them many years ago. I revised some of them but I still think the main part is not very good especially for the students. They don't like the PowerPoint lecture, I know. But because Statistics 101 covers a lot of materials I cannot write everything on the board. I don't know how to fix this issue.

Dr. Tannenbaum agreed that having graduate instructors click through someone else's PowerPoint slides could be problematic, but he said, "I also don't want to deny them access to these resources as they prepare to teach."

I asked Cheng and Deming's students if they would prefer their instructor use the blackboard or PowerPoint. The overwhelming majority of respondents, ten, supported the blackboard while only three students preferred PowerPoint. Students who favored PowerPoint cited its visibility, time-saving, and the utility of being able to review the slides after class and gathering all the information in one place. Students who favored the Blackboard said "[It] makes me more focused" and "allows me to become more engaged." Several students appreciated seeing a problem worked out step-by-step on the board and appreciated that using the board slowed the pace of the course. One of Cheng students said the use of the blackboard would make her more likely to attend the course regularly. She wrote:

I won't ditch if I know that I am going to miss notes that I can't find on [the course management website] later. Cheng explains the problems better and shows more steps when he is using the blackboard. It makes it easier for me to follow him. Also I don't see the point in coming to class if all a teacher is going to do is read from the power point. I can do that myself outside of class.

Bingwen's students expressed contentment with his avoidance of PowerPoint. The use of professors' PowerPoints by graduate instructors of Statistics 101 will be examined more fully in the sixth chapter.

Although this marks the end the results chapter, more findings will be reported in the sixth chapter. In the process of data collection, I located three contradictions: 1) Students' formal final course evaluations were more negative than informal midterm evaluations. 2) Students complained about their instructors' language but did not pose the types of language clarification questions that I would have anticipated. 3) Instructors were less aggrieved by students leaving during the class than other students in the class. Before I can adequately examine these contradictions, I need some more tools. In the next chapter, I will borrow from postcritical ethnography and cultural studies to prepare for an analysis of the three contradictions.

CHAPTER 5: (NON)STATISTICAL ANALYSIS TOOLS

In the summer of 2005, I spent ten days in Beijing. It was very hot. To cope with the heat, some men on the streets and sidewalks would lift their shirts above their stomachs and carry about their business with their midsections exposed. This was much different from the shirtless young men who you may see running around an American college campus in the summer. In Beijing, it seemed the bigger the belly, the more likely it would be hanging out. I really enjoyed the informality of this.

When I have talked with students and visiting scholars from China, they are often interested in how I experienced Beijing. I usually tell them about seeing the Forbidden City, walking around Tiananmen Square, and going to see the Great Wall. I talk about eating roast duck, Beijing's specialty, and lots of dumplings. In a conversation with a scholar visiting from Beijing, I told her about how I enjoyed the informality of men lifting up their shirts as a way to beat the heat. She informed me that this no longer happens. I was intrigued by her assertion, but since we had just met and she seemed a bit put off by my suggestion that some men walk around with their bellies out, I did not inquire further.

During the course of my research, I took the opportunity to ask several participants who had lived in Beijing whether some men in Beijing lift their shirts up to cope with the summer heat. One student who is from Beijing said, "A lot of elderly people do that, especially if it's very hot." Another student who studied in Beijing said, "No, that's not the case anymore. [Beijing] has changed so much in eight years." Conversely, one other student stated:

Yeah, that's just the traditional Chinese thing. It depends on where you are. If you are in Tiananmen Square you can probably not do that, but if you are somewhere that is a more traditional Chinese style place, like the hutong [urban neighborhoods with narrow alleys], you can probably do that and no one cares. It depends where you are.

I suspect that men still expose their stomachs on hot days in certain parts of Beijing. It seems just as likely, however, that the practice, as half of my respondents claimed, could have gone out of favor.

Objectively, the different stances on shirt raising could easily be reconciled by walking around Beijing on a hot summer day. However, the objective question of whether some men in Beijing lift their shirts is not nearly as interesting as examining the possible reasons why Chinese students and visiting scholars accept or reject the existence of the practice of shirt raising. I think there is much more to learn by interrogating the contradictory statements on shirt raising than by trying to “get to the bottom” of the existence of shirt raising. In this situation, I believe the case study methodology outlined in the third chapter, which is guided by Yin (2009), would advocate for finding an answer to the question of whether men in Beijing raise their shirts on very hot days. Yin's approach can be best described as postpositivist: True objectivity is not seen as a possibility, but it is still held out as an ideal goal.

Yin's view of reliability demonstrates his postpositivism. He (2009) writes, “A good guideline for doing case studies is ... to conduct the research so that an auditor could in principle repeat the procedures and arrive at the same results” (p. 45). If the goal is to find out if men still lift their shirts on hot days in Beijing, Yin's hypothetical auditor may succeed. I could travel to Beijing and record the temperature and what streets and alleys I walked down at what time of day recording whether or not I observed any men with their shirts raised. On a day with a similar temperature, following the same route at the same time another researcher may reasonably expect to find the same results. If, however, the question is not the objective question of whether

some men in Beijing still raise their shirts on very hot days, but the more interesting question, to me anyway, of what accounts for the contradicting statements on shirt raising, then it no longer seems as reasonable to expect two researchers to come to the same conclusions. When objectivity is no longer the goal, the positionality of the researcher now takes on a much greater importance.

From a postcritical ethnography perspective, the positionality of the researcher necessarily colors the findings and interpretations ((Noblit, Flores & Murillo, 2004). I believe that an exploration of the researcher's positionality, "the groups and interests the [researcher] wishes to serve as well as his or her biography," would facilitate a more thorough interrogation of the contradicting reports on shirt raising (Noblit, Flores & Murillo, 2004, p. 21). Below I present some additional pieces of my positionality, especially the interests I wish to serve, as I explain how I realized I needed methodological tools beyond Yin's postpositivist case study methodology.

Let's Get (Post)Critical

My initial impulse for conducting this study was to "get to the bottom" of the contradiction between the undergraduate complaints reported in the literature with my own interactions with Chinese graduate students. In a sense, I wanted to prove that undergraduates are racist and highlight some of the innate racism and xenophobia present in the United States. From the beginning, I realized that this was problematic and, perhaps, unhelpful. Even if the undergraduates are racist, what is to be done?

In his study described in the introduction, Rubin (1992) employs this objective, "get to the bottom" of the ITA problem focus. He (1992) provides suggestive evidence that

undergraduates are racist by gauging students' reactions to the same audio recording but showing some students an Asian face and other students a White face. In the same article, Rubin (1992) describes an intervention he conducted with undergraduates where participants observed an ITA teach two classes and in later sessions "explained their recorded observation/evaluations to the [ITA] in the presence of a neutral facilitator" (p. 524). The intervention operates using contact theory, which states that positive, informal contact between intercultural participants with relatively equal status alongside a neutral facilitator can decrease hostility (Breslin, 1981; Gundykunst, 1977). Rubin's intervention did not indicate the desired outcomes. Ultimately, Rubin (1992) laments, "Future programs . . . will require labor-intensive and time-intensive efforts, and will not be practical for the sort of large-scale sensitization needed on college campuses" (p. 528).

Of all the ITA literature Rubin's (1992) study is my favorite, perhaps in part due to nostalgia as it was my introduction into the ITA literature. He convinced me undergraduates are racist. He outlines an intervention based on contact theory, which I think at the very least is worth a shot. While plenty of things could go wrong in attempting to facilitate positive contact between people of different cultures, overall, it seems like a worthy means to an ideal end.

While Rubin's (1992) study is my favorite, I would not be trying to be a critical scholar if I did not find a single problem with it. Rubin explains the apparent racism of the undergraduates with homophily. Sociologist Everett Rogers (1971) explains, "One of the most obvious and fundamental principles of human communication is that the transfer of ideas most frequently occurs between a source and a receiver who are alike, similar, homophilous" (p. 210). When used to explain racism, homophily seems to claim that racial segregation is a byproduct of human nature. I find this defeatist, and it does not line up with my personal experience. My

initial impulse was, like Rubin (1992), to expose the racism of undergraduates, but then what? That not only smacks as unfair to the undergraduates but also doesn't seem to get me anywhere interesting. By using a postpositivist "get to the bottom" of the ITA problem approach, I think Rubin utilizes an overly simplistic theory, homophily, to explain his results.

Interrogating the contradiction between undergraduate complaints and my own admiration for ITAs, rather than trying to "get to the bottom" of the contradiction by providing evidence that the undergraduate students are racist, opens up more possibilities. Before I could get to interrogating the contradictions, however, I first had to find the contradictions.

Prior to going into the classrooms, I thought I would find undergraduate complaints based on the ITA problem literature but also based on my own personal experience listening to acquaintances and friends recount bad experiences with ITAs. Too often after I describe my work with international graduate students but before I can begin my critique of the ITA problem, I am greeted with "Oh, that is such important work! I had an international TA..." I have inadvertently initiated many horrible ITA stories. Usually language is the main complaint, "I could not understand a thing he said."

I expected I would find complaints, but I needed data. To this end, Yin's approach was quite helpful. I found three specific contradictions that, I believe, speak to the overall contradiction that prompted this research. First, undergraduate students tended to evaluate their instructors more favorably on informal midterm reviews than on formal end-of-term reviews. Second, students complained that they could not understand their instructors yet they did not ask language clarification questions. Third, undergraduate students were more offended by their fellow students walking out of class than the instructors. In each of these cases, interrogating the contradiction is, perhaps, more interesting than searching for a resolution. I will not claim that in

the pages ahead I do not offer any resolutions. However, alongside any resolutions I want to attempt to account for the contradictions in the spirit of interrogation rather than solving the contradictions. Yin's (2009) case study methodology was great for uncovering the contradictions, but to interrogate them I need a different set of tools.

Representation (and Reflexivity)

Before getting to the larger contexts that I will present in an effort to help interrogate the three contradictions I found, I want to briefly address two more concerns raised by postcritical ethnography. Noblit, Flores, and Murillo (2004) list four issues that postcritical ethnographers consider, "positionality, reflexivity, objectivity, and representation" (p. 21). I have delineated my view of objectivity from Yin's (2009) above. I have also touched on my positionality in regards to my interests going in to this study and a biography is included in third chapter. Now, I turn briefly to representation and reflexivity while still clinging to the shirt raising example.

If the practice of shirt raising does still occur in Beijing, the two Chinese scholars who denied the practice could honestly be unfamiliar with it. It could be they only spent time in areas of the city where exposed male midsections were deemed inappropriate. Initially, when the female visiting scholar informed me that men no longer lift their shirts, I took that as a contestation over what it means to be Chinese. I took it to be a way of saying, "I am Chinese, and I do not do that; my friends do not do that; and my family does not do that." The other student who denied the practice did so in the context of rejecting pre-modern representations of Beijing and China. He said, "[Beijing] has changed so much in eight years." In the interview, I asked him about representations of China in American films and television. He lamented that China is presented in an outdated fashion and that images are usually taken from the 1980s and show lots

of bicycles. In actuality, he said, contemporary Beijing is a hypermodern city filled with cars. For this student, it seemed that by rejecting the practice of men baring their stomachs he was insisting on Beijing's modernity. In relaying my appreciation of what I thought was a benign cultural practice, I inadvertently represented Beijing, China, and Chinese people in a way in which at least two Chinese scholars were uncomfortable.

As a White American researcher hoping to relate the experiences of Chinese TAs, I am aware of a number of negative implications. Attempting to give voice to Chinese TAs could imply that Chinese TAs cannot speak for themselves. It may imply that Chinese TAs cannot speak for themselves in English. This is especially troubling because the Chinese TAs are required to speak English because I, as the researcher, do not speak Chinese. Giving voice to Chinese TAs may imply that they cannot speak for themselves to an academic audience. This is troubling because the Chinese TAs are all graduate students and researchers in their own right. The White American researcher examining foreign Chinese students also immediately stirs legitimate concerns of neocolonialism. By its very nature, my research identifies a group as foreign, re-inscribes borders around this group, and works to describe their experience from a majority perspective. This fear that I was playing out an update of an old colonial project was with me during the entirety of data collection. There is nothing I could do to shake it, but I hope that recognizing it helps somehow. In admittedly small attempts at overcoming this concern I presented some of my main findings to my primary informants during data collection, and I also gave a written course description to each of the three observed instructors for their examination.⁹

Although the fear of enacting a neocolonial project as researcher remains present, I am also able to imagine alternatives. The fear of neocolonialism may itself be problematic. It assumes that in its relationship with China the United States is the colonial power. China sends

⁹ I have not received any substantive feedback.

more students to study abroad than any other country. In this context, a reversal of the colonizer/colonized could be advanced. An alternative to a colonizer/colonized dichotomy is to consider the potential that there are other transnational forces at play. Chinese TAs in Statistics could be seen as inviting undergraduate students into a global math/technology discourse that supports the free flow of global capital to the advantage of a global elite class.

Another representational concern is that in order to best protect the identity of my main informants, I have not included much biographical information about them in this dissertation. Unfortunately, this may have the unwanted effect of reinforcing the very present idea of homogeneity among Chinese male graduate students studying statistics at Research University. My research questions already work to police the boundaries around Chinese graduate students as subjects to be studied. Even providing great amounts of individual information on each participant would still likely be inadequate at combatting the symbolic act of defining my target group as Chinese graduate students in statistics. Unfortunately, for the protection of my graduate student/instructor participants, I have not included much personal information that may help break down the imagined homogeneity of the group.

Reflexivity (and Representation)

There is a chance that the two shirt raising deniers were engaging in an enactment of a public transcript (Scott, 1990). While it may be acceptable for residents of Beijing to acknowledge the practice of shirt lifting with others inside Beijing, some may prefer that the practice is denied to outsiders. I assume that many of the responses I received from both Chinese and American participants were part of a public transcript. Participants have very little to gain by providing any information they would not be comfortable sharing publicly. These public

responses still hold value, and it is unreasonable to expect participants to reveal their innermost feelings. Even if participants wanted to, I do not believe there is any true nature of their experience to be revealed.

There was also some self-censorship on my part about what questions I would and would not ask Chinese participants. Chinese students in the United States who have questioned Chinese policies have been intimidated and seen and their families in China threatened (Dewan, 2008). For this reason, I consciously avoided asking Chinese participants to critique China or talk about sensitive topics like pro-democracy movements. These restrictions imposed by me and the participants certainly color the results reported in the previous and following chapters.

Context Cubed: Three Larger Contexts

To better account for the opposing statements on whether shirt raising is still practiced in Beijing, an examination of a variety of larger contexts could be advantageous. Knowing more about how gender and class operate in Beijing would help. A description of the transformation of Beijing could also be helpful, as well as traditional and contemporary Chinese views of the body. Placing the contradicting stances on shirt raising in these larger contexts would be useful, and I would argue necessary, to start to give a decent account for the different reports on shirt raising in Beijing. Additionally, offering an account for the discrepancy about shirt raising could also help inform or shed new light on the larger contexts drawn upon for an attempt at an explanation. It is also certain that the contexts listed above would be incomplete. There would be other contexts not examined that would have added to the account.

In this section, I situate the case study within three larger contexts: 1) race/racism in the United States and especially the racialization of Asians, 2) American representations of a rising

China, and 3) undergraduate instruction at research universities especially as it concerns Statistics. The ITA problem literature outlined in the previous chapter could be considered an additional larger context. These larger contexts are distinct from the local contexts (different courses) referenced in the prior chapter in answering the research question: How does context affect the experiences of Chinese TAs and their students? The larger contexts are broader than the local context; they occur at a further level of abstraction than the local context.

This emphasis on context is borrowed from cultural studies. Lawrence Grossberg (1997; 2006) asserts that radical contextuality is a foundational principle of cultural studies. Radical contextuality attempts to respect the complexity present in the world. Grossberg (1997) writes, “An event or practice (even a text) does not exist apart from the forces of the context that constitute it as what it is. Obviously, context is not merely background but the very conditions of possibility of something.” (p. 255). In the shirt raising example, the contradicting accounts connect with larger contexts through articulations. These articulations are not fixed nor predetermined, but the presence of articulations between practices and local contexts and larger contexts has consequences.

The larger contexts are presented here because in the next chapter, I will attempt to map articulations, or connections, between larger contexts, local contexts, and my findings. The decision to include these particular three larger contexts concerning race/racism, representations of China, and undergraduate Statistics reflect my own positionality and concerns. I hope the brief examinations of the larger contexts below will allow me to give a better account of the contradictions I found.

Charting Race and Racism in the United States

In “The Souls of White Folks,” W. E. B. Du Bois (2007 [1920]) explains that racial aesthetics support a system that exploits people of color to the direct benefit of White people. He (2007 [1920]) writes:

This theory of human culture and its aims has worked itself through warp and woof of our daily thought with a thoroughness that few realize. Everything great, good, efficient, fair, and honorable is “white”; everything mean, bad, blundering, cheating, and dishonorable is “yellow”; a bad taste is “brown”; and the devil is “black.” (p. 22)

Racism does its work, partially, through aesthetics, preferences, what one finds pleasing and displeasing. In turn, these preferences support racism.

In Dewey’s (1997 [1938]) bipartite theory of experience, outlined in the Introduction, the first and most easily recognizable value of an experience relies heavily on aesthetics, “an immediate aspect of agreeableness or disagreeableness” (p. 27). Racialized aesthetics can shape experiences in an immediate, preconscious way through engrained aesthetic articulations between race and beauty.

In the piece quoted above, Du Bois (2007 [1920]) relates several examples of racism ranging from a White man yelling at a Black child to a mob “mad with murder, destroying, killing, and cursing; torturing human victims” (p. 17). Within these examples that range widely in severity but are all overt racist acts, DuBois recounts another example, “In Central Park I have seen the upper lip of a quiet, peaceful man curl back in a tigerish snarl of rage because black folk rode by in a motor car. He was a white man” (p. 16-17). Today, this latter example may be referred to as a microaggression.

The concept of microaggressions emerged in the late 1960s and is attributed to Harvard professor of Education and Psychiatry Chester Pierce (Yosso, Smith, Ceja & Solórzano, 2009). Pierce (1995) describes:

[Microaggressions] are subtle, innocuous, preconscious, or unconscious degradations, and putdowns, often kinetic but capable of being verbal and/or kinetic. In and of itself a microaggression may seem harmless, but the cumulative burden of a lifetime of microaggressions can theoretically contribute to diminished mortality, augmented morbidity, and flattened confidence. (p. 281)

Microaggressions are enactments of the racialized aesthetics that Du Bois describes.

Microaggressions provide a way to talk about and account for the ordinary, perhaps predominant, manifestations of racism. Sue, Bucceri, Lin, Nadal, and Torino (2007) write, “Instead of overt expressions of White racial superiority, research supports the contention that racism has evolved into more subtle ambiguous, and unintentional manifestations in American social, political and economic life” (p. 72).

While microaggressions are a useful tool to talk about racism, it is a mistake to imagine that racism has evolved away from overt and violent expressions into this more subtle form. First off, as Du Bois describes, microaggressions took place alongside the overt and violent expressions of racism. It doesn't seem particularly notable to say the microaggressions also occurred in the past; but it is important to maintain that while racism has changed, it has not evolved in a more palatable fashion to toward microaggressions. Microaggressions have always been around, and they occurred alongside the overt, violent racist acts Du Bois describes. Violent, overt racist acts may have waned, but the murder of Black youth sanctioned by ‘stand your ground’ laws and the mass incarceration of Black men suggest that we should not yet celebrate the disappearance of violent, overt racist acts (Bonilla-Silva, 2013; Alexander, 2010).

Much of the research on microaggressions has taken place on college campuses (Gomez, Khurshid, Freitag & Lachuk, 2011; Solórzano, Ceja & Yosso, 2000; Sue et al., 2007; Sue, Lin, Torino, Capodilupo & Rivera, 2009; Yosso et al., 2009). Mary Louise Gomez et al. (2011)

studied microaggressions faced by TAs of color and international TAs in Education who taught pre-service teachers. Of the ITAs, Gomez et al. (2011) write:

Each of these international graduate students discussed feeling as though their professional expertise was invalidated in subtle, and not-so-subtle ways. [Students] dysconsciously and continually used silence, ignoring, avoidance, and verbal confrontation to invalidate [the ITAs'] knowledge and experience. (p. 1195)

Sue et al. (2007) focused specifically on Asian Americans experiences of microaggressions.

They found eight common themes: “Alien in Own Land,” “Ascription of Intelligence,” “Denial of Racial Reality,” “Exoticization of Asian American Women,” “Invalidation of Interethnic Differences,” “Pathologizing Cultural Values/Communication Styles,” “Second Class Citizenship,” and “Invisibility” (p. 75-77).

The first two listed “Alien in Own Land” and “Ascription of Intelligence” relate directly to two of the most reported stereotypes of Asian Americans as the model minority and as perpetual foreigners (Ng, Lee & Pak, 2007). “The model minority myth advances the view that AAPIs [Asian American and Pacific Islanders] have successfully assimilated into mainstream society. In addition, it presents an underlying message that racism is no longer an obstacle due to social mobility” (Pang, Han & Pang, 2011, p. 379).

The perpetual foreigner stereotype denies Asian Americans full and equal citizenship (Lee, Wong & Alvarez, 2009; Ng, Lee & Pak, 2007). Kim, Wang, Deng, Alvarez, and Li (2011) write, “Maintaining a highly ethnic lifestyle is often misinterpreted as distance from, and resistance to, the mainstream culture. In consequence, Asian Americans are often believed to be unassimilable” (p. 292). Any lingering ties to another culture can raise suspicion.

Chinese graduate students in the United States are positioned both inside and outside the racial discourse described above. While they are immediately raced as Asian, they are also identified as foreigners. The primacy and particularity of race and racism in the United States is

often shocking and confusing to international students (Gomez et al., 2011). Potentially confounding any confusion is a pervasive silence or uncomfortableness concerning open discussions of issues of race/racism, especially among White people who may espouse a color-blind ideology (Castagno, 2008; Fine, 1991; Pollock, 2004). Accounting for the silence around race and racism, Allan Johnson (2001) writes, “When you name something, the word draws your attention to it, which makes you more likely to notice it as something significant. That’s why most people have an immediate negative reaction to words like ‘racism,’ ‘sexism,’ or ‘privilege’” (p. 11). The racial silence can be seen in the apparent hesitancy of some of the ITA problem literature to name where ITAs come from. Additionally, intercultural competence speaks about difference without addressing the privilege and oppression attached to difference. It also avoids talking about racism by recasting overt, even violent, racist acts as intercultural *incompetence*.

Chinese graduate students in the United States are caught up in American racial discourse, but silence around race/racism may frustrate attempts to gain access to the discourse. Chinese graduate students are also implicated in American imaginings of China, which are discussed next.

The Rise over Run of China

The research cited above refers predominantly to Asian Americans and not to Asian international students or other visitors whom may or may not settle in the United States long term. Chinese graduate students are also caught up in representations of China. As noted in the introduction, the major theme of China’s rise is split between representations as China as threat and China as opportunity (Pan, 2012). Recently published books highlight the threat: *The*

Coming Conflict with China (Bernstein & Munro, 1997), *Hegemon: China's Plan to Dominate Asia and the World* (Mosher, 2001), *The Coming China Wars: Where They Will Be Fought and How They Can Be Won* (Navarro, 2006), *Death by China: Confronting the Dragon – a Global Call to Action* (Navarro & Autry, 2011), *Showdown: Why China Wants War with the United States* (Babbin & Timperlake, 2013), *By All Means Necessary: How China's Resource Quest is Changing the World* (Economy & Levi, 2014), *Unbalanced: The Codependency of America and China* (Roach, 2014), and *The Contest of the Century: The New Era of Competition with China - and How America Can Win* (Dyer, 2014). China's growing military and economy are the most widely cited sources of fear (Pan, 2012).

China's growing economy is also a source of hope. China's expanding middleclass is looked to as a potential market for U.S. goods and as a potential democratizing force (Gross, 2013, McGregor, 2007; Studwell, 2003). Chengxin Pan (2012) argues that threat and opportunity are the two dominant paradigms that inform a larger narrative of a rising China.

Pan (2012) asks what the representations of China can tell us about the West, particularly the United States. On a psychological level, Pan argues that the United States projects its own desires to be the world's leading economy, military, and political force onto China to explain why a rising China should be feared. In the post-Cold war era, the emergence of China as a threat portrays China as the Other against which Western subjectivities can be described. In othering China, the West "has sought to deny Chinese subjectivities, to impose upon China a fixed subjectivity, or to reduce its subjectivities to a singular, homogeneous whole" (Pan, 2012, p. 52). The subjectivity of China can be fixed in one of two ways. Either the supposed capabilities of China are used as a way to divine China's intentions or Chinese culture and/or civilization is portrayed in singular, essential, and absolute terms that can also foretell China's intentions. To a

lesser extent, the China opportunity paradigm also serves to other China by portraying the Chinese as a passive, docile, and controllable work force or consumers (Pan, 2012).

Pan (2012) goes on to note that the fear of China does not just serve to bolster Western subjectivities but also has more material uses. The threat of China helps to support the United States' military-industrial complex. Pan (2012) writes, "Only with a threat as big as China can those weapons programs grow into an optimal size and become both strategically justifiable and financially stable" (p. 75). Pan also outlines how a network of intellectuals in universities and think tanks support this mission. Pan (2012) writes, "From the beginning, the military-industrial complex has been a military-industrial-academic complex, of which the knowledge-producing community of the 'China threat' paradigm is a fully-paid-up member" (p. 76). Pan warns that the propagation of the China as threat paradigm could be a self-fulfilling prophecy. The more China is regarded and treated as a potential threat, China may become more threatening.

For politicians on the left and the right, China has become "a new villain to run against" (Chen, 2010). While Chinese and American elites work toward the mutual goal of lining their pockets, Americans are told they are in danger of losing their standing in the world. Professor of Politics and International Studies Shaun Breslin (2005) writes:

[T]he hegemony of neoliberalism as an economic model results in state actors playing the role of adjusting the domestic political economy to the requirements of mobile transnational capital – although this often coincides with attempts to protect vulnerable domestic groups – to moderate neoliberal globalization. State policy, in China and elsewhere, both reflects and facilitates the economic power of non-state actors. (p. 753)

American politicians blame the Chinese for taking American jobs and push through neoliberal reforms promising to make the United States more competitive to the benefit of an elite class invested in the continued success of transnational corporations.

The fear and suspicion of China also relates to Education and can be a source for neoliberal reforms. In December 2013, the results of the 2012 Program for International Student Assessment (PISA) test scores were announced. The United States scored average in science and reading and below average in math (Arkin, 2013; Layton, 2013). Shanghai, as a region placed first in all three categories. Immediately, there were questions about whether or not Shanghai cheated (Strauss, 2013). Accusations of foul play centered around the charge that poorer migrant children were not tested (Loveless, 2013). In this accusation, there is a tacit acknowledgement that test scores are linked to wealth and inequality. For this reason, some argue that the test scores do not suggest that the United States has an Education problem; but, rather, the results point to America's inequality and poverty problem (Carnoy & Rothstein, 2013). Those who insist on the importance of PISA results are often the same ones who call for reforms to Education like linking funding and academic success as measured by standardized tests (Hanushek, 2014; Hanushek & Lindseth, 2009), which can be viewed as part of a larger push to privatize public schools (Ravitch, 2013; Taubman, 2009). The criticism of American schools is mostly aimed at primary and secondary education, but post-secondary schools have faced criticism as well, which will be discussed as the third larger context for this study to be placed within.

Diminishing Returns: Undergraduate Education in Statistics at Research Universities

Undergraduate education has faced critiques from professors (Aronowitz, 2000; Scanlon, 2005), university presidents (Bok, 2006; Duderstadt, 1999), and commissions made up of largely of professors, deans, and presidents (Boyer Commission, 1998; Kellogg Commission;

1997). Much of the criticism has been directed at research universities (Bok, 2006; Scanzoni, 2005). George Kuh and Shouping Hu (2000) summarize some of the main critiques, writing:

[Research universities] ostensibly feed their undergraduates a steady diet of educationally vapid practices, such as large lecture-dominated lower-division classes that insure student anonymity and discourage meaningful intellectual engagement, reward systems that favor scholarly productivity over undergraduate teaching and advising, and heavy use of inexperienced graduate student instructors who aspire to emulate the research-oriented careers of their faculty mentors. (p. 2)

Similarly, Sociologist John Scanzoni (2005) argues that shrinking state funding places pressure on professors to seek external funding through their research and reduces the time and effort spent on undergraduate education. This results in classes that do not stimulate undergraduates. Professor of Sociology, Cultural Studies, and Urban Education Stanley Aronowitz (2000) writes, “[T]he B.A. signifies the candidate can tolerate boredom and knows how to follow rules, probably the most important lesson in postsecondary education” (p. 10). Universities, faculty, and instructors may not deserve all of the blame. Studies on undergraduate culture have found that undergraduate students fail to prioritize academic and intellectual pursuits (Horowitz, 1987; Nathan, 2005).

Former Harvard president Derek Bok (2006) contends that research is not detracting from undergraduate education, but that professors lack incentive to alter their pedagogy or curriculum in an effort to improve student learning because of the emphasis on research but also because quality measures of teaching and learning are not employed. Bok (2006) also notes that students and graduates generally rank their institutions highly on surveys and university applications and enrollments continue to rise suggesting happy customers.

Within research universities, there are differences in how disciplines approach undergraduate education. Through a large scale survey of undergraduates, Brint, Cantwell, and Hanneman (2007) argue that the Arts, Social Studies, and Humanities have different “cultures of

engagement” from engineering and the natural sciences. While the former value participation, interaction, and ideas; the latter, which includes statistics, emphasize “improvement of quantitative skills through collaborative study with an eye to rewards in the labor market” (p. 383). In addition to some of the general characteristics listed above, Statistics has its own unique features.

As an academic field, Statistics is relatively young. In the United States, the first Statistics Department was established in 1933 at Iowa State University (Iowa State University, 2013). As a subject, Statistics has changed greatly since its inception. Statistics began as a very practical and narrow subject aimed almost exclusively at scientists, especially those involved in agriculture and biology (American Statistical Association [ASA], 2005). John Tukey’s work in the late 1960s and early 1970s on exploratory data analysis allowed Statistics to move beyond the confines of probability and be fruitfully applied to a whole new range of fields. Tukey’s innovations and the advances in computer technology have rapidly changed the landscape of Statistics over the last 50 years (ASA, 2005).

The 2005 publication of the Guidelines for Assessment and Instruction in Statistics Education: College Report (GAISE) by the ASA, and the foundation of the Journal of Statistics Education in 1993 and the Statistics Education Research Journal in 1987 all speak to a focus on education within statistics. Statistics education research identifies a number of difficulties that an instructor of an introductory statistics course may encounter (Zieffler, Garffield, Alt, Dupuis, Holleque & Chang, 2008). Students are likely to come to an introductory statistics course with several misconceptions that may need to be cleared up before they can gain new, informed statistical knowledge (Kahneman, Slovic & Tversky, 1982; Garfield, 1995). Another difficulty is that while it may be relatively easy to teach and assess whether students can perform a statistical

technique, teaching and assessing statistical literacy is much more difficult (Rumsey, 2002). Statistical literacy includes two main components: statistical competence and statistical citizenship. Statistical competence is “the basic knowledge that underlies statistical reasoning and thinking;” statistical citizenship is the development of the “ability to function as an educated person in today’s age of information” (Rumsey, 2002, p. 4). Finally, and perhaps most importantly, many students may come to a statistics class with a negative attitude about statistics. Researchers show a positive correlation between attitudes towards statistics in terms of self-efficacy (the student believes she can do statistics), value (the student believes statistics is important), affect (the student believes statistics is interesting and does not provoke anxiety), and difficulty (the student does not believe that statistics is overly difficult) and performance in a statistics course (Ramirez, Schau & Emmioğlu, 2012; Emmioğlu & Capa-Aydin, 2012).

While there is an abundance of research examining statistics instruction at the undergraduate level, there is relatively little research about the TAs who are often called upon to deliver such instruction and even less research about international TAs. There are however, a few notable exceptions. In a survey of 68 TAs from 18 American universities, Jennifer Noll (2011) found that the TAs had a solid grasp of some statistical sampling ideas but struggled with others. Noll did not report whether any participants were international students.

In a focus group study with TAs for an introductory statistics class at the University of Nebraska, Jennifer Green (2010) found that TAs wanted more explicit guidance about what content was most important and how to best integrate computer software. She also found that students with more experience either as graduate students or as teachers had more confidence and felt more efficacious as instructors. Lastly, she found that the TAs had a desire to improve

their teaching and saw collaboration with other TAs as a means to do so. Green made no mention of the nationalities of the TAs in her study.

In a description of how an introductory statistics course at a research university was changed to implement the GAISE guidelines, Roger Woodard and Herle McGowan (2012) speak at length about the new process of training course TAs. In describing the difficulty of getting TAs to incorporate active learning techniques, they write, “Many of the international graduate students come from cultures that emphasize students quietly sitting and absorbing material” (p. 10). Interestingly, this is the only time they mention ITAs in the paper and they do not indicate the percentage of ITAs or just where these quiet and absorbing students come from.

The three interrelated larger contexts addressed above were included because I believe they make up some of the “conditions of possibility” for the contradictions that I will describe in the next chapter (Grossberg, 1997, p. 255). Certainly, other larger contexts could be useful, but for time and space considerations I decided to focus on only these three. Other possibilities include Statistics’ role in supporting audit culture, gender in the fields of Statistics and Business, students as consumers, representations of Asians and Chinese in American popular culture, and a history of race/racism in the South and at Research University. Surely, there are many other possibilities.

CHAPTER 6: STATS CHAT - DISCUSSION

This chapter includes my analysis and more interview data. Analysis began during and was part of the data collection process. During data collection, three points of contradiction emerged that I felt warranted further analysis. I wanted to know why students' informal midterm evaluations were more positive than their end of term formal course evaluations; why some students complained that they had difficulty understanding their instructor's language yet did not ask language clarification questions; and why were students more offended by their classmates walking out than the instructors? Before getting to these questions, however, I want to talk about the related issues of boredom, the use of PowerPoint (PPT), and the ITA Problem. After an analysis of the three contradictions listed above, the chapter will end with a return to the distance between instructors and students reported in the fourth chapter.

A PPT Problem, Not an ITA Problem

Before embarking on this research, I had forgotten just how boring undergraduate classes can be. Although several students stated that they were bored in class, I was surprised that more did not make this complaint. It may be that being bored in class is so common place that it is not worth mentioning (Aronowitz, 2000). My tolerance for sitting in boring classes could be waning while the undergraduate students I sat amongst are in their peak years of enduring boring classes. Additionally, since attendance was not mandatory or even valued, the students who were most

bored may have just stopped showing up to class and were either not in class when I gathered consent forms or did not want to answer questions about a class they rarely attended.

In the ITA problem literature, boredom is not a common theme. Again, maybe it is too commonplace to be worth mentioning. A difference in methodologies could also play a role. The time I spent observing the classes made the boredom a felt reality for me. It was not until the fifth or sixth time observing each class that the boredom really set in, seeing the routine and the monotony play out. In the Statistics 222 course where all instruction took place on the blackboard, I may have been more bored than the students. Motivated by their desire to gain entrance into the Business major, these students had more skin in the game. They also occupied themselves dutifully copying down everything Bingwen wrote on the chalkboard.

In Cheng and Deming's Statistics 101 classes, it seemed the boredom I felt was shared amongst the students. I may have fought sleep, but unlike some of the students, I never fell asleep. The heavy use of PowerPoint slides in Statistics 101 was boring. Ideally, the availability of the slides on a course management website freed the students from having to copy down all of the information and allowed them to focus on the instructor. In actuality, however, it appeared that the availability of PPT slides online allowed students to engage in other pursuits on their computers or phones. Also, as several students reported, it freed them from attending the class.

In my experience, the use of PowerPoint is often positively correlated with boredom, meaning the more PowerPoint is used, the more bored I am. However, I have seen PowerPoint used effectively and judiciously and do not think it should be written off out of hand. The PowerPoints used by Cheng and Deming had additional confounding factors. The slides, created by professors in years past, contained examples relevant to and of interest to those professors. As Dr. Sherman explained, he was really interested in the use of polls in American electoral politics

and used this as a way to engage his students. Cheng and Deming often did not have access to the background knowledge or contextual information that could have helped them explain why an example shown on a slide was interesting or why a particular result was expected or unexpected.

Way back in the introduction, I claimed that the ITA problem as an idea is one of the “conditions of possibility” that allow for the undergraduate complaints to be taken as an ITA problem (Grossberg, 1997, p. 255). In essence, I am arguing that the ITA problem is a kind of self-fulfilling prophecy. The idea that ITAs struggle to teach undergraduates helps to make it a reality. This is a tough argument to demonstrate with empirical evidence. However, the use of professors’ PowerPoints by the Chinese graduate students in Research University offers a speculative illustration.

Based on past experience, the Statistics professors at RU worry that the undergraduates may complain about their Chinese TAs. The supposed deficiencies of Chinese TAs, outlined quite thoroughly in the ITA problem literature, are known to the professors in department. In an effort to help, professors give TAs access to their PPT slides. While Dr. Tannenbaum agreed that having TAs flip through PowerPoint slides created by someone else was not ideal, he stated that he did not feel it would be fair to withhold past PowerPoints from graduate teaching assistants.

The Chinese graduate students are introduced into the ITA problem through their required participation in an ITA training program. The very fact that they have to take this class that is not open to graduate students from the United States announces that there is some concern about their potential to be effective TAs. Access to PPTs that have the stamp of approval of tenured faculty provides comfort. Coupled with the time demands of being a graduate student in

a research intensive field in a research intensive university, the institutional doubt about their teaching abilities leads them to rely heavily on the faculty PowerPoints.

The use of other people's PowerPoints in the classroom contributed to the boredom and frustration of students. Students air this frustration in end of course evaluations, which confirms the existence of the ITA problem. Many of the students' negative comments are focused on the language of the Chinese TAs. The next section will cast doubt on the students' claims that they had trouble understanding their Chinese instructor's language.

Could You Repeat That? Instructor Comprehensibility

Students gave conflicting reports about whether they could understand Cheng's English. Several students cited a "language barrier" in end of course evaluations. Other students said they could understand, or that while they may have struggled some at the beginning of the course, they soon found his speech to be comprehensible. This is, perhaps, not surprising. Certainly, different thresholds for comprehensibility exist. One student could comprehend easily and another could struggle.

However, the conflicting reports paired with an observation I made in Cheng and Deming's classes made me doubt the sincerity of students in those classes who claimed they could not understand Cheng or Deming. I would expect that if students were having trouble understanding the language of the instructor, language clarification questions would have been quite common. I would expect students to ask questions like: "Could you say that again?" "What do you mean by...?" or "What did you say?" In eleven observations of Deming's class, I did not hear any students asking a single language clarification question. In the twenty of Cheng's classes I observed, only once did I hear a student ask for an explicit language clarification. Once

and only once, a student asked, “Could you repeat that?” Other than that one question, I did not observe any other language clarification questions. I asked Cheng about this phenomenon:

Warren: I don’t think I’ve observed a single time where a student raised their hand and asked, “What did you say?”

Cheng: Yeah.

W: Or, “Could you say that again?”

C: Yeah.

W: They’ve asked for clarification about what you’ve written or about the material itself.

C: Yeah, yeah, yeah.

W: But they haven’t asked you to repeat a word. Does that line up with your...?

C: Yeah, so that’s weird. I don’t know. Maybe I should talk to the students because I repeated during the first several classes, “If you have questions, just ask and do not hesitate or do not feel ashamed.” Only several students ask.

W: Well, even when students ask questions, I feel like they’re not asking about the language. ... If the students are gonna say ... they sometimes have difficulty understanding your language, then I would expect you would get a lot of questions like “Could you repeat that?” or “What did you just say?”

C: So what do you think?

W: What do I think? I don’t know. What do you think? Tell me what you think, and then I’ll tell you what I think.

C: [The students] think there are too many problems, so they don’t want to ask anymore. Do you think that’s possible?

W: I guess that’s a possibility that students are like, “I can’t understand anything so there is not one word or several words that I need repeated.” But I can understand everything you say.

C: You cannot understand everything I say?¹⁰

W: I said, “I can.”

¹⁰ An example of a language clarification question.

C: You can?

W: Yeah.

C: OK, so then what do the students mean by saying that I'm not clear? So maybe clear means both, like two parts, one is my language and the other is the material. OK, so maybe you can ask the students.

Following Cheng's advice. I asked his students as well as the students in the other observed classes:

In this class (and in other classes I have observed with Chinese instructors) several students have stated that they sometimes cannot understand the instructor's language. Yet, in this class (as well as the other classes), I have never observed a student asking for a clarification of language (i.e. 'Could you repeat that?' or 'What did you say?'). Why do you think this is?¹¹

Some students agreed with Cheng's assessment that students may feel that there are too many problems to ask for clarification. One student said, "The student thinks it would be too much and would rather not have eyes on them for a clarification that will most likely not be clarified." Another student wrote, "Possibly because people are resigned to it. Asking once would resolve your current problem, but it wouldn't solve the instructor's accent." Another student said that students may fear "that they might not understand a restatement any better." One student gave two potential reasons: "I feel like some people think it would be useless because even if they asked him to explain it again, they still couldn't understand his accent enough. Some people also feel bad about asking him to repeat it again because they know he can't help that he has such a thick accent."

The lack of clarification questions as a way to spare the instructors' feeling was a popular sentiment. One student offered, "I think its because they don't want to 'signal' him out for not speaking english clearly. Some people get offended when a person highlights the fact their

¹¹ I observed the single language clarification only after this question had been asked. This was roughly midway through the semester.

accent makes it hard to understand what he/she is saying.” Another student said, “I think they might be afraid to ask for clarification out of fear of offending the instructor. I think they don't want to make him feel bad because he has a different accent.” Another student hoped, “I would like to think it was sensitivity that keeps people from asking.” He said, “In a way it is respect for the teacher. Asking a question like that is like saying your english is bad.” Likewise another student concurred, “I ... feel that it is rude to ask him to repeat himself since he is the teacher.”

One student linked the lack of language questions to the critical course evaluations. The student said, “If people don't understand what [the instructor] is saying and don't ask him to clarify I think it is because they want to have something to complain about later.” Cheng's and Deming's students used the formal end of course evaluations as a venue to vent their frustrations about their instructor's English. While only one student complained about Cheng's English in the informal mid-term evaluation, six of eleven comments mentioned Cheng's language negatively in the formal end of term evaluations.

As was the case with Cheng, I never had a problem understanding Deming's English. As I have stated earlier, my prior interactions with Cheng and Deming and my experience working with non-native speakers of English may have made it easier for me to comprehend their English. Deming found the lack of language clarification questions interesting. He said, “I told [the students] to feel free to just stop me. They say, ‘I don't know how to ask a question.’ So I say, ‘You can just raise your hand, and say, ‘I don't understand what you are saying.’” But actually nobody did that. It's weird.” Deming related this phenomena to the students overall apathy. He said, “Maybe they just don't care.”

Mingzhi, Ruan and Fang all reported that their students also did not ask language clarification questions. They all explained that students may ask for language clarification by

asking questions about the material. Mingzhi reported, “In my class the students did not ask, ‘I didn’t understand what you were talking about.’ They would just ask, ‘Could you explain that again?’” Ruan said, “I don’t think [the students] asked many language questions.” He continued, “Actually, I would appreciate if they could raise that kind of question. . . . Sometimes they just ask you to explain that again.” Mingzhi and Ruan believed that students’ questions about the material may stand in for language clarification questions. Fang had a similar take. He said “Students asking for a re-talk about a thing, that didn’t happen to me too much. What the students usually do is stay after class and ask me in person, ‘What does this mean? What does that mean?’ and some of them will just come to the office hours and ask for things like that.”

Students could be saving language clarification questions for after class. They may prefer to complain rather than ask for clarification. Students might feel their instructor’s language is so bad that questions could not possibly help. However, the most common explanation offered by students was that they avoid asking language clarification questions for fear of disrespecting their instructors.

None of the students seemed to share my theory that there were no language clarification questions because students could actually understand the instructor’s language. They may have had other legitimate gripes about the course, but they often seized onto language as a way to declare their displeasure. The students’ assertion that it is out of a fear of disrespecting the instructor was intriguing. Students feel that asking language clarification questions could be disrespectful by drawing attention to the instructor’s language. This seems to articulate with the silence surrounding race and racism. Part of the silence surrounding race/racism, especially for White people, is a fear that by talking about race they may be accused of being racist. Drawing attention to any linguistic differences could be disrespectful. It is safer, apparently, to not

understand. The students' assertion that drawing attention to an accent took on another meaning when I gained access to the end of year evaluations.

Midterm Greater Than Final Evaluations

The negative comments on final course evaluations stated in the fourth chapter did not come as a surprise to Cheng. During our first interview he alerted me to an interesting phenomenon. He explained, "From [speaking with] other lecturers, it's basically that for all the evaluations during the semester, before the final exam, [students] say it's always good, but on the final evaluation they will give you very bad evaluations."

All but one of the Chinese graduate instructors I interviewed were aware of this narrative. Only Mingzhi had not heard of this tale. These evaluations held significance for the instructors, especially those who were interested in pursuing jobs in the academy. Bingwen explained, "Well I think it's pretty important, especially since I tentatively want to get a faculty position, so teaching is definitely one of the important components of the application. So I hear that some universities need these evaluations as well as the teaching statement."

Although Bingwen was quite pleased with the reviews he received and ultimately he did not feel there was any discrepancy between his midterm and final evaluations, he was well aware of the narrative. When I asked him about it, he replied:

Exactly. Exactly. I've heard that story again and again. I mean, I don't know what's going on. [The midterm evaluation] is a time I told them they can really express your feelings about my teaching. You can write anything because it is anonymous. So I mean, I understand if you just don't want to write anything, but it's really not good to write something positive now, and then try to reflect your anger or whatever in the later feedback. I don't know. Maybe that's cultural stuff. They try to be nice to you in the procedure. That really feels bad.

I assured Bingwen that I was not aware of any cultural norm that would dictate students withholding negative feedback until formal end of course evaluations. Bingwen continued:

If you really have some strong objections or opinions, you can just try to express it as early as possible, and then I can try to accommodate, or try to solve the problem, or try to adjust my teaching style, then everyone benefits from that. It really doesn't help a lot when you give bad feedback at the very end of the semester, like a revenge kind of thing.

Fang had direct experience with this phenomenon. When I asked him about it, he said, “[My midterm evaluation] was actually very good, and I talked to my advisor. And he says, ‘Ok, do not get fooled by these reviews cause it’s gonna be a lot more negative in the final reviews.’” Fang guessed that this happened because “[students] are just too lazy to type [bad reviews] out, and they are afraid of me finding out who is writing the bad reviews from the midterm. So they will tend not to report bad things in the midterm or they say ... things that are just very positive. I think they are afraid of the instructor’s revenge.” Cheng also guessed that students might not trust the anonymity of the midterm reviews, saying, “Since it’s anonymous, [students] should just tell me the truth; but maybe they are afraid that I can discover who wrote it, but what I want is just their honest opinion.” Longtime Statistics Professor, Dr. Tannenbaum surmised that even if students had faith in the anonymity of the midterm reviews, they may still fear that an instructor could exact revenge against the entire class for a generally negative midterm review.

Cheng’s formal end of course evaluations were not good. He did not meet the department mean for any of the categories. The written comments were generally negative as well. Most of the negative comments (six out of eleven total comments) focused on his English language skills. When I compared the midterm to the final evaluations, I thought the final evaluations were much harsher. Even though he suspected the final evaluations would be worse, in the end Cheng was hesitant to say that the final evaluations were more negative than the midterm evaluations. He said, “The difference is not so obvious. There is some difference, but it’s not so obvious.” He

continued, “On the midterm evaluation, they didn’t say anything about my English, but afterward [in the final evaluation] they did. In the midterm evaluation, they did say I’m not very clear, and then they said that again in the final.” Many of the midterm evaluations consisted of instructors giving students a blank sheet of paper and asking for general feedback. However, Cheng’s informal midterm evaluation approximated the final course evaluations. In addition to asking some open-ended questions, Cheng also asked students to rate whether they agreed with a number of statements using the same scale as the formal end of course evaluations (1=strongly disagree, 5=strongly agree). While the statements were not the same, three of them were close enough to warrant comparison. See Table 4 below for said comparison.

Table 4: Student Ratings on Midterm and Final Evaluations of Cheng’s Class with Departmental Means

| Informal Midterm Evaluation (n=32) | | Formal End-of-Course Evaluation (n=25) | | |
|--|----------------|---|----------------|-----------------------------|
| Statement | Average Rating | Statement | Average Rating | Departmental Average Rating |
| The instructor presents the material within this class in a clear manner | 3.72 | The instructor expressed ideas clearly | 2.68 | 4.02 |
| The instructor cares about whether or not I learn the material presented in class | 4.03 | The instructor showed concern about whether students learned the material | 3.40 | 4.08 |
| Overall, I would recommend this instructor to other students wanting to take a statistics course at RU | 3.55 | Overall, the instructor was an effective teacher | 2.92 | 4.04 |

In each of the three comparable statements, the scores decreased from the informal midterm evaluation to the formal end of course evaluation.

Deming was also familiar with the good midterm, bad final review phenomena. I did not have access to the Deming’s informal midterm reviews. Like Cheng, Deming was only willing to

claim a slight difference between his midterm and final evaluations. When I asked Deming if he felt the final evaluations were more negative than the midterm evaluations, he responded:

A little bit, a little bit. I guess two reasons: First one is the evaluation in the mid-semester are done for only those students who attend the class so in general I guess maybe one-third of students did not show up and did not complete the mid-semester evaluation. Those students who missed a lot of class and did badly in the later exams, they feel bad and give worse comments in final evaluation. That's the first thing. Another thing is there are very specific items in the final evaluation but not in the midterm evaluations made by me. I just gave them a piece of paper to write their comments, ideas, and what's on their minds.

Ruan felt he experienced this phenomenon as well. He said, "Yeah I would say there are definitely more negative aspects in the final evaluations than the midterm review. That's true, yeah, that's true. Maybe those students that are not satisfied with the class, they just don't like doing this midterm evaluation." He continued, "The final evaluation should have a bigger response rate, a much larger proportion of students will respond to that. I think maybe those students who are not happy with the course will also express themselves during [the final evaluation]." Like Deming, Ruan thought that the differences in the format of the midterm and final evaluations could play a role. He said, "In the middle year review, I try to let them tell me what material they do not understand, so they have something to write about even if they don't know what to write" He went on to say, "In the final review, the most of the negative comment I got is that they think I really have this language barrier, so sometimes students cannot understand me." The instructors offered several reasons for the discrepancies between midterm and final evaluations. First, students may feel that the instructor could identify students who gave bad midterm reviews and seek retribution. Additionally, an instructor could seek retribution on the entire class for generally negative reviews. Second, there may be a respondent bias. Students who attend the class and are present to fill out midterm reviews may be more satisfied than their peers who do not attend class and have access to the final review. Third and finally, format

differences between the unstandardized, informal midterm evaluations and the standardized, formal final evaluations could account for some of the difference.

One student agreed with the instructor revenge theory. He said, “I think in general students would be hesitant to criticize teachers in mid-term evaluations for fear that the teacher would find out who wrote it, and hold a grudge against them.” Several other students advanced a theory not covered by the instructors. They thought that students are more likely to feel good about the course in the middle of the semester before they know their grade, and students are likely to feel worse about the course towards the end when they have a better idea what their grade will be. One student wrote, “In the middle of a semester, students are still hopeful they will finish well in a class, but by the end they are less hopeful (if they aren't doing well) and are more likely to be tired of the course and give lousy evaluations.” Another student advanced this theory while adding that the increasing difficulty of the course content could play a role. She said, “I would say it is because it's easy to blame the instructor for one's bad grade towards the end since we have more of a clear idea of what grade it will be. It could also be because the material gets harder and they don't fully understand it and blame the instructor's fault for not explaining well.” Undergraduates seemed to prefer this temporal explanation.

When asked about why there were no language clarification questions asked, most respondents stated that this was an attempt to avoid disrespecting the instructors by drawing attention to their language especially their accent. However, in both Cheng's and Deming's final evaluations roughly half of all students who wrote comments complained about their instructors language, particularly their accent. Since the final and midterm evaluations were anonymous, I could not link undergraduate interviewees to their evaluations. According to the undergraduate interviewees, asking a language clarification question could be disrespectful by indirectly

drawing attention to an instructor's accent. By this standard, complaining about an instructor's accent in an end of course evaluation would be even more disrespectful.

I think the instructor and student explanations for the positive/neutral midterm evaluations and negative end of term evaluations are all possibilities. Students could fear retribution; they may be more optimistic in the middle of the semester; and differences in the format of midterm and final evaluations could play a role. I think there could be other factors at play. As Bingwen noted, I think the students could be enacting revenge on the instructor. While a midterm evaluation can help the instructor to improve his practice, an end of course evaluation is mostly punitive. The students may not know or could be unable to clearly express what changes could improve the course. For many courses, PowerPoint presentations are the expected norm. All of the Statistics 101 instructors, including the two professors, made heavy use of PowerPoint. The students were frustrated, but may have been unable to pinpoint why. Maybe they did not want to take the time and effort to really consider their comments carefully. Those students who include written comments at all, have already surpassed the effort put into evaluations by the roughly half of students that leave no comments, not to mention the roughly 40% of students who do not complete the end of course evaluation.

I think a type of racial aesthetics could also be at play. Students are upset, and an easy to recognize and seemingly objective, and therefore benign, difference is one of language. Du Bois' comments on the working of racial aesthetics can be productively applied to accents. I believe a relevant paraphrase would be: "Everything great, good, efficient, fair, and honorable is [in standard American English]; everything mean, bad, blundering, cheating, and dishonorable [has a foreign accent]" (p. 22).

Commenting on an instructor's accent can be a roundabout way of commenting on an instructor's foreignness. It is certainly less inflammatory to say the instructor's 'thick accent' made it hard for me to understand rather than the instructor's 'Chineseness' made it hard for me to understand. In their replies to questions about the lack of language clarification, many students felt that accent was an area to avoid out of respect. Discrediting a Chinese instructor's accent may be an allowable, sanctioned, even expected form of prejudice.

Outta Here: Students Leaving Class

All three of the classes I observed had very public displays of students leaving the class. In Bingwen's class a student walked into and across the room fifteen minutes into the class only to hand in the homework and then walk back out of the class. In Deming and Cheng's classes, several students left after quizzes passing right by the instructors as they were going over the quiz answers. Other TAs reported similar experiences. In all cases, the students interviewed appeared more offended by their fellow students' actions than the instructors, who found the actions to be acceptable or only mildly disappointing.

Bingwen's students were not at all amused by the student who, in the middle of class, entered, walked the length of the wide room only to hand in the homework and then exit all with a big smile. Three of the four students who responded to my email interviews thought this action was rude. One student said the action was "disrespectful, although he might have had other commitments so I won't judge him based on his actions." Another student agreed but also felt that Bingwen was partly responsible. He said:

These actions are obviously disrespectful. However, if the professor has not laid out any ground rules regarding entering late or turning in homework, then he should not be surprised if things like this happen from time to time. To avoid this, he should have gotten mad at the student, or had a set rule about coming in late beforehand.

The third student expressed disbelief saying, “I honestly myself couldn’t believe that happened. I feel like if a student who does [not] come to class is one thing but to walk in front of the instructor and only to hand in the homework ... should not be tolerated.” While his students seemed to be offended for him, Bingwen was less aggrieved. He said, “I’m ok with that. I mean the attendance is not required. It’s recommended but not required, so if you feel like you know the material then you can do that; but still, that particular action or behavior is not very respectful since I’m in the middle of the class, but I’m ok with it.”

I asked Cheng how he felt about students walking past him to exit as he was explaining the answers to a quiz they had just completed. Cheng responded, “I feel like a little disappointed, but it is ok; it is fine.” When I asked Deming if it bothered him, he said “Yeah, a little bit.” When I asked Fang about students leaving early, he replied, “Well to be honest I feel a little bit, you know, depressed. I don’t know how to say these emotional things, but yeah I’m ok with that, I don’t feel too uncomfortable with [students leaving early].” Ruan faced similar experiences and appeared to be the most upset, which was still fairly mild. He said, “[Students] sometimes just leave early during the class. There are some of those kind of students. That doesn’t feel good.” Conversely, Mingzhi did not mind at all students leaving during the class. He said, “I can accept that. If you are in class and you want to leave early, that’s fine.”

Seven students in Cheng and Deming’s classes described the leaving students’ actions as rude or disrespectful. One student wrote:

I, personally, think that their actions were very rude and insulting to the instructor. It makes it seem like they aren't interested in what he has prepared for the class and/or think they are too good to have to attend because they already “know the material.” Granted, it could be that they had prior commitments on that one specific day but if that wasn't the case, I think it was very rude.

Similarly, two other students stated, “I think that it is very disrespectful whenever a student leaves class before the instructor is done,” and, “I feel like that is a very inconsiderate and rude thing to do. If I was a professor I would be bothered by their actions.” Although most of the students agreed that the actions were rude, disrespectful, inconsiderate and/or tactless, four students did not think the students did anything wrong. One student wrote, “It's there decision to stay or not stay. I am indifferent.” Another student seemed somewhat offended by the question. She wrote, “I don’t care if they decide to leave because we are not children and can decide on our own if we want to attend the class in the first place.” While some of students who responded to the interview question were not all offended, most of the students were more offended than the instructors.

I viewed these actions by students as microaggressions. They were the most egregious forms of microaggressions that I witnessed in my observations. These acts, students walking right past instructors on their way out of the class seemed to be regarded as microaggressions by the students. In their study of microaggressions and TAs, Gomez (2011) reported that ITAs’ students, “dysconsciously and continually used silence, ignoring, avoidance, and verbal confrontation to invalidate [the ITAs’] knowledge and experience” (p. 1195). One of the most insidious aspects of microaggressions is their subtlety and their deniability. I witnessed silent, ignoring, and avoidant undergraduate students, but the students could have just been bored or uninterested in the material. Similarly, the leaving students could have had somewhere to be.

These possible excuses do not determine whether an action is or is not a microaggression. In fact, perpetrators are usually unaware of their microaggressions (Solórzano & Yosso, 2001, Sue et al., 2009, Yosso et al., 2009). For this reason, it is usually up to the recipient of a microaggression to name an act as a microaggression. In their study of microaggressions against

Asian Americans, Sue et al. (2007) required that participants “agree that racism and discrimination against people of color (particularly Asian Americans) exist in the United States” (p. 74). I registered the leaving students’ actions as microaggressions, but it did not seem that the TAs felt particularly aggrieved.

To find out more about this, I asked Bingwen, Cheng, and Deming if they thought that their race or nationality had any effect on how the students treated them. I asked in particular whether the students leaving class or other possibly disrespectful behavior had anything to do with them being Chinese or Asian. Deming said, “I don’t think so, if [another instructor] does the same things as me the same things happen.” Bingwen expressed a similar view but added that age may play a role, saying, “I think this will improve if it is a more senior instructor, instead of the race. That’s my guess, if they want to go they will go anyway no matter who you are.” Cheng was the only instructor who considered this as a possibility. I asked him, “Do you think that the students behavior, some of their refusal to answer questions or like leaving directly after the quiz, things like that, do you think that any of that could be because of your being Chinese or Asian? What do you think?” Cheng replied:

Yeah, I mean some of it may be related to that I’m a Chinese, like maybe a little bit. I think the question is depending on my teaching, if I teach very well even though I’m Chinese, I think they will... I don’t know it also depends on... I don’t know why they don’t want to answer the questions. It depends on the person. Sometimes as a student, I ask questions and sometimes I don’t ask, and maybe they just, like they are not interested in the question or they don’t agree with my teaching method or anything like that. So that’s possible, or maybe it’s because I’m Chinese.

These answers raised more questions. More broadly, I asked all of the instructors I interviewed whether they felt they had experienced or witnessed any examples of racism or prejudice while students at RU. Deming, Bingwen and Ruan all said that they had no personal experiences with racism or prejudice while living in the United States. Interestingly, Cheng and Mingzhi both

cited examples of bus drivers being rude to them as instances when they felt they could have been discriminated against due to their race or nationality. Fang also felt he had been discriminated against, but he did not see it as a big deal. He said:

I think I have been discriminated against, but I don't know whether it's because I'm not a White man, or it's because I have an accent, or maybe something else; but I do think I have been discriminated against. But I don't care. If you are discriminated against by someone that's not very important or close to you, you just don't care sometimes.

Fang went on to describe an example of anti-Asian racism that was relevant to him as he was applying for jobs. He was also aware that his sentiment could be considered by others to be racist. He said:

The very first example that came into my mind is like the hiring for assistant professors. You know there are a lot of things going on here, but some things I cannot say because if I say them, then I will be a racist. But I do want to point out that there are a lot of discriminations in the course of selecting assistant professors or the admission of undergraduates. You know we have to do a lot better in the SAT. Asian people have to do a lot better in the SAT than other people... If we are really equal then why do we have this kind of discrimination?

Mingzhi admitted that he was not very familiar with race. He said:

Race is quite a new concept to me, because in China we have kind of different ethnicities but not the racial differences. In general they don't have the concept of race. People hate high level corrupt officials; they don't hate people from different races. The race thing is very strange to me.

Mingzhi, Fang, and Cheng were very open and upfront in discussing race while Deming, Ruan, and Bingwen all seemed more guarded. I was more surprised by the instructors' openness than the other instructors' reluctance.

I think the instructors' minimizing the importance of students leaving the class could have been an enactment of a public transcript. In another setting, they may have expressed a different reaction to the leaving students. The same goes for the instructors' responses about having faced prejudice or racism. Given the unfamiliarity with race that Mingzhi stated, it makes

me wonder where the Chinese graduate students gained their information about race and racism in the United States. Fang displayed enough understanding about race/racism to know there were certain things he should not say. I am not sure exactly what the unspoken comments were, but from the context I can guess that it was something similar to a reverse racism argument that non-Asian people of color get preferential treatment. I imagine Americans, especially White Americans, reluctance to talk about race and racism stifled the graduate instructors' access to conversations about race/racism.

The Student's Perspective

I was also interested in the student's perspective. I asked them, "Do you feel Chinese people living in the United States face prejudice, discrimination and/or racism? Why or why not?" While all of the respondents answered in the affirmative, the responses varied greatly. In the shortest and, perhaps, most persuasive response, a Chinese American student answered simply, "Yes. personal experience." Several students felt Chinese people living in the United States face very little prejudice. One student wrote:

I feel like Chinese people in the US face minimal prejudice, discrimination, and/or racism. I am sure there is a little discrimination that still exists, but because they have become such an integral part of our society I feel as if most people accept them and do not view them as outsiders.

Another student expressed a similar thought saying:

I think that it is impossible to not notice differences between yourself and others, so Chinese people probably do face some form of prejudice. However, this may not be incredibly detrimental, it just means that people may notice that there are some inherent differences. In addition, the international students seem to self-segregate themselves to a large degree. This is understandable, but means that the greater student body doesn't get a chance to connect with them.

This student's response is a variation of the perpetual foreigner stereotype. The international students, based on the question presumably international students from China, choose to self-segregate themselves and deprive the rest of the students a "chance to connect with them." While I would tend to agree with the relative segregation of Chinese students, assigning all of the responsibility to students from China is a problem. From this perspective, the Chinese students are responsible for either assimilating or not, and the predominantly White institution and its majority White student body has no responsibility for discouraging or forging connections with students from China.

Another student claimed that Chinese people who assimilate face less prejudice giving a nod to the perpetual foreigner stereotype and also introduced the model minority myth. She wrote:

I think it depends on how immersed they are in American culture, and sadly how strong their accent is. I wouldn't say there is actual prejudice or racism (that I have seen) but older Chinese people are prone to discrimination in some way or form. Those older individuals who keep their native traditions especially, as if they were a sign of not being educated or have backward ways of thinking. However young Chinese people might face some type of name calling but overall its assumed they are all naturally intelligent.

Several students also cited the model minority myth, with different levels of skepticism, and concluded that it limits the negative effects of any prejudice. One student stated, "There is definitely a Chinese/Asian stereotype, but I don't think it brings Chinese students down. If anything it builds them up because the stereotype is that they are smarter and more diligent with their school work than American students." In a similar fashion but more critically, another student wrote, "In my mind, the only racism nowadays that Chinese people receive is based on academics. Chinese people are often perceived as being extremely smart or adept in math and science, which of course is not always the case." One student cited the model minority myth, self-segregation, and language as well as her own personal experience. She wrote:

I think they do to a sense because I notice that many Chinese students are treated differently (because they are usually more intellectual and spend more time on school/studying) and they tend to hang around with other Chinese (or other Asian) students. Outside of the school setting, I think most Chinese people are discriminated for their lack of ability to speak proper English. Also, I am a quarter Chinese and I had friends from high school who would jokingly make fun of the fact that I am part Asian. They weren't doing it in a menacing way; they were simply joking because they were my friends, but the fact that they did say things (even though I am SUCH a small fraction of Asian) shows that there is racism against Chinese people.

In this description, the fact that Chinese students group together is seen as causing discrimination rather than as a result of racism or discrimination. Another student also made a link between discrimination and language quite uncritically, saying, “Yes, they face prejudice because they are different and they are hard to understand.”

Another student expressed the idea that prejudice is universal. He said, “Of course they do. Everyone at some point faces some form of prejudice that may or may not affect them directly. As to why, that is a much harder thing to address because people find all kinds of reasons to dislike others.” This comment supports a color-blind ideology that minimizes racism and discrimination against minorities.

Finally, one student cited economic competition as a reason for discrimination. He said:

I definitely think that there is some racism with Chinese people living in the United States because most American citizens believe Chinese people and other races are here taking jobs from Americans citizens. Others feel that Chinese people don't like other races and are people whom do not want to become part of the American society.

In this comment, the fear of China is applied to Chinese living in the United States and connected to the perpetual foreigner stereotype. Chinese students hanging out with one another is seen as a rejection of American students and contributes to the distance discussed below.

A Statistically Significant Distance

Both Bingwen and Fang noted a distance between themselves and the students. The other instructors were disappointed with students' lack of engagement, an emotional distance perhaps, and attendance, a physical distance. The distance between the instructors and the students was reflected in the instructors' personal lives. All of the Chinese graduate students I interviewed stated that they mostly hung out with other Chinese students. Of his relationships with Americans, Deming said, "The relationship is not so deep. We just talk about work and research things, so maybe it's a cultural difference. Americans like parties, and we [Chinese students] get a drink and have nothing to say. We wonder what we should do in a party." Mingzhi noted that his conversations with Americans are never as deep or as lengthy as our hour and a half long interview. Fang felt his relationships with Americans were not as close compared to his relationships with other Chinese students. Of his relationships with Americans, he said, "They are just more formal. Things like I have to go to class, or I have to go for reference letters, but for more personal things I tend to go with my own Chinese people."

Cheng's main interactions with Americans occurred with his conversation partner who he met through a Christian organization with an evangelical mission. Cheng spoke very highly of the program and his conversation partner. He assured me he did not feel pressured to go to church or otherwise explore the Christian faith. Historically, one of the original opportunity paradigms regarding China was of Christian missionaries seeking to convert the Chinese (Pan, 2012). Cheng had also applied to a campus organization to be placed with a host family who would have regular meals with international students. His first attempt a couple of years ago was fruitless and he was not placed with a host family. During data collection, he applied again and

was paired with a family. Cheng actively sought out opportunities to interact with Americans through two different programs.

All of the Chinese students interviewed cited the prestige of American universities or the positive research environment as factors that led them to come to the United States. Several students claimed one of the reasons that they came to the United States was to meet people, presumably Americans, and be exposed to another way of life. Cheng said he came the U.S. “to broaden my horizons to see what’s happening in the United States.” Another Chinese graduate student stated that a desire to “go to a different place, get used to the life there, to learn, to meet some new people there, and get used to some different cultures” spurred his interest in pursuing graduate studies in the United States. Based on the descriptions of their interactions with Americans, this desire did not seem fulfilled.

From the undergraduate comments on race/racism above, it seems that at least some American students think that Chinese students’ relative separation from the larger students body is a choice made by Chinese students. Dr. Tannenbaum expressed a similar view. He thought that increasing Chinese PhD students’ contact with Americans could lead them to be more effective teachers of American undergraduates. Like the undergraduates, he thought that it was mostly the Chinese students’ preference that resulted in them hanging out mostly with each other. When I asked what might be done to foster connections between Americans and the Chinese students, he thought it may be possible for Chinese and American students to connect over food, sports, or religion. He did not, however, have high hopes that such programs would be successful. He lamented, “You can lead a horse to water, but you can’t make ‘em drink.” It seems Chinese graduate students are responsible for providing their own hospitality.

Again this fits into a perpetual foreigner stereotype. Maintaining connections with Chinese students is seen as a rejection of connecting with Americans. While several students seemed to want more relationships with Americans and at least one Chinese graduate student, Cheng, actively sought out these relationships, the prevailing view among American students seemed to be that Chinese students were uninterested in forging connections with American students. The fear of China (Pan, 2012) and the fear of difference that the intercultural competence literature cites could be at play. This seemed like it also affected the instructors' classrooms as well. Several Chinese students cited difficulty in coming up with American examples to use in class. From the attitudes of Dr. Tannenbaum and some of the students, it is perhaps not surprising that several Chinese graduate instructors thought that their examples must be American in order to be effective.

CHAPTER 7: CONCLUSION/WAYS FORWARD

“Statistics is about dealing with uncertainty.”

-Dr. Sherman

At three different points in our interview, Dr. Sherman stated, “Statistics is about dealing with uncertainty.” Statistics accomplishes this largely through quantifying events and then attempting to determine their likelihood. In this dissertation, I have not so much dealt with uncertainty as I have tried to introduce uncertainty. I have argued against a simple explanation, preferred by some undergraduates and some Chinese instructors, that claims linguistic differences account for difficulties in Chinese instructors’ classrooms. I have also resisted the counterargument that any difficulties are a product of undergraduates’ racism and xenophobia. While not denying that language or racism may play role, I have insisted that there are other factors at play. Furthermore, in the fifth chapter, I argued that attempting to resolve my own ability to comprehend Chinese graduate students’ English and the complaints of undergraduates would not be as productive or as interesting as interrogating that contradiction.

In an attempt to justify this interrogatory approach above an approach seeking resolution, I drew on conflicting reports of whether some men in Beijing lift their shirts on very hot days. I argued that examining the possible reasons Chinese scholars in the United States accept or reject the existence of shirt raising in Beijing would be more interesting and more productive than simply finding an objective answer to question of whether some men in Beijing lift their shirts on

very hot days. Through this anecdote, I asserted the necessity of considering my positionality as researcher, acknowledging problems of representation, and situating the phenomena of shirt lifting in broader contexts. I also argued for looking reflexively at the research.

In my discussion of reflexivity, I did not, however, consider what led to my inquiry about and fascination with shirt raising in Beijing and the potential problems it presents. Such an inquiry could question the possible exoticizing or infantilizing nature of my inquiry. Certainly, the shirt raising inquiry serves to other as I note that this type of behavior does not happen in the United States. My attraction to the shirt raising issue could also be seen as an attempt to claim an authentic or insider's knowledge about Beijing. I wanted it to be known that I had walked through the alleys and experienced the "real" Beijing. In a similar fashion to inquiring about my use of the shirt raising anecdote, I think it is appropriate in this concluding chapter to look back at what exactly I have done in this dissertation. Namely, I want to address my presence in the dissertation, and I want to explore some of the possibilities and limitations of this self-important approach.

At the start of this research, I set off to conduct a case study, and I feel I have or, at least, I could have. In hindsight, I did not end up with a case study or, at least, only a case study. My presence throughout the chapters seems out of place in a case study. In this concluding chapter, I first look backward at what I have done and then look forward to questions and projects that could build upon this work.

Show Your Work

In addition to a case study methodology, I acknowledged that I borrowed from postcritical ethnography and cultural studies' radical contextuality. I could have acknowledged

that I borrowed from, maybe bastardized, autoethnography and narrative inquiry as well. I not only addressed my positionality in a couple of sections, but I also introduced the research through my personal experiences, offered my reactions to the literature, kept a constant running commentary on all data collected, and framed the fifth chapter around a personal anecdote. This personal approach warrants some attempts at an explanation. I will try to account for this narrative style and explore the possibilities it opened and those it foreclosed.

In a similar fashion to the shirt raising claim, the inclusion of my own responses to the data I collected can be seen as a claim of insider's knowledge. This research did not begin with data collection but, rather, is a culmination of years spent ruminating, critiquing, and working within the ITA problem. While my initial research questions asked about the experiences of Chinese graduate instructors and their undergraduate students, I was also unwilling to discount my own experiences.

By inserting myself so fully into the reporting of the research I attempted to maintain control over the message. This was born out of a fear that by not responding immediately to the claims of my participants that they might be taken simply at their word while I want to insist that it is more complex. When undergraduate students complained about their instructor's language, I challenged those claims straightaway. While I attempted to report on the experiences of Chinese graduate instructors and their undergraduate students in statistics courses, my own experiences while collecting data and before data collection are also foregrounded.

In the methodology section, I could not adequately explain what happened between data collection and the creation of this dissertation. There is a disconnect, or a black box, between how I collected data and then how I reported and interpreted that data. For me, claiming an iterative process where data were coded and themes emerged does not adequately bridge the gap

between a methodology and a results section. I hope that my presence throughout this dissertation provides some insight into the void between data collecting and reporting.

My constant mediation is also an attempt to justify my reasoning while also allowing for doubt. In the beginning, I stated that I thought that this was more than a language problem. Later, when I report that I found it to be more than a language problem, this may raise suspicions. I attempted to provide evidence that supports my claim, but I leave myself open to the charge that I only reported what I thought all along. However, I was also upfront about my initial belief that one of the main issues was racism on the part of some undergraduate students. I hope that when I contend that racism or xenophobia are overly simplistic explanations that this may carry more credence.

By featuring my own voice so prominently, I have, in part, obscured the voice of my participants. My participants' voices are mediated through my own voice. To me this approach seems more sincere. Concealing my voice in service of highlighting the participants' voice would not remove me as an intermediary.

My main concern with my self-important approach is that by inserting my own experience into the research I may have occluded some of the experiences of the instructors and students. One area that was not adequately explored was the pedagogical differences between the United States and China. Several Chinese graduate instructors I interviewed were critical of their schooling in China, especially the lack of student engagement and emphasis on high stakes standardized tests. The Chinese instructors I observed all attempted to engage their American undergraduate students with questions. Cheng and Deming were disappointed with the reluctance of their students to respond. Although, the Chinese instructors made attempts to engage their undergraduate students, a lack of familiarity with that pedagogical style could have been an

impediment to successfully engaging the students. Future research could more fully explore the role that pedagogical differences between the United States and China play in the classrooms of Chinese instructors with American students. I discuss several other avenues for future research below.

Ways Forward

In addition to paying more attention to the pedagogical differences between classrooms in the United States and China, this study raises a number of possibilities for future research. A similar observation heavy methodology could be taken into courses in different disciplines, with instructors of various nationalities, including Americans, and at other universities. This study also suggests avenues for the study of microaggressions that include observations as well as personal accounts. Utilizing participatory action research, future inquiries may be better able to express the voices of Chinese teaching assistants.

Ideally, campus groups dedicated to connecting international students with domestic students would not be necessary. However, ways to seek more and better contact between domestic and Chinese students could be sought and studied. Additionally, methods for introducing international students into American notions of race and racism, inequality, homophobia, and sexism could be pursued.

Inquiry into the goals of undergraduate courses could help delineate what is expected from students and instructors. Optional attendance policies suggest that certifying knowledge and skills are more important than teaching and learning. If students already know the material, they need only to demonstrate their knowledge on tests to be rewarded with good grades. The rationale of having graduate students teach undergraduates should also be examined. Graduate

students flipping through pre-made PowerPoint slides suggests that graduate instructors are simply a means of instructing many undergraduates with a limited number of professors while mitigating the amount of time graduate students must devote away from their own research and course work. Broader questions about the role of universities and the place of international students within universities could help delineate what responsibilities students and universities have toward each other. The relative isolation of international graduate students in their departments implies the primacy of the universities role in promoting research. In light of the ubiquitous calls for universities to create global citizens, the isolation of international graduate students suggests that internationalization is to be consumed through study abroad experiences and special courses rather than in everyday interactions.

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