

2011

# Humans Being: People, Places, Perspectives and Processes (Full Issue)

Follow this and additional works at: <https://pdxscholar.library.pdx.edu/mcnair>

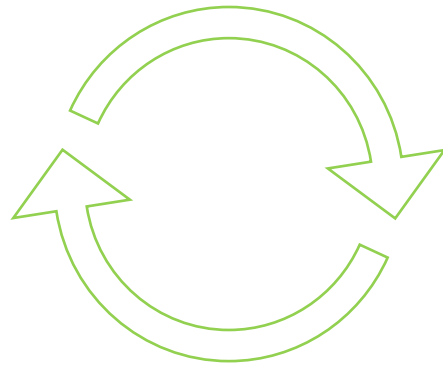
Let us know how access to this document benefits you.

---

### Recommended Citation

(2011) "Humans Being: People, Places, Perspectives and Processes (Full Issue)," *PSU McNair Scholars Online Journal*: Vol. 5: Iss. 1, Article 25.

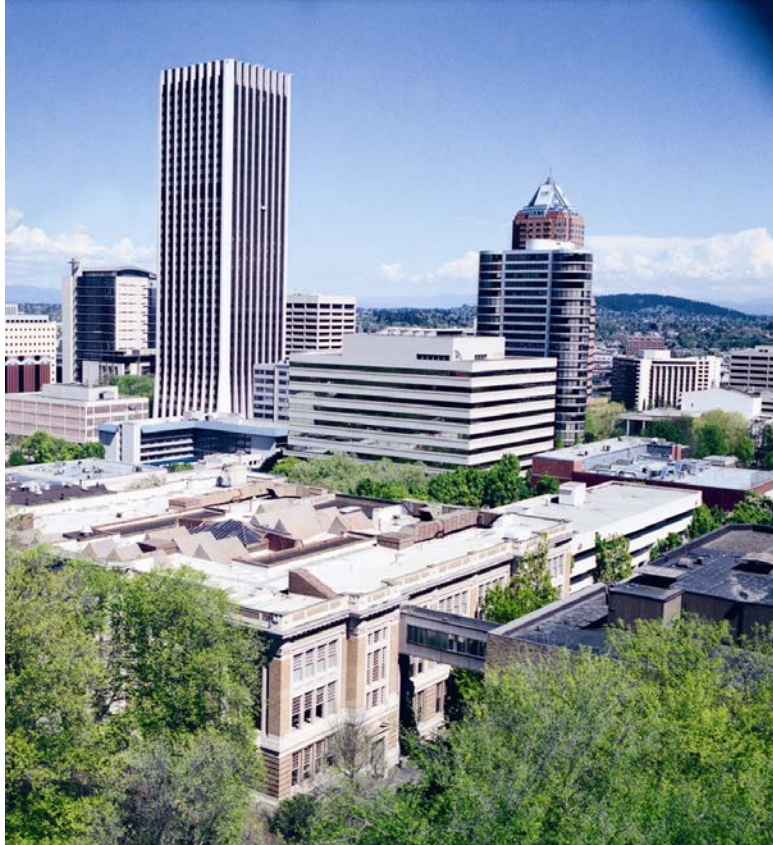
This open access Full Issue is distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License \(CC BY-NC-SA 4.0\)](https://creativecommons.org/licenses/by-nc-sa/4.0/). All documents in PDXScholar should meet [accessibility standards](#). If we can make this document more accessible to you, [contact our team](#).



# HUMANS BEING

**PEOPLE, PLACES, PERSPECTIVES AND PROCESSES**

**2011 McNair Scholars Online Journal**



The Ronald E. McNair Scholars Program at Portland State University (PSU) works with motivated and talented undergraduates who want to pursue PhDs. It introduces juniors and seniors who are first-generation and low-income, and/or members of under-represented groups to academic research and to effective strategies for getting into and graduating from PhD programs.

The McNair Scholars Program has academic-year activities and a full-time summer research internship. Scholars take academic and skills-building seminars and workshops during the year, and each scholar works closely with a faculty mentor on original research in the summer. Scholars present their research findings at the McNair Summer Symposium and at other conferences, and are encouraged to publish their papers in the McNair Journal and other scholarly publications.

The Ronald E. McNair Post-baccalaureate Achievement Program was established in 1986 by the U.S. Department of Education and named in honor of Challenger Space Shuttle astronaut

Dr. Ronald E. McNair. The program, which is in its seventh year on campus, is funded by a \$924,000 grant from the U.S. Department of Education and institutional cost-share funds.

The McNair Scholars Program's student-centered approach relies heavily on faculty and university commitment. Activities and opportunities provided by the program focus on building a positive academic community for the scholars while they are undergraduates at PSU.

## Ronald E. McNair



Ronald Erwin McNair was born October 21, 1950 in Lake City, South Carolina. While in junior high school, Dr. McNair was inspired to work hard and persevere in his studies by his family and by a teacher who recognized his scientific potential and believed in him. Dr. McNair graduated as valedictorian from Carver High School in 1967. In 1971, he graduated magna cum laude and received a Bachelor of Science degree in Physics from North Carolina A&T State University (Greensboro). Dr. McNair then enrolled in the prestigious Massachusetts Institute of Technology. In 1976, at the age of 26, he earned his Ph.D. in laser physics.

His dissertation was titled, "Energy Absorption and Vibrational Heating in Molecules Following Intense Laser Excitation." Dr. McNair was presented an honorary doctorate of Laws from North Carolina A&T State University in 1978, an honorary doctorate of Science from Morris College in 1980, and an honorary doctorate of science from the University of South Carolina in 1984.

While working as a staff physicist with Hughes Research Laboratory, Dr. McNair soon became a recognized expert in laser physics. His many distinctions include being a Presidential Scholar (1971-74), a Ford Foundation Fellow (1971-74), a National Fellowship Fund Fellow (1974-75), and a NATO Fellow (1975). He was also a sixth degree black belt in karate and an accomplished saxophonist. Because of his many accomplishments, he was selected by NASA for the space shuttle program in 1978. His first space shuttle mission launched successfully from Kennedy Space Center on February 3, 1984. Dr. Ronald E. McNair was the second African American to fly in space. Two years later he was selected to serve as mission specialist aboard the ill-fated U.S. Challenger space shuttle. He was killed instantly when the Challenger exploded one minute, thirteen seconds after it was launched. Dr. McNair was posthumously awarded the

Congressional Space Medal of Honor. After his death in the Challenger Space Shuttle accident on January 28, 1986, members of Congress provided funding for the Ronald E. McNair Post-Baccalaureate Achievement Program. Their goal was to encourage low-income and first-generation college students, and students from historically underrepresented ethnic groups to expand their educational opportunities by enrolling in a Ph.D. program and ultimately pursue an academic career. This program is dedicated to the high standards of achievement inspired by Dr. McNair's life.

Source: [mcnairscholars.com](http://mcnairscholars.com)

# Table of Contents

## **The Portland State Scholars**

### **Editorial Board**

#### **Matching Organization Personality Perceptions and the Job Applicant's Personality: A Correlational Study**

Scholar: Dakota Green

Mentor: Donald Truxillo, PhD

Reviewer: Jessica Bettelheim

#### **Loss of Cul3 in Primary Fibroblasts**

Scholar: Paula Hanna

Mentor: Jeffrey Singer, PhD

#### **Optical microscopy - preliminary classification of two R chondrites**

Scholar: Niina Jamsja

Mentor: Alex Ruzicka, PhD

Reviewer: Kristy Hauver

#### **Income disparity for working mothers: Eliminating structural discrimination through public policy.**

Scholar: Marques Lang

Mentor: Mary C. King, PhD

Reviewer: Leslie Hammer, PhD

**Fact and Fiction: Liu E's Treatment of Characters in The Travels of Lao Can**

Scholar: Henry Lem

Mentor: Jonathan Pease, PhD

Reviewer: Steve Wadley, PhD

**Women and Tenure Transition: An Examination of Land Access and Gendered Land Rights in Kanungu District, Uganda**

Scholar: Emmalee McDonald

Mentor: Ellen Bassett, PhD

Reviewer: Ray Lewis, PhD

**Experiential Self-Referential Processing & Autobiographical Memory Retrieval: A Preliminary Look**

Scholar: Kathryn Mills

Mentor: Robert Roeser, PhD

Reviewer: Melissa Pirie

**The effects of experimentally induced psychological stress on memory-recall**

Scholar: Mohamed Mohamed

Mentor: Gabriella Martorell, PhD

Reviewer: Denissia Withers

**Collaborative Ethnographic Film: A Workshop Case Study**

Scholar: Richard Stern

Mentor: Jeremy Spoon, PhD

Reviewer: Steven Fedorowicz, PhD



**The Postmodern Persistence of the Brazilian Development State: A  
Comparative Study of Policies During the Cardoso and Lula Administrations**

Scholar: Adam Talkington

Mentor: Leopoldo Rodriguez, PhD

Reviewer: Shawn Smallman, PhD

**Occupational Crowding by Race in the Pacific Northwest: A Comparative  
Study of Portland, Oregon and Seattle, Washington**

Scholar: Moriah Willow

Mentor: Karen Gibson, PhD

Reviewer: Mary King, PhD

# The Portland State Scholars 2010



Scholar: Jesse Anderson

Mentor: Dr. Craig Carr

Project Title: The Birth of American Individualism

Scholar: Nathaniel Bobbitt

Mentor: Dr. Karen Sweazea

Project Title: A Revised View of Thought and Language: On Olfactory Conditions and Genetic Signaling in Non-Human Primates (2010)

Scholar: Stephanie Collier

Mentor: Dr. Robin Hahnel

Project Title: The Political Economy of Media Justice: Portland in the Mix

Scholar: Eric Dexter

Mentor: Dr. Jason Podrabsky

Project Title: The Ecology of Body Snatching: An Investigation of Somatic Fusion within a Population of Colonial Tunicates

Scholar: Christina Estrada

Mentor: Dr. Yves Labissiere

Project Title: Investigating Advantage Outcomes in Race within the American Hispanic Population

Scholar: Erik Funkhouser

Mentor: Dr. Richard Clucas

Project Title: District Level Compliance to Anti-bullying Policy Redesign: Transitioning to Coercive Intergovernmental Mandates

Scholar: James Dakota Green

Mentor: Dr. Donald Truxillo

Project Title: Matching Organization Personality Perceptions and the Job Applicant's Personality: A Correlational Study

Scholar: Paula Hanna

Mentor: Dr. Jeffrey Singer

Project Title: Differential Response to Complete Loss of Cul3 in Primary Fibroblasts

Scholar: Niina Jamsja

Mentor: Dr. Alex Ruzicka

Project Title: Optical microscopy – the means of preliminary classification of R chondrites

Scholar: Marques Lang

Mentor: Dr. Mary King

Project Title: Income inequality amongst working mothers: Eliminating structural discrimination through public policy

Scholar: Henry Lem

Mentor: Dr. Jonathan Pease

Project Title: Fact and Fiction: Liu E (1857-1909) and Characters in the *Travels of Laocan*

Scholar: Gabriela Mendez

Mentor: Dr. Jana Meinhold

Project Title: The Aftershocks of an Immigration Raid on a Community

Scholar: Kathryn Mills

Mentor: Dr. Robert Roeser

Project Title: Measuring the effects of a mindfulness intervention on executive functioning and self-referential processing in emerging adults

Scholar: Mohamed Mohamed

Mentor: Dr. Gabriela Martorell

Project Title: The effects of experimentally induced psychological stress on memory recall

Scholar: Jamie L. Morrissey

Mentor: Dr. Mary C. King

Project Title: Growing a Green Economy in Rural Oregon

Scholar: Michael Pascual

Mentor: Dr. Marcia Klotz

Project Title: Liberal Grief and Spaces of Death: Grieving Matthew Shepard and James Byrd Jr.

Scholar: Taija Revels

Mentor: Dr. Siobhan Maty

Project Title: The Perception of Healthcare Services Provided by Tlingit Women Elders in Juneau, Alaska

Scholar: Marisela Rodriguez

Mentor: Dr. Chris Carey

Project Title: Modern Day Slavery in Portland, Oregon: an Ethnographic Study of the Anti-Trafficking Community Working Against Sex Trafficking

Scholar: Jacob Sherman

Mentor: Dr. Yves Labissiere

Project Title: To Drink or Not to Drink: How Students' Perceptions of Water Influence their Beverage Drinking Behavior

Scholar: Joshua Smith

Mentor: Dr. Peter Collier

Project Title: The effects of educational attainment on Northwest Native American Tribal Community members views about power dynamics in social institutions

Scholar: Richard Stern

Mentor: Dr. Jeremy Spoon

Project Title: Ethnographic Film Workshops: A Reflexive Lens

Scholar: Adam Talkington

Mentor: Dr. Leopoldo Rodriguez

Project Title: Postmodern Development Strategies in Brazil: A Comparative Study of Policies During the Cardoso and Lula Administrations

Scholar: Tasia-Jana Tanginoa

Mentor: Dr. David Kinsella

Project Title: Women of Terror: A Comparative Analysis of Female Suicide Bombing

Scholar: Kofi Tweneboah

Mentor: Dr. Carl Wasmer

Project Title: Using Solar Energy as a means of Reducing Carbon Emission (CO<sub>2</sub>): A Step to Climate Change in the US and the world

Scholar: Josiah Wagner

Mentor: Dr. Jason Podrabsky

Project Title: Mechanisms behind DNA photorepair and protection in embryos of the annual killifish *Austrifundulus limnaeus* after exposure to UV-C radiation.

Scholar: Ayole Waritu

Mentor: Dr. Karen Seccombe

Project Title: HIV/AIDS Epidemic and Stigma in Ethiopia

Scholar: Katherine Williams

Mentor: Dr. Barry Messer

Project Title: Incorporating Ecological Design Principles into our Urban Water Management: An Exploration of Institutional 'Receptivity' to Water Reuse in Portland, Oregon

Scholar: Moriah Willow

Mentor: Dr. Karen Gibson

Project Title: Occupational Crowding by Race and Gender in the Pacific Northwest: a Comparative Study of Portland, Oregon and Seattle Washington

Scholar: Lucas Yoder

Mentor: Dr. Lynn Santelmann

Project Title: The acquisition of relative clause structures in Mandarin Chinese by English L1 speakers

# **Editorial Board**

**Toeutu Faaleava**, Director, McNair Scholars Program

**Jolina Kwong**, Program Coordinator

**Tyenne Conner**, Graduate Assistant

**Denissia Withers**, Graduate Assistant

**Melissa Pirie**, Graduate Assistant



Running head: MATCHING ORGANIZATION PERSONALITY PERCEPTIONS

Matching Organization Personality Perceptions and the Job Applicant's Personality: A

Correlational Study

James Dakota Green

Faculty Mentor: Donald M. Truxillo, PhD

Portland State University

I would like to thank Dr. Donald M. Truxillo for supervision of this project which was completed with support from a McNair scholarship. I also thank Josh Carlsen for his assistance with data collection.

Correspondence should be addressed to Dakota Green, and should be sent electronically to [jdg@pdx.edu](mailto:jdg@pdx.edu)

## Abstract

Recruitment is the process by which organizations acquire the talent they need to be effective. As recruitment becomes more competitive, organizations need to attract the types of job applicants that best fit their needs. Recently, researchers have suggested that human resources departments adopt strategies that are similar to marketing strategies; specifically, it has been suggested that organizations can be characterized as having an organizational “personality,” and that the personality of an organization can be leveraged to attract the best applicants. Organizational personality is described similarly to brand personality and is defined as the human characteristics attributed to an organization. This research examines the relationship between *organization personality perceptions* and the personality of potential job applicants, that is, which type of applicant is attracted to which type of organization. Participants rated the attractiveness of 33 trait adjectives in a potential employer and then rated their own personalities in terms of *Big Five* and *proactive personality* models. Results suggest that the attractiveness of an organization’s perceived personality was related to the personality of the participant. Suggestions for future research are presented, and findings may be used to better understand which types of organizations are most attractive to which applicants.

Keywords: organizational personality, proactive personality, Big Five personality, recruitment.

## Matching Organization Personality Perceptions and the Job Applicant's Personality: A Correlational Study

Talented applicants are necessarily scarce. The success of a human resources department in recruiting talented applicants has been demonstrated to provide sustainable competitive advantage (Barney, 1986). Companies spend approximately 31% of the human resources budget is spent on recruitment and retention efforts (Leonard, 1999). In procuring the most talented applicants, a firm is not only equipping themselves with good workers, but they are also holding talent that their competitors are not. Thus, it is worthwhile to pursue talent and determine the most effective ways to do so.

Cable and Turban (2001) have suggested that human resources departments should use a recruitment strategy that is similar to a marketing strategy. Slaughter and Greguras (2009) have suggested that an effective way to do this is to understand how *organization personality perceptions*, defined as “a set of human personality characteristics perceived to be associated with an organization” (Slaughter, Zickar, Highhouse, & Mohr, 2004, p. 86), affect initial attraction. Slaughter et al. have recently developed a measure of organization personality perceptions, wherein five distinct dimensions categorize organizational personality: Boy Scout, Innovativeness, Dominance, Thrift, and Style.

Organizational personality is analogous to brand personality (Slaughter et al., 2004; Cable & Turban, 2001). By imbuing brands with personalities, marketers are creating a medium for communicating to a designated consumer market. When a brand is well liked or successful, the result is brand consumption (Kapferer, 2004). Marketing scholars define the value consumers have for a brand as brand equity (Aaker, 1996). Cable and Turban have similarly defined recruitment equity as a company’s ability to recruit talented job seekers based on how much they

value the company. A human resources department is able to build recruitment equity by communicating in a way that reaches their target applicant market.

Schneider (1987) suggests that individuals are attracted to, select, and stay employed by organizations where they find similarity. This model is referred to as the *attraction, selection, and attrition (ASA) model*, which describes the process by which job seekers and organizations form mutually beneficial relationships. According to this model, there is a natural tendency for human beings to gravitate towards others with similar traits (Schneider). Thus, if an organization is attempting to recruit applicants, they should communicate directly to job seekers who find the organization's personality attractive.

In order to reach an audience that will gravitate towards a particular organizational personality, research needs to evaluate not only the perceived personality of the organization, but also the potential relationship between the personality of job seekers and the organizational personality types they find attractive. Slaughter and Greguras (2009) have recently evaluated the affect of the relationship between respondents' Big Five personality (Saucier, 1994) and organization personality perceptions on an applicant's initial attraction to an organization. However, this study assigned participants to specific organizations, which may have lead to bias effects because of other factors associated with a particular company such as compensation. Furthermore, Slaughter and Greguras did not examine the effects of proactive personality (Seibert, Crant, & Kraimer, 1999), an important human personality characteristic found to affect a range of workplace outcomes.

The purpose of this study is to further examine the relationship between organization personality perceptions and Big Five personality. Additionally, the relationship between organization personality perceptions and proactive personality will be examined.

### *Marketing Context of Recruitment*

In the same way consumers differentiate brands based on images of the makers of a given product, users of the product, and of the product itself, job seekers differentiate organizations based on information about their products, the job itself, and the people who work for the organization (Cable & Turban, 2001). An organization's image has been defined as "an audience's beliefs about traits that are central, distinctive, and relatively enduring about the company" (Cable & Yu, 2006, p.828). Cable and Turban have suggested that organizational images are analogous to brands; jobs are analogous to products; and job seekers are analogous to consumers (Cable & Turban). The image that an individual has of a company is something that is derived from inferences individuals hold of the organization as a producer of products or services. Organizational image can be derived from any number of interactions that an individual has with a company, and these interactions will be the base for which individuals differentiate that company from its competitors (Cable & Yu).

A company's brands are the careful craft of that company's marketing department. Marketing departments work fiercely to create brands that have a 'unique selling position' (Keller, 1993, p. 6). They do this by defining their target consumer within the market in which they intend to compete (Kotler, 1972). Effective brand construction leads to brand equity which in turn leads consumers to perceive a reason to choose a particular brand (Keller). *Brand equity* is defined as the value that consumers have for a brand, and this value is based on the consumer's knowledge of that brand (Aaker, 1996). Cable and Turban (2001) have similarly defined *recruitment equity* as the value job seekers have for an organization as a potential employer, based on knowledge that the job seeker has about that organization. Brand equity is considered to be an asset for companies: for some brands the equity is so high that brand

recognition is ubiquitous, customer loyalty rates are at the top of the industry, and perceptions of quality are assumed (Aaker, 1991). If brand equity is analogous to recruitment equity (Cable & Turban), then it is likely that firms stand to benefit a great deal from building recruitment equity.

Devendorf and Highhouse (2008) have suggested that individuals will choose to work for companies where they believe they will fit in. Therefore, human resources departments will need to manage their organizational image in a way that allows their target applicant market to identify with the company as a good fit for employment. According to Devendorf and Highhouse there are two main explanations for applicants to be attracted to particular organizations:

The first reason that we might expect applicants to be attracted to organizations whose employees are similar to them is that similarity facilitates social interaction and provides a sense of comfort (Cable & Turban, 2001), presumably from avoidance of disagreement (Berscheid & Reis, 1998). People like to be liked, and similarity enhances expectations of mutual need gratification in the form of reciprocal liking (Condon & Crano, 1988). A second reason to expect applicants to be attracted to organizations whose employees are similar to them is that people want to be seen with others who are like them. Social identity theory (SIT; Tajfel & Turner, 1986) suggests that people tend to classify themselves and others into various social categories (e.g. organizational membership, religious affiliation). These categories are often defined by prototypical characteristics abstracted from the members (Ashforth & Mael, 1989). Self-categorization (Turner, 1985) is the process by which people define themselves in terms of membership in social groups. When one identifies with a social group, this identification leads to activities that are congruent with the identity, support for institutions that embody the identity, and stereotypical perceptions of self and others (Ashforth & Mael, 1989; Highhouse et al., 2007). (p.608)

The tendency for individuals to define themselves according to where they work is similar to the tendency of consumers to choose brand names based on their value for the brand and their ability to select a branded product. When applicants base their judgments about the attractiveness of an organization on their perception of its image, they are assessing the value they place on the organization relative to the explanations given by Devendorf and Highhouse. Thus, it is important that companies establish their target applicant market and strengthen recruitment equity, as it will likely increase their effectiveness to recruit talent.

### *Human Personality: The Big Five*

Human personality is often defined in terms of traits. These traits are assumed to be generally characteristic of an individual and their tendency to behave a certain way across situations (Levy, 2006). The Big Five model of normal personality is thought to have five distinct dimensions: Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (e.g. McCrae & John, 1992). The Big Five model is the most widely used and researched measure of normal personality (Gosling, Rentfrow, & William, 2003). While there has been variation in naming the five dimensions, it is generally accepted that the Big Five model is an effective tool for measuring normal human personality.

Each dimension of the Big Five model suggests different traits and tendencies for the individual. Individuals rating themselves as *open to experience* are thought to be imaginative, cultured, curious, original, broad-minded, intellectual, and artistically sensitive (Barrick & Mount, 1991). They tend to prefer environments that allow them to learn new things (Barrick, Mount, & Judge, 2001), that are unusual (Rolland, 2002), and that allow them to be creative and innovative (Crant & Bateman, 2000).

Those rating themselves as *conscientious* are generally considered careful, thorough, responsible, organized, planful, hardworking, achievement-oriented, and persevering (Barrick & Mount, 1991). Individuals characterized by this dimension tend to be diligent, and have a strong will to achieve (McCrae & John, 1992), they are persistent, in control of their impulses, and follow the rules (Rolland, 2002).

Those who see themselves as *extraverted* tend to be sociable, gregarious, assertive, talkative, and active (Barrick & Mount, 1991). These individuals tend to be dominant (McCrae & John, 1992), charismatic (Crant & Bateman, 2000), and value large social networks (Sutin, Costa, Miech, & Eaton, 2009).

Individuals that rate themselves as *agreeable* are described as courteous, flexible, trusting, good-natured, cooperative, forgiving, soft-hearted, and tolerant (Barrick & Mount, 1991). Agreeableness is characterized by a preference for work environments that encourage teamwork (Barrick et al., 2001) and social sensitivity (Crant & Bateman, 2000), and they value characteristics such as altruism, nurturance, and emotional support (McCrae & John, 1992).

Individuals that rate themselves as *neurotic* tend to be anxious, depressed, angry, embarrassed, emotional, worried, and insecure (Barrick & Mount, 1991). These individuals tend to view reality as threatening (Barrick et al., 2001), fear novel situations, and prefer stable environments (Slaughter & Greguras, 2009).

By evaluating personality, researchers are able to categorize the public into generalized tendencies and thus are able to predict general behavior. In the present study, the Big Five framework is used to evaluate how individual personality types vary in their attraction to different types of organizational personality.

### *Proactive Personality*



While there are many variations in ways of describing of personality, proactive personality as a trait tends to function in a way that is unlike the Big Five personality types. According to Bateman and Crant (1993) individuals with a *proactive personality* possess the tendency to pursue opportunities without allowing situational barriers to interfere with their goals. These individuals are more likely to manage their careers by pursuing opportunities that allow them to perform most successfully (Seibert et al., 1999). They anticipate change (Bateman & Crant), and they actively select, create, and shape their work environments (Seibert et al.; Crant, 1995). It has also been demonstrated that proactive personality is related to higher levels of career success (Seibert et al.). Individuals with proactive personality are valuable for companies because of their strong work ethic and commitment to their careers.

Individuals with proactive personalities will pursue opportunities that they believe will move them towards their goals. Proactive personality has been demonstrated to lead not only to career success, but also to career satisfaction (Seibert et al., 1999). These individuals value learning new skills and believe that the better they become in their careers the more successful they will be in the long run. Because these individuals are drawn to opportunities that advance their careers, they are likely to be drawn to organizations that are growing successfully or to organizations perceived as rigorous, demanding, reputable, dominant, or growing.

#### *Organization Personality Perceptions*

As noted earlier, organizational personality is one component of organizational image. An organization's personality is defined similarly to brand personality. Aaker (1997) defines *brand personality* as the "set of human characteristics associated with a brand" (p.347). Organizational personality is similarly defined as the set of human characteristics associated with an organization. Organization personality perceptions are beliefs held by job seekers regarding

potential employers, based on perceived human characteristics. Slaughter et al. (2004) established a metric that describes organizational personality in terms of 33-trait adjectives and measures organizational attractiveness according to five organizational personality dimensions: Boy Scout (e.g. friendly), Innovativeness (e.g. exciting), Dominance (e.g. successful), Thrift (e.g. simple), and Style (e.g. hip). This metric is useful for measuring job seekers' initial attractiveness to organizations based on organizational personality and will be useful for understanding effective strategies for building recruitment equity.

The present study investigates the relationship between organization personality perceptions and an individual's Big Five personality and proactive personality. Specifically, this study investigates the degree to which people with different personalities are attracted to different types of organizational personalities. As mentioned above, this study varies from the study Slaughter and Greguras (2009) have recently conducted in two ways. First, the relationship between organizational personality perceptions and Big Five personality are independent of specific companies, and thus examine only the relationship between the two constructs. Second, this study examines the relationship between organization personality perceptions and proactive personality. This study proposes similar hypotheses as Slaughter and Greguras, in the attempt to retest the relationship between organizational personality perceptions and human personality using a different methodology. That is, I will examine the degree to which individuals with different personality types are attracted to different types of organizational personalities in a potential employer.

*The Boy Scout dimension.* The adjectives used to describe organizations perceived to be high on the Boy Scout dimension are friendly, family-oriented, pleasant, personal, attentive to people, helpful, honest, cooperative, and clean. Target, Disney, and Johnson and Johnson are

examples of firms that are described by this dimension (Slaughter & Greguras, 2009). These organizations are considered to be benevolent employers, and the people who work for these companies are considered to be kind, honest, and family-oriented (i.e. agreeable). Individuals that are team-oriented, softhearted, hard working, and responsible (i.e. conscientious) may find organizations that represent the Boy Scout dimension to be attractive.

*Hypothesis 1 (a-b):* Those who are more (a) agreeable and (b) conscientious will be more attracted to organizations strong in the Boy Scout dimension. Specifically, preference for the Boy Scout dimension will be correlated with (a) Agreeableness and (b) Conscientiousness.

*The Innovativeness dimension.* The adjectives used to describe organizations perceived to be high on the Innovativeness dimension are creative, exciting, interesting, unique, and original. IBM, PepsiCo, and Microsoft are examples of firms that are described by this dimension (Slaughter & Greguras, 2009). Innovative companies tend to push research and development of new products continuously. These companies have a reputation of excellence and are growing as part of their business model. Individuals who are ambitious and hardworking (i.e. conscientious), those who value novel experiences and creativity (i.e. open to experience), and those who value growth opportunities (i.e. proactive) may be drawn to innovative organizations.

*Hypothesis 2 (a-c):* Those who are more (a) conscientious, (b) open to experience and (c) proactive will be more attracted to organizations strong in the Innovativeness dimension. Specifically, preference for the Innovativeness dimension will be correlated with (a) Conscientiousness, (b) Openness to Experience, and (c) Proactivity.

*The Dominance dimension.* The adjectives used to describe organizations perceived to be high on the Dominance dimension are successful, popular, dominant, busy, and active. Coca-Cola, General Motors, Disney, and AT&T are examples of firms that are described by this

dimension (Slaughter & Greguras, 2009). Because these firms tend to be large corporations, they also tend to be very competitive and have strong histories of success. Individuals that value strong social networks (i.e. extravert) and opportunities to learn and advance through hard work (i.e. proactive) within the organization may be attracted to organizations characterized by the Dominance dimension.

*Hypothesis 3 (a-c):* Those who are more (a) extraverted and (b) proactive will be more attracted to organizations strong in the Dominance dimension. Specifically, preference for the Dominance dimension will be correlated with (a) Extraversion and (b) Proactivity.

*The Thrift dimension.* The adjectives used to describe organizations perceived to be high on the Thrift dimension are low budget, low class, simple, reduced, sloppy, poor, undersized, and deprived. K-Mart, Kroger, Wal-Mart, Subway, Bob Evans, Meijer, and J.C. Penney are all examples of firms that are described by this dimension (Slaughter & Greguras, 2009). The Thrift dimension has only been demonstrated to show negative relationships with attractiveness (Slaughter et al., 2004; Slaughter & Greguras). Therefore, the Thrift dimension is only expected to have negative relationships with the Big Five dimensions. The Thrift dimension is perceived as low class, low budget, and simple; therefore the people who work there are perceived to be the same. For this reason individuals that are ambitious (i.e. conscientious), sociable (i.e. extraverted), and team-oriented (i.e. agreeable) may find these organizations less attractive.

*Hypothesis 4 (a-c):* Those who are more (a) conscientious, (b) extraverted and (c) agreeable will be less attracted to organizations strong in the Thrift dimension. Specifically, preference for the Thrift dimension will be negatively correlated with (a) Conscientiousness, (b) Extraversion and (c) Agreeableness.

*The Style dimension.* The adjectives used to describe organizations perceived to be high on the Style dimension are stylish, fashionable, hip, and trendy. Nike, Reebok, Pepsi, and Motorola are examples of firms that are described by this dimension (Slaughter & Greguras, 2009). Individuals that are attracted to this dimension will prefer organizations that define style and create popular culture. These individuals will likely be creative, artistic, open-minded, and cultured (i.e., open to experience) and prefer organizations where they will have the opportunity to be creative and explore new ideas.

*Hypothesis 5:* Those who are more open to experience will be more attracted to organizations strong in the Style dimension. Specifically, preference for the Style dimension will be correlated with Openness to Experience.

## Method

### *Sample and Procedure*

All participants were recruited from undergraduate psychology or communications studies courses at a large university in the northwestern United States. Participants were provided with course credit. All data collection took place during the beginning of regularly scheduled class time. A total of 70 participated in the study. The study included 41 women and was 73% White. Sixty-six percent of the sample was currently employed, and 100% had some employment experience.

Data were collected from a single survey. The survey first asked participants to rate the attractiveness of personality trait adjectives for their ideal organization. Next, participants were asked to complete a measure of their proactive personality and Big Five personality. Finally individual demographics were collected.

Note that Slaughter and Greguras (2009) point out that there is good reason for sampling from participants who are not actively engaged in the job seeking process (e.g. those enrolled in college). It is likely that these participants will be more idealistic when conceiving of their ideal employer, and subsequently they may have the greatest interest in finding a company that matches their ideals. For this reason I was interested in university students.

### *Measures*

*Organization personality perceptions.* Organization personality perceptions of the ideal employer were measured using a 33-item scale developed by Slaughter et al. (2004). This measure is used to describe organizational personality and capture the structure of organization personality perceptions. On a Likert scale of 1-5 (1= strongly disagree; 5 = strongly agree) participants were asked rate to the degree to which the 33 organizational personality trait adjectives described their ideal employer. These 33 traits are categorized into five organizational personality types: Boy Scout, Innovativeness, Dominance, Thrift, and Style. Examples of the adjectives were friendly (9 items; Boy Scout;  $\alpha = .86$ ), exciting (7 items; Innovativeness;  $\alpha = .83$ ), successful (5 items; Dominance;  $\alpha = .73$ ), simple (8 items; Thrift;  $\alpha = .78$ ), and hip (4 items; Style;  $\alpha = .95$ ).

*Proactive personality.* I used a 10-item proactive personality scale developed by Siebert et al. (1999). The scale is a shortened version of the original 17-item Proactive Personality Scale (PPS) developed by Bateman and Crant (1993). The scale used in this study asked participants to rate their agreement (1 = strongly disagree; 7 = strongly agree) on the degree to which the ten statements described them personally. Examples of the statements were “if I see something I don’t like, I fix it,” and “I excel at identifying opportunities.” Alpha for the scale was .87.

*Big Five personality.* Big Five personality was measured using the Ten-Item Personality Inventory (TIPI) developed by Gosling et al. (2004). Participants were asked to rate their agreement (1 = strongly disagree; 7 = strongly agree) on the degree to which each of the 10 pairs of descriptors described them personally. The pairs were extroverted and enthusiastic (Extroversion;  $\alpha = .59$ ), anxious and easily upset (Neuroticism;  $\alpha = .65$ ), open to new experiences and complex (Openness to Experience;  $\alpha = .23$ ), dependable and self-disciplined (Conscientiousness;  $\alpha = .74$ ), and reserved and quiet (Agreeableness;  $\alpha = .50$ ). Although most of these alphas were below the recommended .70, the internal consistency of Big Five measures is often low because of the breadth of each factor. In addition, only having two items lowers the reliability. As a result, if anything, this should lead to a conservative test of the hypotheses. Finally, because the Openness to Experience alpha is particularly low, I double-checked for coding errors, but found none. This low alpha is likely due to the breadth of the Openness to Experience factor.

## Results

Table 1 shows the means, standard deviations, and intercorrelations among variables in the study.

Hypotheses 1-6 predicted the relationship between self-rated personality and the attractiveness of different organizational personalities. Below I will present the results for each hypothesized relationship.

Hypothesis 1 predicted that individuals who rated themselves as more (a) agreeable and (b) conscientious would find the Boy Scout dimension more attractive. Review of Table 1 reveals that the relationship between Agreeableness and attractiveness of the Boy Scout dimension was significant, and the relationship between Conscientiousness and the Boy Scout

dimension was not significant. Therefore, Hypothesis 1a was supported, and Hypothesis 1b was not supported.

Hypothesis 2 predicted that preference for the Innovativeness dimension of organizational personality would be correlated with (a) Conscientiousness, (b) Openness to Experience and (c) Proactivity. Table 1 shows that both Conscientiousness and Proactivity were not related to attractiveness of the Innovativeness dimension. Thus, Hypotheses 2a and 2c were not supported. However, the relationship between Openness to Experience and preference for Innovativeness dimension was significant. Therefore, Hypothesis 2b was supported.

Hypothesis 3 predicted that individuals rating themselves as more (a) extraverted and (b) proactive would be more attracted to organizations described by the Dominance dimension of organizational personality. As shown in Table 1, there is a significant relationship between both Extraversion and Proactivity and attractiveness of the Dominance dimension. Therefore, Hypothesis 3 was supported.

Hypothesis 4 predicted that individuals who rated themselves as (a) conscientious, (b) extraverted and (c) agreeable would be *less* attracted to organizations described by the Thrift dimension of organizational personality. As predicted, Table 1 shows both Conscientiousness and Extraversion were negatively correlated with preference for the Thrift dimension. Thus, Hypothesis 4a and 4b were supported. The relationship between Agreeableness and the Thrift dimension was not significant. Therefore, Hypothesis 4c was not supported.

Hypothesis 5 predicted that preference for the Style dimension of organizational personality would be correlated with Openness to Experience. Review of Table 1 reveals that Openness to Experience is negatively correlated with the Style dimension. Thus, Hypothesis 5 was not supported.



In addition, some other non-hypothesized relationships between human personality and the attractiveness of organizational personality types were found. As shown in Table 1, the Thrift dimension of organizational personality was negatively correlated with proactive personality, and the Style dimension was negatively correlated with Openness to Experience. Consistent with previous research (Bateman & Crant, 1993), Table 1 also shows that Proactivity was correlated with both Extraversion and Conscientiousness.

### Discussion

The purpose of this research was to examine the relationship between human personality and organizational personality types, in an attempt to determine which human personality types are most attracted to each organizational personality dimension. The results of the study show several significant relationships.

The relationships between human personality and organizational personality should be interpreted in two ways. First, organizations should market themselves in a way that reaches individuals characterized by the human personality dimensions that are related to their organizational personality type. For example, if an organization projects an image characterized by the Innovativeness dimension, they should expect to receive applicants that are high in Openness to Experience. Second, if an organization determines that they need applicants that are characterized by a particular human personality trait they should market themselves according to the organizational personality dimension that those individuals find most attractive. For example, if an organization needs individuals that are high in Proactivity they should portray an image characterized by the Dominance dimension.

Slaughter and Greguras (2009) have suggested that organizations characterized by the Thrift dimension need the most help in attracting applicants. As the results of this study, and all

other published studies involving the Thrift dimension (Slaughter et al., 2004; Slaughter & Greguras) demonstrate, applicants are generally not attracted to the Thrift dimension. In fact, the results of the present study showed that applicants who are proactive, conscientious, and extraverted – three important employee traits – actually find organizations characterized by Thrift to be *less* attractive. Therefore, organizations characterized by the Thrift dimension are in a position to gain the most from ‘rebranding’ their organizational personalities.

Future research should continue to evaluate the relationship between organization personality perceptions and human personality. Specifically, it would be helpful if future research were able to capture actual applicant behavior regarding actual organizations. It would be interesting to capture whether or not these relationships exist in the real world and if they lead to better employee-related outcomes (e.g. lower rates of turnover or higher productivity) after people are hired. One possible way to capture this behavior would be to sample from a job fair with a longitudinal design.

### *Limitations*

This study was intended to be simple. The first limitation of this study is the use of simplified metrics. Although the TIPI was demonstrated to be valid (Gosling et al., 2004), the brevity of this measure may have lead to somewhat low reliability for the Big Five dimensions, especially Openness to Experience. Future studies should use more comprehensive measures of personality (e.g. Big Five facets). However, it is important to point out that the present study obtained significant results even with less reliable measures, suggesting that stronger relationships might be found in replications where more reliable measures are used.

Second, there could be some inflation of relationships as there was only single-source data measured at one time point. Future studies should involve multiple sampling intervals, and,

as suggested previously, a longitudinal design would be the most informative, as it would capture the long-term effects.

Third, the sample was small (N=70), predominantly female (59%), white (73%), currently working (66%), all participants had prior work experience, and all students were from the same university and were studying the same two subjects. Future studies should include a larger and more diverse sample to see if this would in any way affect the results.

### *Conclusion*

This research investigated the relationship between organization personality perceptions and human personality measured in terms of Big Five personality and proactive personality. Slaughter and Greguras (2009) have suggested that the link between human personality and initial attraction to organizations is determined, at least partially, by organization personality perceptions. Slaughter et al. (2004) have suggested that when job seekers are assessing their attractiveness to organizations they consider organizations in terms of the human characteristics associated with the company (e.g. organization personality perceptions), and that five organizational personality types categorize these characteristics. Cable and Turban (2001) have stated that attraction to organizations varies by the job seekers perception of the company. Human resources departments are the marketers of employment for organizations; they are responsible for supplying job seekers with information about the organization. When communicating with job seekers it is important to remember that individuals are drawn to situations that are similar to their self-concept (Schneider, 1987). Thus, recruiters should leverage their organizational personality to the types of applicants they are most interested in attracting. Moreover, human resources departments should assess their needs, then determine how to market their organization during recruitment.

## References

- Aaker, D. A. (1991). *Managing brand equity: Capitalizing on the value of a brand name*. New York: Free Press.
- Aaker, D. A. (1996). *Building strong brands*. New York: Free Press.
- Aaker, J. L. (1997). Dimensions of brand personality. *Journal of Marketing Research*, 34, 347-356.
- Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44, 1-26.
- Barrick, M. R., Mount, M. K., & Judge, T. A. (2001). Personality and performance at the beginning of the new millennium: What do we know and where do we go next? *International Journal of Selection and Assessment*, 9, 9-30.
- Barney, J. B. (1986). Organizational culture: Can it be a source of sustained competitive advantage? *Academy of Management Review*, 11, 656-665.
- Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of Organizational Behavior*, 14, 103-118.
- Cable, D. M., & Turban, D. B. (2001). Establishing the dimensions, sources, and value of job seekers' employer knowledge during recruitment. *Research in Personnel and Human Resources Management*, 20, 115-163.
- Cable, D. M., & Yu, K. Y. T. (2006). Managing job seekers' organizational image beliefs: The role of media richness and media credibility. *Journal of Applied Psychology*, 91, 828-840.
- Crant, J. M. (1995). The Proactive Personality Scale and objective job performance among real estate agents. *Journal of Applied Psychology*, 80, 532-537.

- Crant, J. M., & Bateman, T. S. (2000). Charismatic leadership viewed from above: The impact of proactive personality. *Journal of Organizational Behavior, 21*, 63-75.
- Devendorf, S. A., & Highhouse, S. (2008). Applicant-employee similarity and attraction to an employer. *Journal of Occupational and Organizational Psychology, 81*, 607-617.
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality, 37*, 504-528.
- Kapferer, J. (2004). *The new strategic brand management: Creating and sustaining brand equity long term*. London: Kogan Page.
- Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *The Journal of Marketing, 57*, 1-22.
- Kotler, P. (1972). A generic concept of marketing. *The Journal of Marketing, 36*, 46-54.
- Leonard, B. (1999). HR squeezed by tight labor market. *HR Magazine, 44*, 37.
- Levy, P. E. (2006). *Industrial/organizational psychology: Understanding the workplace*. Boston: Houghton Mifflin.
- McCrae, R. R. & John, O. P. (1992). An introduction to the Five-Factor Model and its applications. *Journal of Personality, 60*, 175-215.
- Rolland, J.P. (2002). Cross-cultural generalizability of the Five-Factor Model of personality. In McCrae, R. R. & Allik, J. (Eds.), *The Five-Factor Model of personality across cultures* (p.7-28). New York: Kluwer Academic/Plenum Publishers.
- Saucier, G. (1994) Mini-markers: A brief version of Goldbergs's unipolar Big Five markers. *Journal of Personality Assessment, 63*, 506-516.
- Schneider, B. (1987). The people make the place. *Personnel Psychology, 40*, 437-53.

Seibert, S. E., Crant, J. M., & Kraimer, M. L. (1999). Proactive personality and career success. *The Journal of Applied Psychology, 84*, 416-27.

Slaughter, J. E. & Greguras, G. J. (2009). Initial attraction to organizations: The influence of trait inferences. *International Journal of Selection and Assessment, 17*, 1-18.

Slaughter, J. E., Zickar, M. J., Highhouse, S., & Mohr, D. C. (2004). Personality trait inferences about organizations: Development of a measure and assessment of construct validity. *Journal of Applied Psychology, 89*, 85-103.

Sutin, A. R., Costa, P. T., Miech, R., & Eaton, W. W. (2009). Personality and career success: Concurrent and longitudinal relations. *European Journal of Personality, 23*, 71-84.

Table 1: Means, Standard Deviations, and Intercorrelations among Study Variables

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11
Human Personality													
1. Proactive Personality	5.15	.730	(.866)										
2. Openness to Experience	5.24	.995	.254*	(.230)									
3. Conscientiousness	5.56	1.18	.410**	.256*	(.737)								
4. Extraversion	4.63	1.26	.404**	.158	.100	(.593)							
5. Agreeableness	3.31	1.19	.221	-.194	-.170	.077	(.498)						
6. Neuroticism	3.09	1.27	.028	-.224	-.146	-.043	.295*	(.646)					
Organizational Personality													
7. Boy Scout	4.28	.525	-.079	.176	.068	.147	-.339**	-.009	(.860)				
8. Innovativeness	3.32	.396	.184	.263*	.144	.191	-.161	.178	.455**	(.828)			
9. Dominance	4.68	.713	.283*	-.185	.064	.277*	.099	.008	.295*	.335**	(.725)		
10. Thrift	1.87	.519	-.302*	.085	-.316**	-.334**	.155	.030	-.149	-.292*	-.364**	(.796)	
11. Style	3.23	.919	.147	-.253*	.005	.065	-.061	-.042	.088	.210	.430**	-.286*	(.952)

N= 66-70

\* Correlation is significant at the 0.05 level (2-tailed). \*\* Correlation is significant at the 0.01 level (2-tailed).



Portland State  
UNIVERSITY

# **Loss of Cul3 in Primary Fibroblasts**

---

Summer 2010 McNair Research

**Paula Hanna - McNair Scholar**  
**Jeffrey Singer, PhD - Faculty Mentor**  
**Final Research Paper for the McNair Scholars**  
**Program**



## **Loss of Cul3 in Primary Fibroblasts**

### ***Abstract:***

DNA holds the essence of life, and interpreting it can give us clues about cell dynamics. Using retrospective analysis of cell processes, such as protein production and degradation, we try to answer some basic questions, taking advantage of cells being the fundamental units of life. Disruption of these complex processes results in abnormality, dysfunction, and eventually cell death. Cul3 is an essential enzyme that regulates the levels of proteins that in turn regulate transitions between different cell cycle stages. Cell cycle is a description of progressive order of events that lead to cell division. When the Cul3 gene is knocked out in cells of living organisms, some cells undergo apoptosis, or programmed cell death. This research focuses on the role of Cul3 in regulation of cell cycle transitions with a particular interest in how cells that lose Cul3 enter into the apoptotic pathway. The experimental system utilizes a special allele of Cul3 that was constructed in the lab and contains flanking DNA signals for a recombinase called Cre. When expressed, the Cre recombinase knocks out the Cul3 gene. Cells that have lost the gene are then monitored and analyzed for DNA breaks. We introduced the Cre gene using retroviral infection of primary fibroblasts containing the Cul3 special allele. This virus also expresses a special form of green fluorescent protein that allows us to identify cells that lost the Cul3 gene. As part of the experimental design, controls, which are cells that cannot delete the Cul3 gene and viruses that only express the green indicator protein, are included.

### **Keywords:**

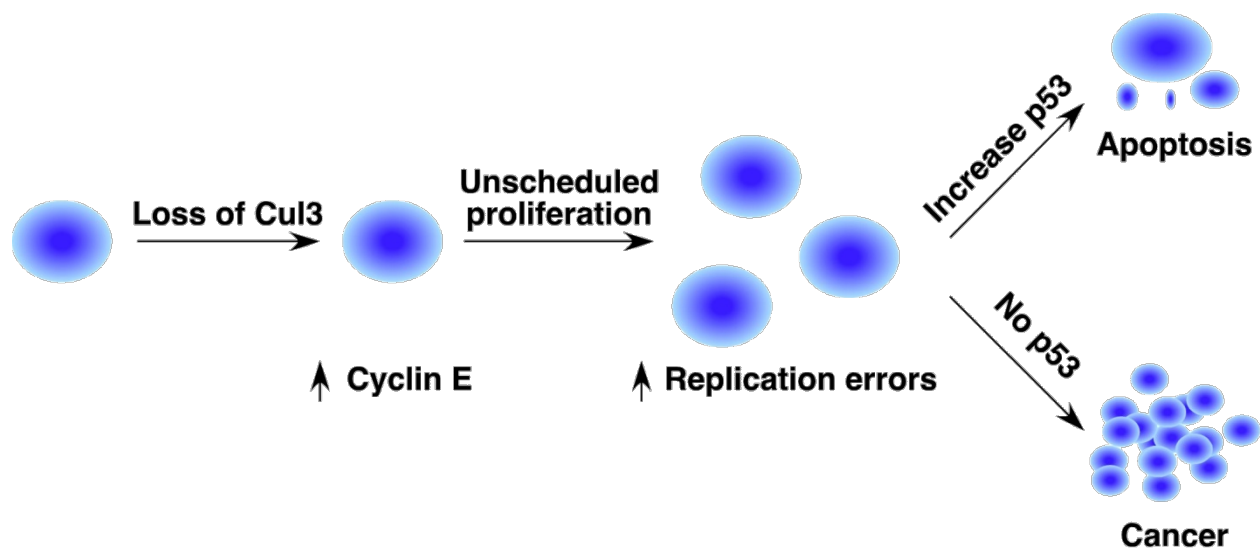
**Cul3 – apoptosis – primary fibroblasts – degradation – enzyme – knock out – Cre recombinase – retroviral infection**

### ***Introduction:***

We study cells, taking advantage of them because they are the most basic units of life, to better understand the activity of science and appreciate the complexity of DNA, gene expression, and protein interactions. We do so through a reductionist lens to break them down into their elements and components that we can examine one at a time. Yet, with all our current advances in both science and technology, many aspects of cell dynamics and regulations remain a mystery. For instance, one basic questions we are trying to answer is how cells regulate their growth.

Cells divide in order to proliferate and they do so via cell cycle. Cell cycle is a series of phases or transitions that are driven by cell cycle promoter proteins. One type of such proteins is Cyclins. The cell cycle is also maintained under control by repressor proteins such as Cullins. It is the fine balance between cell cycle promoters and repressors that controls cell cycle progression.

The Singer lab has shown that Cul3 protein, which belongs to the family of repressor proteins, is essential for cell survival. This particular protein degrades cell cycle promoter protein, Cyclin E. A working model that the Singer Lab formulated is shown in Figure 1.



**Figure 1. A working model that The Singer Lab formulated after Cul3 Loss in mice cells.**

The loss of Cul3 protein leads to dramatic increase in Cyclin E levels which lead to uncontrolled cell division. Consequently, that leads to many replication or duplication errors, and depending on the presence or absence of a certain protein, called p53, apoptosis is induced or the cells become cancerous.

Apoptosis, or programmed cell death is a specific biochemical pathway that leads to the elimination of cells as a cell regulation mechanism. It is through apoptosis that the homeostasis of the body is conserved at all multi-cellular levels. Therefore, when abnormal cell functioning or atypical gene expression of vital proteins occurs, the cell commits suicide in order to eliminate the malfunctioning cells.

The primary goal of this research is to answer the question: Is apoptosis triggered by Cul3 loss which is induced by a gene knockout? And if so how?

### ***Background Knowledge:***

#### **Section1: What triggers Apoptosis?**

Apoptosis, or programmed cell death, can be triggered by many factors and different stimuli. Internal stimuli like DNA damage or cellular stress is one pathway that leads to apoptosis. The second pathway results from external stimuli, mediated by receptors that receive signals from neighboring cells. These are the most two common factors that lead to cell suicide. The mechanism by which the cell dies varies according to the types of the cell and stimuli. The p53-mediated cell death is perhaps the most familiar mechanism. The p53 gene gets activated, causing the transcription of the p53 protein, a tumor suppressor. This protein induces growth arrest or apoptosis depending on the stress that the cell experiences. A recent study has shown that over expression of Cyclin E protein during the cell cycle is linked to specific p53 mutations, which in turn could induce apoptosis (2). Another study has shown that another protein, the

ubiquitin ligase Itch, regulates apoptosis as well through controlling TXNIP protein level (7). TXNIP, or Thioredoxin interacting protein, is a regulatory factor that plays various roles within the cell. Perhaps the most important role of TXNIP is regulating the REDOX homeostasis within the cell and controlling tumor growth.

## **Section2: Why do we focus on Cul3?**

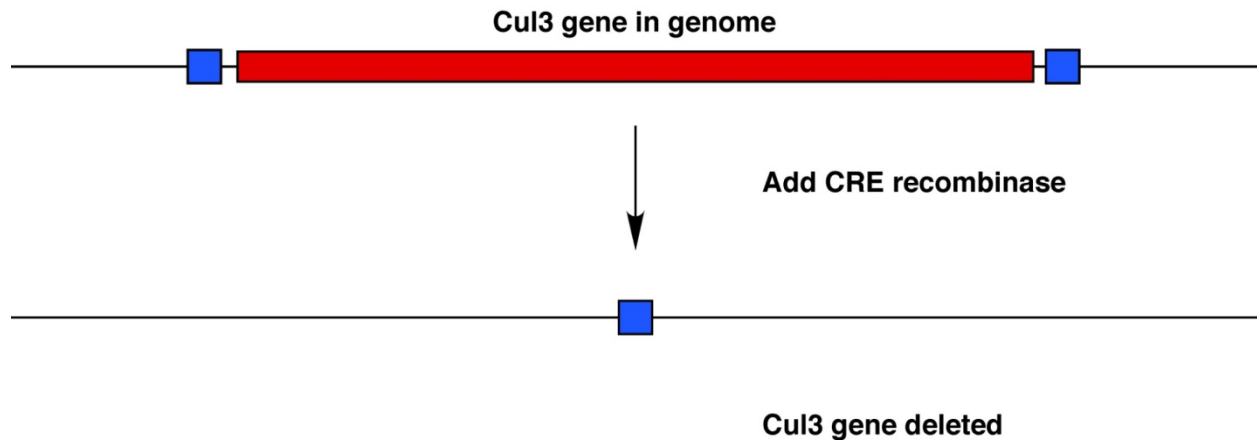
Cyclin E regulates the G1 to S phase transition of the cell cycle. A recent study has shown that cells in G1 phase are more susceptible to death-inducing activity of wild-type p53 (6). Therefore, it is best to target cells within this transition period in order to gain an understanding of how the loss of Cul3 gene affects Cyclin E levels, and ultimately, cell cycle progression.

## **Section3: What are the results of Cul3 gene knockout? (3, 5)**

Earlier studies in the Singer lab show that the knockout of the Cul3 gene results in early embryonic lethality. Further analysis revealed that Cul3 is not needed for all cellular processes since some cell types survived despite the lack of the gene. This observation is hypothesized to have been caused by the mis-regulation of cell cycle regulators and the “anti-proliferative” signals of p53.

### ***Plan of Attack:***

In order to approach the primary question of this research we needed to delete the Cul3 gene from mouse cells called fibroblasts. Figure 2 shows the Cul3 gene in the context of the genome. We used a very modern technology that utilizes a specifically engineered virus to introduce an enzyme called Cre recombinase that deletes Cul3 gene in fibroblasts. After the insertion of Cre recombinase, Cul3 gene is deleted.



**Figure 2. Cul3 gene in the context of the genome. Deletion sites are coded with the blue boxes shown. Notice that Cre recombinase causes the deletion of the whole gene and one deletion site, leaving the other site behind.**

For the experimental design, we used the same design used by McEvoy et al. earlier (3). First, we constructed two groups; a control group that has a normal form of Cul3 gene and an experimental group that gets the floxed form. This floxed form has been treated with the Cre-recombinase enzyme that deletes Cul3 gene as shown in Figure 1. All of the floxed fibroblasts contained a transgene that expresses the Cre recombinase when the drug tamoxifen is added. Thus the addition of tamoxifen caused deletion of the Cul3 gene. Cell populations were then divided further into 3 groups; one for each tool we used to monitor Cre recombinase expression. Apoptotic effect was then monitored through terminal deoxynucleotidyltransferase-mediated dUTP-biotin nick end labeling, or TUNEL labeling which stains apoptotic cells red.

***Materials and Methods:***

**Plasmid vector isolation and purification.** Three plasmid vectors, pBabe Cre, pBabe YFP, and pBabe Cre-eYFP were cultured, isolated and purified. The first two vectors are engineered for holding the Cre and YFP gene inserts, respectively. The third plasmid, however, is designed specifically to hold both gene inserts in order to act as a detecting tool. pBabe Cre expresses the Cre recombinase enzyme, while pBabe YFP expresses YFP protein that gives off green color when hit by UV light under microscope.

**Cell Culture.** Mouse embryonic fibroblasts, MEFs, were obtained from a stock supplied by the Singer lab.

**Phoenix cells transfection and infection.** Packaging cells were transfected by pBabe Cre, pBabe YFP, and pBabe Cre-eYFP. They were left to harvest for 2 days and were checked for fluorescence (only the cells that had YFP inserts).

**Western blotting.** Obtained proteins were separated by gel electrophoresis then transferred to a blotting membrane. This membrane is then incubated and treated with a primary antibody that is specific to our proteins of interest. A secondary antibody was then used to detect the primary antibody, and thereof, our proteins of interest.

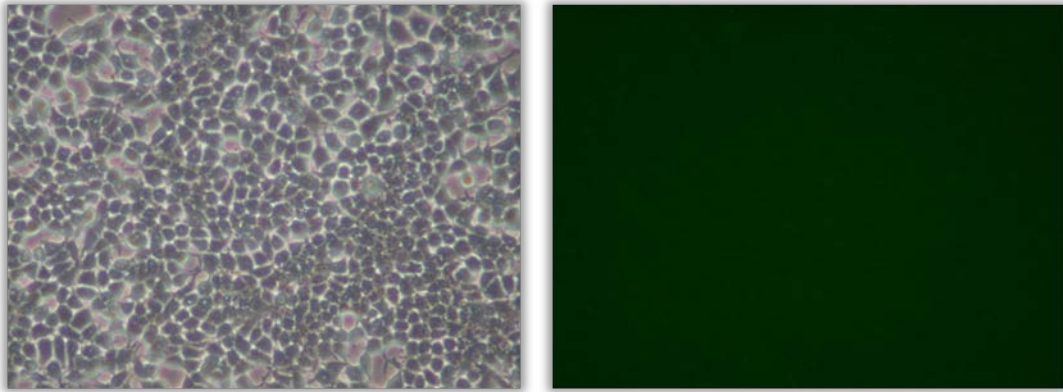
**Detection of apoptosis, and TUNEL labeling.** In order to detect apoptosis, cells were labeled with terminal deoxynucleotidyltransferase-mediated dUTP-biotin that recognizes DNA breaks and nicks. Although this label does not directly indicate apoptosis, it's a good way to identify possible apoptotic cells.

### ***Results and Explanations:***

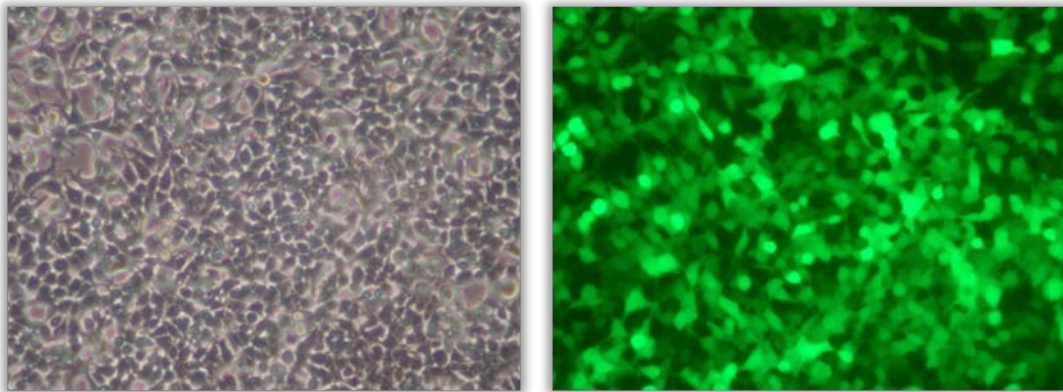
One of the challenges of this research was to monitor the expression of our enzyme, Cre recombinase. First we needed to introduce the Cre recombinase gene into fibroblasts through viral infection. Then we needed to monitor its expression and activity through three different techniques:

- First, the co-expression of YFP, which is a protein that fluorescence green when its exposed to UV light under the microscope,
- Second, Western blot analysis of CRE to ensure its presence, and
- Third, measurement of recombination activity through PCR and gel electrophoresis to ensure activity.

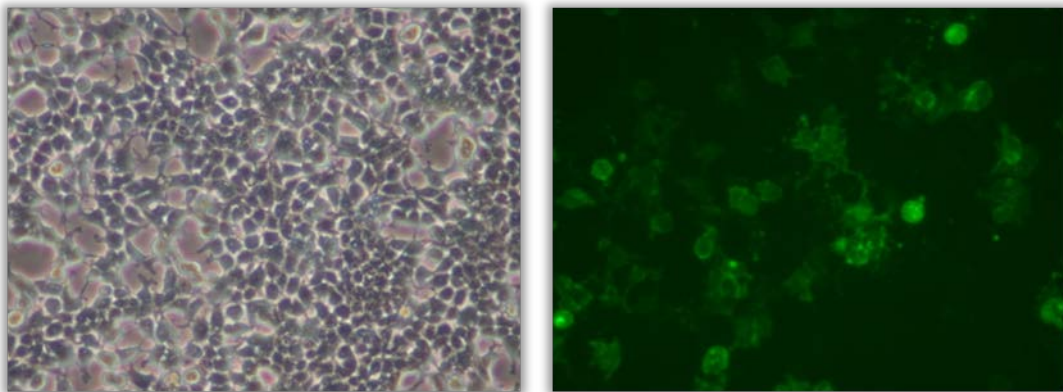
Figures 3, 4 and 5 show the viral cells that expressed Cre, YFP, and both, respectively.



**Figure 3. Cre recombinase plate shown under normal microscopy on the left and when UV light is shown upon it on the right.**



**Figure 4. YFP plate shown under normal microscopy on the left and when UV light is shown upon it on the right.**



**Figure 5. Cre-YFP plate shown under normal microscopy on the left and when UV light is shown upon it on the right.**

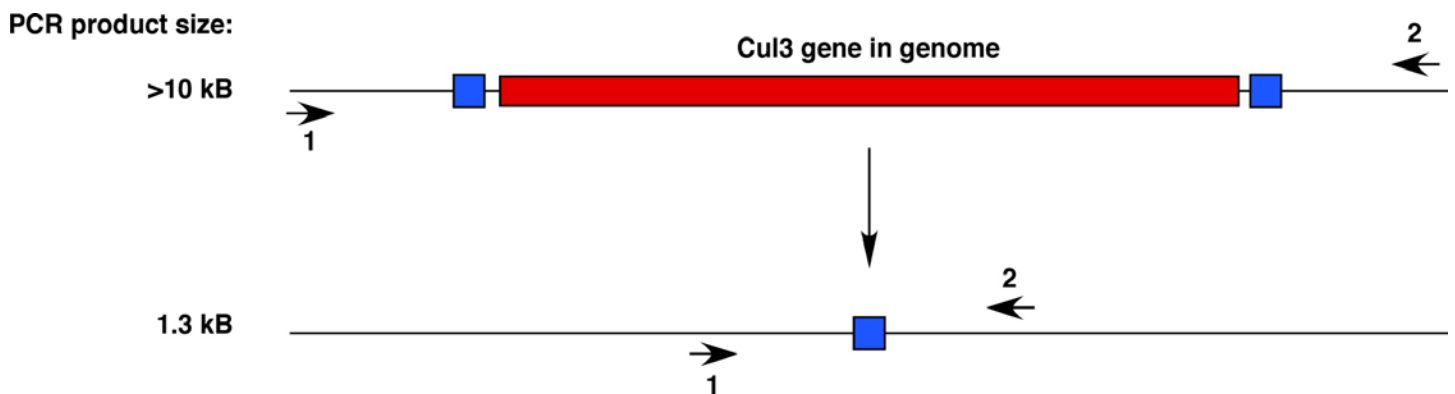
In Figure 3, there are some growing cells and no fluorescence. That's because Cre recombinase doesn't fluoresce by itself under the microscope, i.e. it needs an indicator. In Figure 4, however, there is the YFP protein expressed in green color when visualized by UV light. Combining the two genes in one viral cell (Figure 5), we see some green fluorescence which is indicative of YFP, and since the cells are making YFP, they are probably making Cre too.



**Figure 6. Western blotting. Lane 1: Cre Control. Lane 2: YFP Control. Lane 3: YFP. Lane 4: Cre. Lane 5: Cre and YFP.**

Figure 6 shows the second technique used in this experiment, Western blotting. Western blot is an assay of proteins (or a protein blot). It checks for the presence or absence of specific proteins. In the first lane, there is Cre expressed as a control. In the 4<sup>th</sup> and 5<sup>th</sup> lanes Cre is expressed in the viral cells that have Cre by itself, and both Cre and YFP, respectively. Note that lanes 2 and 3 are not expressing Cre, simply because they did not receive the Cre plasmid.

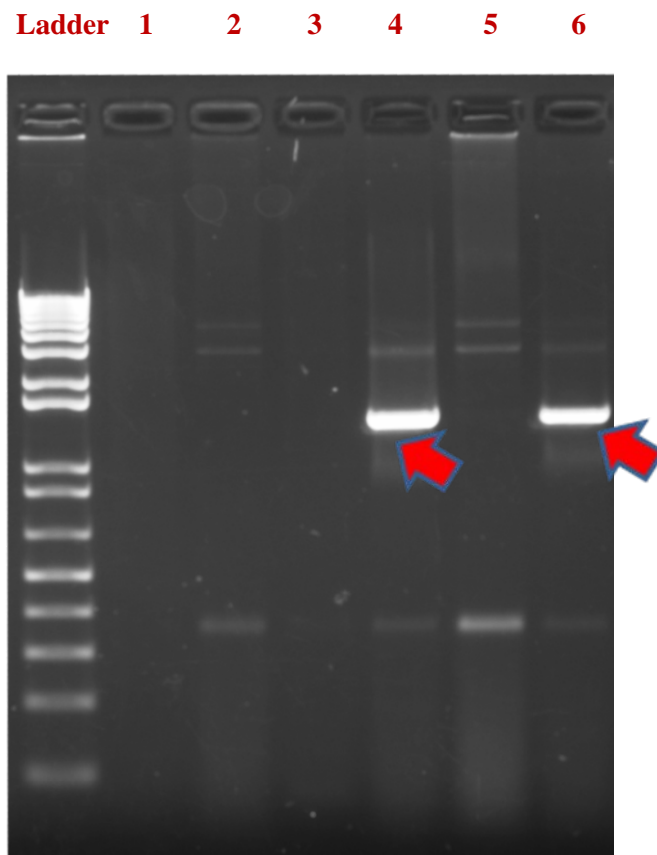
Third technique we utilized is checking for the Cre recombination through PCR. PCR stands for polymerase chain reaction which is a machine that amplifies small pieces of DNA.



**Figure 7. The upper cartoon shows genes before deletion, while the lower cartoon shows genes after treatment with Cre recombinase, i.e. deletion of Cul3 gene.**



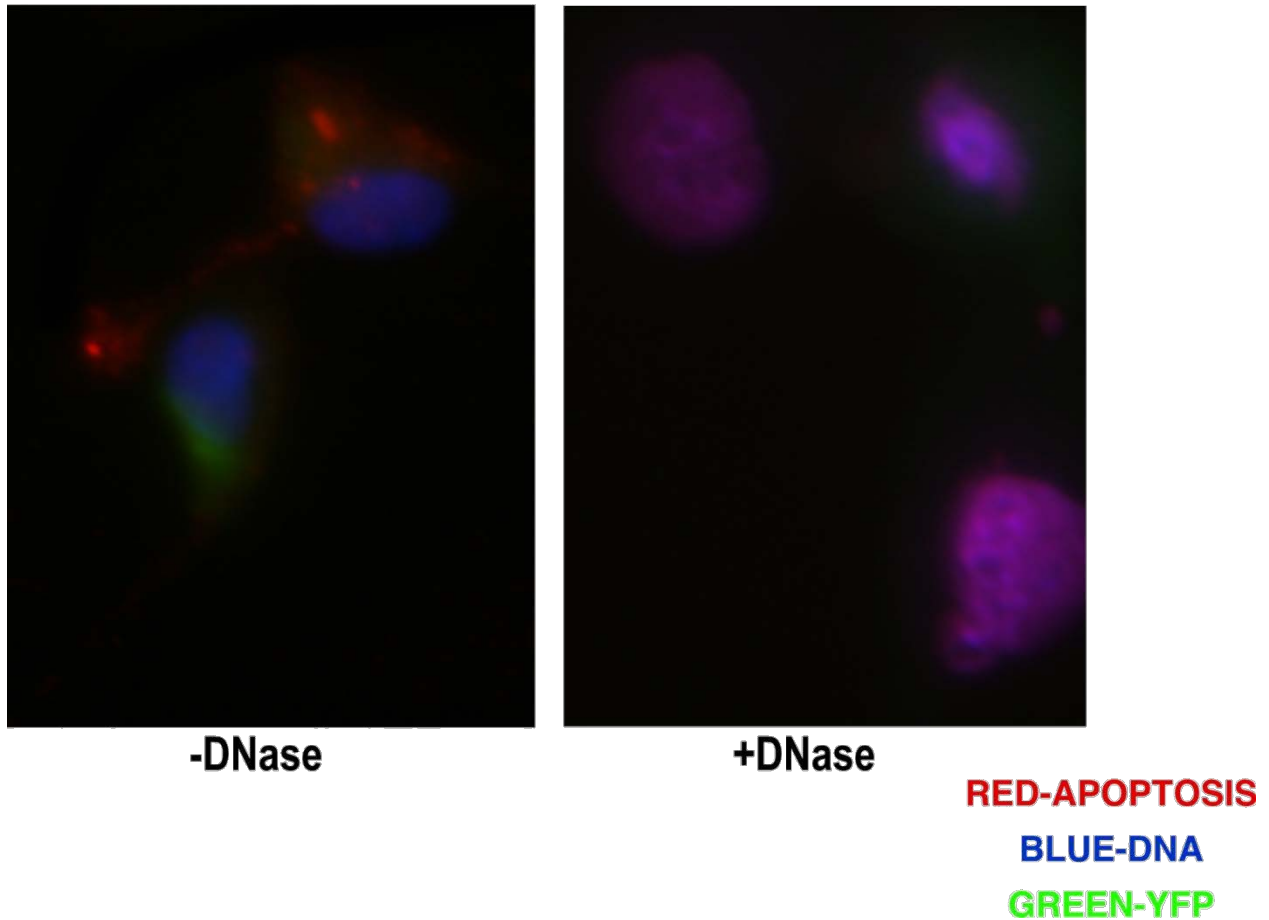
Figure 7 shows the construct that we expect to get out of PCR machine. The black arrows at the ends are the same PCR primers. The 10 kb size of the top construct is where recombination hasn't occurred. The DNA is too big for the PCR machine to process. When recombination occurs, however, the size is 1.3 kb. That's because the DNA construct is much smaller and can be processed by the PCR.



**Figure 8. Gel electrophoresis of the DNA pieces amplified through PCR. Lane 1: Wild type fibroblasts + Cre. Lane 2: Wild type fibroblasts + YFP. Lane 3: Wild type fibroblasts + YFP-Cre. Lane 4: floxed fibroblasts + Cre. Lane 5: floxed fibroblasts + YFP. Lane 6: floxed fibroblasts + YFP-Cre.**

Figure 8 shows the actual results of running gel electrophoresis, a technique to measure the size of DNA pieces. At the red arrows there are our 1.3 kb bands, shown only when viral Cre recombinase is used.

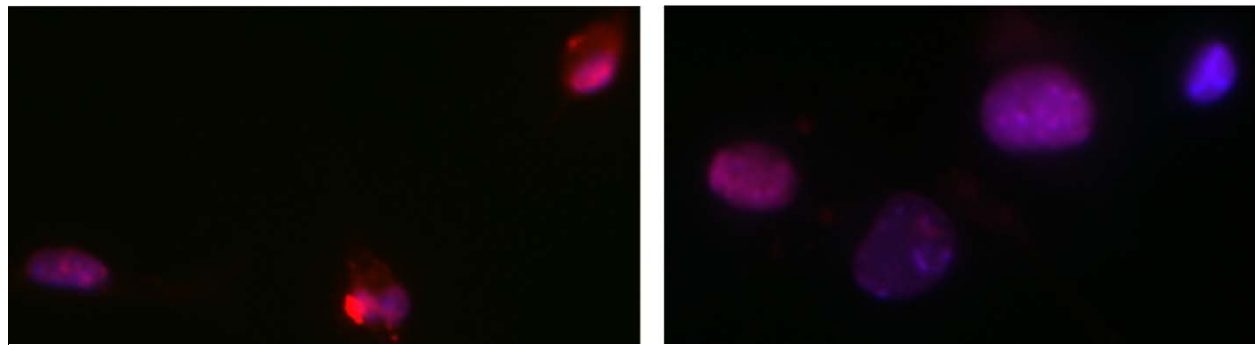
## Cul3<sup>flx/flx</sup> pBabe YFP



**Figure 9. Floxed Fibroblasts infected with YFP under microscope without DNase (left) and with DNase (right).**

Lastly, fibroblasts were infected with viral YFP under the microscope to check for apoptosis. Figure 9 shows fibroblasts that were infected with YFP gene. TUNEL assay uses DNase. DNase is a positive control that generates DNA strand breaks to show Apoptosis (RED color). In the left panel, the cells without DNase show clear distinct blue and green colors (DNA and YFP respectively). The red color is just background. In the right panel, however, there is purple color (or mixed red and blue) that indicates apoptosis in nucleus where we expected it (where breakages in DNA occurred). This Figure represents the controls for the experiment.

## Cul3<sup>flx/flx</sup> pBabe Cre-YFP



-DNase

+DNase

RED-APOPTOSIS  
BLUE-DNA  
GREEN-YFP

**Figure 10. Floxed Fibroblasts infected with Cre-YFP under microscope without DNase (left) and with DNase (right).**

Figure 10 shows fibroblasts infected with Cre recombinase and YFP. Both pictures show purple color which looks similar to +Dnase panel in Figure 9. This purple color indicates apoptosis and that is most likely due to the deletion of Cul3. What Figure 10 is interpreted to show is the apoptotic effect triggered by Cul3 loss which is induced by knocking out Cul3 gene.

### ***Future studies:***

First our short term goals are to optimize our experiments to allow for maximum efficiency, and analyze apoptotic assays of the mouse cells. Our long term goal is examine the dying cells to look at what could be happening in the background, other than apoptosis, that might have altered the results.

### ***Acknowledgements:***

I would like to thank Dr. Jeffrey Singer for his dedicated support and Dr. Justin Courcelle for his careful review of the manuscript.

## References:

1. Li, C. et al (2009, June 17). Novel p53 target gene, S100A9, induces p53-dependent cellular apoptosis and mediates the p53 apoptosis pathway. *Biochem*, 363-372. doi:10.1042/BJ20090465
2. Lindah, T. et al (2004). Overexpression of cyclin E protein is associated with specific mutation types in the p53 gene and poor survival in human breast cancer. *Carcinogenesis*, 25(3), 375-380. doi:10.1093/carcin/bgh019
3. McEvoy, J. et al (2007). Constitutive Turnover of Cyclin E by Cul3 Maintains Quiescence. *American Society for Microbiology*, 27(10), 3651-3666. doi:10.1128/MCB.00720-06
4. Ohtsubo, M. et al (1995). Human Cyclin E, a Nuclear Protein Essential for the G1-to-S Phase Transition. *American Society for Microbiology*, 15(5), 2612-2624. doi:0270-7306/95/\$04.0010
5. Singer, J. et al (1999). Cullin-3 targets cyclin E for ubiquitination and controls S phase in mammalian cells. *Genes and Development*, 13, 2375-2387. doi:0890-9369/99
6. Yonish-Rouach, E. et al (1993). p53-Mediated Cell Death: Relationship to Cell Cycle Control. *American Society for Microbiology*, 13(3), 1415-1423. doi:0270-7306/93/031415-09\$02.00/0
7. Zhang, P. (2010, January 12). The ubiquitin ligase itch regulates apoptosis by targeting thioredoxin-interacting protein for ubiquitin-dependent degradation. *The American Society for Biochemistry*. doi:10.1074/jbc.M109.063321
8. Zhang, W. (2006). Fbw7 Isoform Interaction Contributes to Cyclin E Proteolysis. *American Association for Cancer Research*, 4(12), 935-943. doi:10.1158/1541-7786.MCR-06-0253

# Optical microscopy – preliminary classification of two R chondrites

Jamsja, Niina

Faculty Mentor: Alex Ruzicka, PhD

Cascadia Meteorite Laboratory

Department of Geology, Portland State University

## ***Abstract***

CML 215 and CML 392 are two unclassified meteorites that belong to the class of Rumuruti (or R) chondrites. Using optical thin section microscopy both specimens were preliminary classified as R3-5. Both meteorites contain hydrous phase amphibole, which indicate interaction of the parent body (or bodies) of these meteorites with OH<sup>-</sup> oxidant. Presence of this phase in CML 215 and 392 brings the number of amphibole-bearing R chondrites to three. At this point is uncertain whether CML 215 and 392 are paired.

## ***Introduction***

Rumuruti, or R, chondrites have been identified as a new meteorite class 16 years ago. With only few dozen known meteorites in the class, R chondrites represent a fifth class of undifferentiated meteorites (Rubin and Kallemeyn 1994; Weisberg et al. 2006). R chondrites differ from other primitive chondrites by many different factors, some of which include high oxidation state, low chondrule/matrix ratio and absence of metallic Fe, Ni (Greenwood et al. 2000; Schulze et al. 1994; Weisberg et al. 1991). Over the years new geochemical data have shed light on the composition of R chondrites. High S fugacity found in these meteorites indicate a S-enriched origin of formation (Isa and Rubin 2010), and presence of hydrous phases, such as hornblende and biotite, indicate presence of water during the parent body formation (McCanta et al. 2007; McCanta et al.

2008; Mikouchi et al. 2007).  $\delta^{17}\text{O}$  compositions, highest among all of the meteorites, also suggests unique environment of R chondrite formation (Greenwood et al. 2000).

Petrographic characteristics can also help shed light on the formation history of R chondrites. For this reason two unclassified R chondrites have been chosen for detailed optical microscopy studies. This paper summarizes research that has been conducted on the samples so far and emphasizes on new findings.

## **Methods**

Two R chondrite specimens chosen for the study, CML 215 and CML 392, are courtesy of Cascadia Meteorite Laboratory (CML). They were studied using petrographic microscope Leica DM 2500, also a courtesy of CML. Total of four double-polished thin sections from both specimens (CML215-2; CML392-2A, 2B, and 2C) were studied using transmitted, cross polarized, and reflected lights, as well as with flatbed and thin section scanners.

Lithic clasts in meteorites were identified using primarily reflected light mode and hand specimens. Preliminary petrologic states were obtained using petrographic identification techniques of Weisberg et al. (2006), Huss et al. (2006), and Berlin and Stöffler (2004).

Shock deformation of olivine grains was studied using cross-polarized light of the petrographic microscope. Large (> 50 microns), clean grains with high birefringence colors were chosen for the analyses. Whenever possible at least twenty grains were chosen for classification of each clast. Shock classification stages were assigned based on criteria provided by Stöffler et al. (1991), Schmitt (2000), and Schmitt and Stöffler (2000). Based on the suggestions from above mentioned authors, 25% of the grains with the highest shock stage were chosen to assign a shock stage. Shock

classification of CML 215 was made based on the only thin section CML 215 -2, while CML 392 was classified based on studies made on all three thin sections (-2A, -2B, -2C).

## ***Results***

### **Overall Petrography**

#### **CML215**

CML215 has a brecciated appearance with dark/light clasts embedded in a brown clastic groundmass. Twenty one lithic clasts were identified in CML215-2 thin section (Figure 1) with clasts ranging in size from 600  $\mu\text{m}$  in diameter to 1.0x1.4 cm in apparent size. Some clasts contain transparent matrix, have no twinned pyroxene, glass, or zoned olivine, and contain plagioclase feldspar. Observations of these clasts could be consistent with petrologic type 4 or 5 (Huss et al. 2006; Weisberg et al. 2006). Other clasts contain twinned pyroxene, and feldspathic glass (in some cases partially devitrified), and what appears to be zoned olivine. With no plagioclase feldspar found in them, these clasts are considered to be to be petrologic type 3. Host portion of CML 215 is enriched in chondrules and in chondrule and clastic fragments and shows indicators of different petrologic types. Major minerals present in CML215 are olivine, plagioclase, pyroxenes, and oxide minerals that have not yet been identified. Accessory minerals are composed of opaques that are believed to be sulfide, metal, and chromites.

**Figure 1.** Reflected light micrograph mosaic of CML215-2 thin section shows prominent outlined clasts.

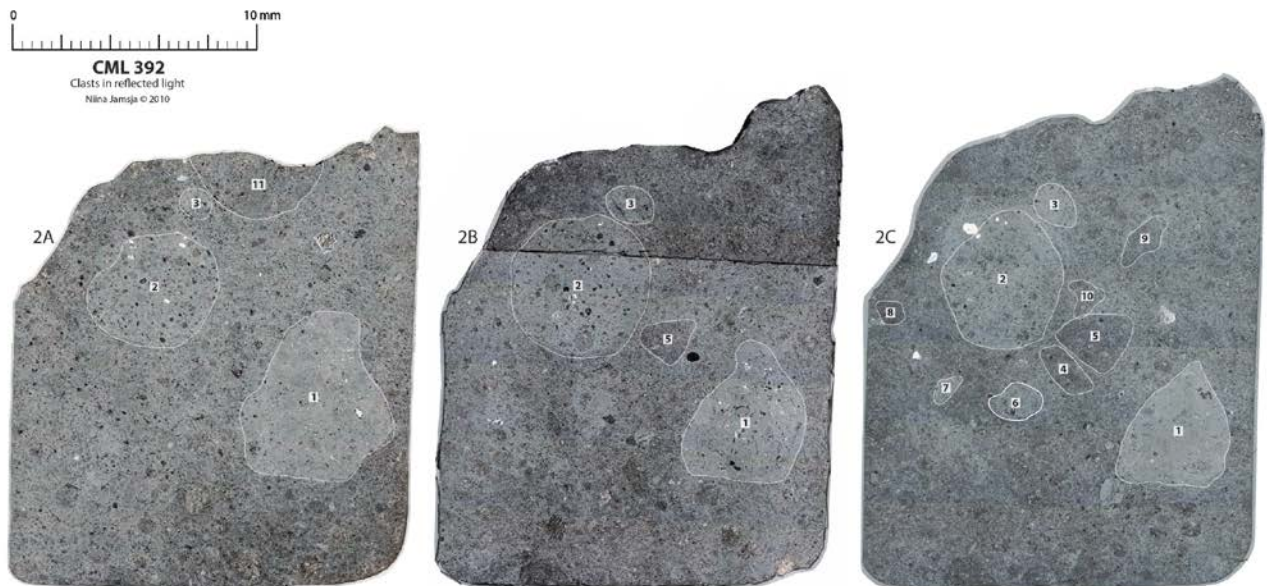
### **CML392**

Optical microscopy studies of CML392 revealed only eleven prominent clasts with their size ranging from 750  $\mu\text{m}$  to 6.3 mm in diameter (Figure 2). Presence of isotropic glass, sharp chondrule-host boundaries, presence of twinned pyroxene in both host and some of the clasts



indicate that CML392 probably belongs to the petrologic type 3 (Huss et al. 2006; Weisberg et al. 2006).

One clast stands out from the rest of the lithic clasts in CML392. Clast 10 is feldspathic in composition, has appearance of a shock melt, and reaches 1x1.4mm in apparent size. Besides plagioclase feldspar, it contains tiny speckles of opaque phases that are chromites and Fe oxides. Clast 10 also contains glassy matrix and appears to flow around adjacent grains and clastic fragments of high and low Ca pyroxene, some of which are enclosed poikilitically within the clast (Figure 3).

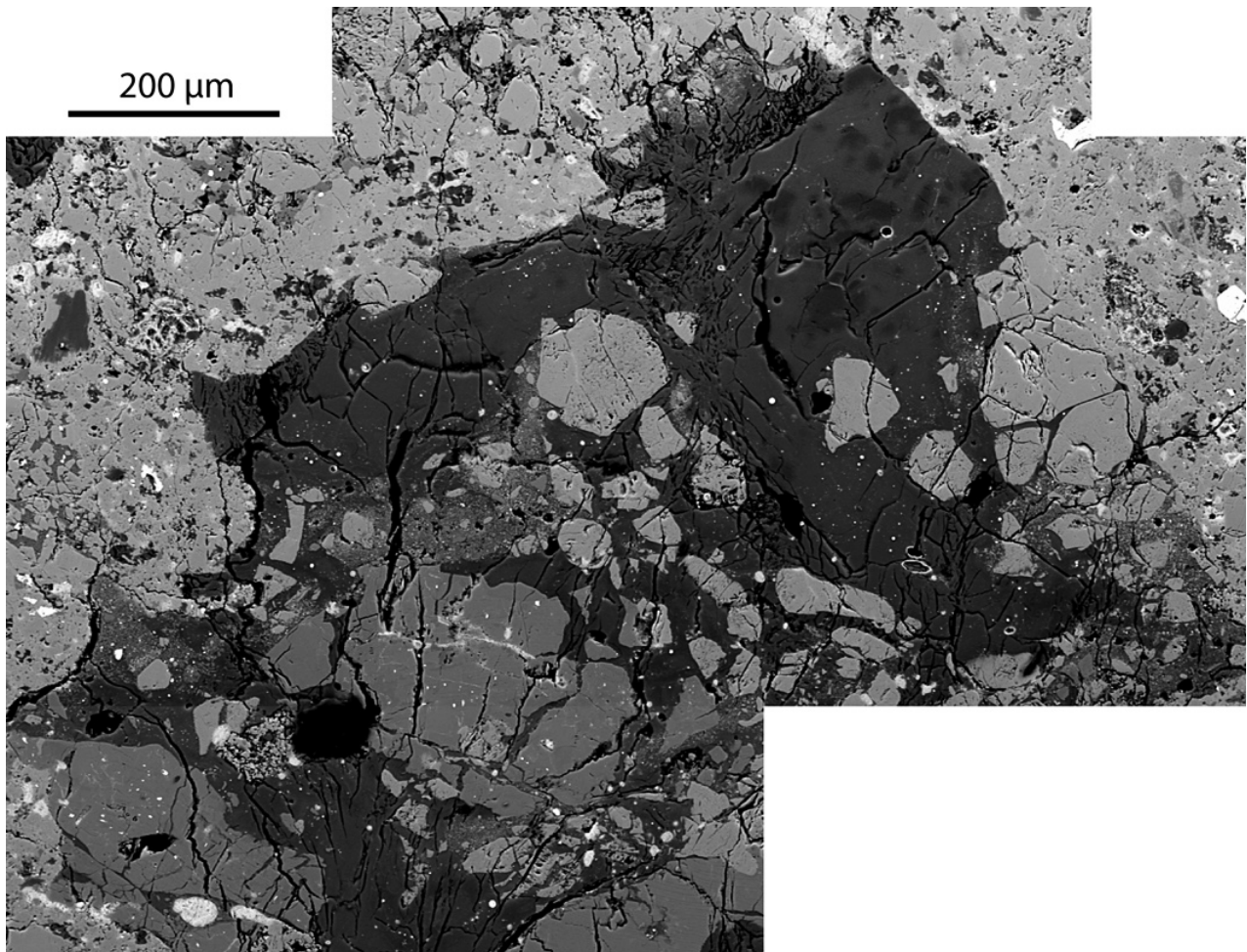


**Figure 2.** Three thin sections of CML 392 show prominent clasts. These three consecutive thin sections provide valuable insight on the morphology and arrangement of clasts in third dimension.

Similarly to CML215, host portion of CML392 is difficult to assign to a single petrologic type due to mixed criteria in different regions. In general the host is composed of fine-grained, somewhat transparent groundmass that contains abundant chondrules, chondrule and clastic fragments.

Presence of glass, partially devitrified glass, zoned olivine grains, and twinned pyroxene indicate

petrologic type 3, while coarse plagioclase grains, disintegrated chondrule-host boundaries, recrystallized groundmass and in some places altered appearance of chondrule fragments and grains might indicate to petrologic state closer to 5. Until chemical composition (which will reveal exact range of petrologic types present) is obtained, CML392 is tentatively classified as possibly R3-5.



**Figure 3.** Backscatter electron micrograph of clast 10 shows feldspathic shock-melt (dark grey) which poikilitically encloses olivine and pyroxene fragments (light and medium grey, respectively) and is surrounded by oxidation products (white).

## **Amphibole**

CML392 and CML 215 both contain amphibole. This is the second reported occurrence of amphibole in R chondrites which is believed to form in the parent body during metamorphism (McCanta et al. 2007). According to the pleochroic and absorption colors, and grain shape (MacKenzie and Adams 1994) amphibole phase found CML392 and 215 is most likely a hornblende. Observed grains in CML 215 and CML392 (11 grains and 4 grains, respectively) are strongly pleochroic, range in size from 50 to 200 microns and occur as isolated euhedral grains. All of the grains show planar fractures, but do not exhibit characteristic for amphibole 120° cleavage (MacKenzie and Adams 1994; McCanta et al. 2007).

Similarly to observations of Mikouchi et al. in LAP 04840 meteorite (2007), hornblende in CML 215 and 392 is often present adjacent to plagioclase feldspar grains. Hornblende is only found inside the host portion of the rock and does not appear inside clasts. These findings are different from the only other report of hornblende in LAP 04840, where authors have reported presence of amphibole in the host as well as inside chondrules of the meteorite (McCanta et al. 2007; Mikouchi et al. 2007).

Two hornblende grains in CML215 coexist with a very large (~350 µm) high-Ca pyroxene grain in the same vicinity. This, along with the fact that high-Ca pyroxene is present in CML215 suggests that the amphibole phase does not have to form at the expense of low-Ca pyroxene, as was previously suggested (McCanta et al. 2007).

## ***Discussion***

Both CML 215 and 392 show a range of shock and metamorphic effects. Despite this fact no evidence of post-accretionary thermal or collision processes have been observed. Coexistence of

material of different petrologic types in the same spatial vicinity and lack of cross-cutting relationship between clasts, chondrules and the host material are some of the facts supporting this idea. Presence of feldspathic clast 10, which would have experienced recrystallization or underwent thermal annealing during post-accretionary processes, is also an indicator that there is no history of significant thermal or shock events after the lithification process was complete. This suggests that lithic clasts and fragments, chondrules, and the host material all have unique origin of formation and sustained majority of thermal and shock alteration elsewhere prior to being agglomerated together.

Although all of the chondritic components in both meteorites are believed to have formed elsewhere in the solar system prior to being accreted together, at this point it is difficult to determine whether CML392 and 215 were derived from the same parent body. Chemical compositions, when obtained, might help shed light on the compositional differences or similarities between the two meteorites. However the very nature of CML215 and 392 being brecciated meteorites makes it difficult to state with certainty whether the parent body origin of these meteorites is the same.

Presence of amphibole in CML215 and 392 is indisputable evidence that a hydrous oxidant was present in the region of R chondrite parent body formation. At this point it is uncertain what was the state of the oxidant (i.e., was it liquid water, ice, or water vapor). However, because studied meteorites presumably do not reach petrologic state higher than 4 in most regions, it is inferred that high degree metamorphism is not a necessary condition for the formation of the amphibole, as previously believed (Mikouchi et al. 2007).

## **Conclusion**

CML 215 and 392 are best described as genomic breccias belonging to the class of R chondrites. Both specimens are preliminary classified as R3-5 and contain what is believed to be an amphibole phase. This discovery puts the total number of amphibole-bearing R chondrites to three and supports the idea that R chondrite parent body/bodies had interaction with water at some point in their formation or alteration (Treiman and MaCanta 2010). The fact that petrologic types of the specimens do not reach type 6 and the fact that high-Ca pyroxene was found coexisting with amphibole show that amphibole does not have to form at the expense of the high-Ca pyroxene and that excessive metamorphism is not a requirement to form it. At this point it is uncertain if both meteorites are paired (i.e., belong to the same parent body) or have originated from different extraterrestrial bodies.

## References:

- Berlin J. and Stöffler D. 2004. Modification of the Van Schmus & Wood petrologic classification for lithic fragments in the chondritic breccia rumuruti (abstract # 1334). 35th Lunar and Planetary Science Conference.
- Greenwood J. P., Rubin A. E., and Wasson J. T. 2000. Oxygen isotopes in R-chondrite magnetite and olivine: Links between R chondrites and ordinary chondrites. *Geochimica et Cosmochimica Acta* 64:3897-3911.
- Huss G. R., Rubin A. E., and Grossman J. N. 2006. Thermal metamorphism in chondrites. In *Meteorites and early solar system II*, edited by D. S. Lauretta and H. Y. McSween, Jr. Tucson: University of Arizona Press. pp. 567-586.
- Isa J. and Rubin A. E. 2010. Oxides in R chondrites: Implications for thermal metamorphism (abstract # 5403). 73rd Meeting of the Meteoritical Society.
- MacKenzie W. S. and Adams A. E. 1994. *A color atlas of rocks and minerals in thin section*. New York: John Wiley & Sons Inc. 40-41. 192 p.
- McCanta M. C., Treiman A. H., Alexander C. M. O. D., and Dyar M. D. 2007. Mineralogy and petrography of the amphibole-bearing R-chondrite LAP 04840 (abstract # 2149). 38th Lunar and Planetary Science Conference.
- McCanta M. C., Treiman A. H., Dyar M. D., Alexander C. M. O. D., Rumble D., III, and Essene E. J. 2008. The LaPaz Icefield 04840 meteorite: Mineralogy, metamorphism, and origin of an amphibole- and biotite-bearing R chondrite. *Geochimica et Cosmochimica Acta* 72:5757-5780.
- Mikouchi T., Ota K., Makishima J., Monakawa A., and Sugiyama K. 2007. Mineralogy and crystallography of LAP 04840: Implications for metamorphism at depth in the R chondrite parent body (abstract # 1928). 38th Lunar and Planetary Science Conference.
- Rubin A. E. and Kallemeyn G. W. 1994. Pecora Escarpment 91002: A member of the new Rumuruti (R) chondrite group. *Meteoritics* 29:255-264.
- Schmitt R. T. and Stöffler D. 1995. Experimental data in support of the 1991 shock classification of chondrites. *Meteoritics* 30.
- Schmitt R. T. 2000. Shock experiments with the H6 chondrite Kernouvé: Pressure calibration of microscopic shock effects. *Meteoritics and Planetary Science* 35:545-560.
- Schulze H., Bischoff A., Palme H., Spettel B., Dreibus G., and Otto J. 1994. Mineralogy and chemistry of Rumuruti: The first meteorite fall of the new R chondrite group. *Meteoritics* 29:275-286.
- Stöffler D., Keil K., and Scott E. R. D. 1991. Shock metamorphism or ordinary chondrites. *Geochimica et Cosmochimica Acta* 55:3845-3867.
- Treiman A. H. and McCanta M. C. 2010. Amphibole-rich R chondrite LAP04840-from an icy asteroid or main-belt comet. *Meteoritics and Planetary Science* 45:A203.
- Weisberg M. K., Printz M., Kojima H., Yanai K., Clayton R. N., and Mayeda T. K. 1991. The Carlisle Lakes-type chondrites: A new group with high  $\Delta^{17}\text{O}$  and evidence for nebular oxidation. *Geochimica et Cosmochimica Acta* 55:2657-2669.
- Weisberg M. K., McCoy T. J., and Krot A. N. 2006. Systematics and evaluation of meteorite classification. In *Meteorites and early solar system II*, edited by D. S. Lauretta and H. Y. McSween, Jr. Tucson: University of Arizona Press. pp. 19-52.

## ***Aknowledgements:***

The author would like to thank Edwin Thompson for the generous donation of both samples and Cascadia Meteorite Laboratory for the access to optical microscopy equipment.

Income disparity for working mothers:  
Eliminating structural discrimination through public policy

Marques Lang

Mentor: Mary C. King, PhD

Portland State University

Ronald E. McNair Program



## Abstract

Several studies have shown that in the United States mothers earn lower incomes than employees of similar qualifications and productivity levels. This phenomenon is known as the *motherhood penalty*. This paper analyzes the antecedents of the motherhood penalty as well as other factors that result in mothers earning lower wages than other women and men, particularly fathers. This begs the question: what role do institutions play in maintaining wage inequality through public policies, specifically maternity leave policy? In answering this question, both the Pregnancy Discrimination Act of 1978 and the Family and Medical Leave Act of 1993 are examined to identify the gaps between current policy and what is needed to promote equality between mothers and nonmothers.

### ***Introduction***

Many young girls dream of having a family and children of their own once they grow up, however, in the United States this decision may come with several unintended consequences. Mothers in this country are being put into positions that may force them into choosing between their careers, their individual health, and the betterment of their family dynamic, which has the potential to lead to lose-lose situations. When a mother opts to reduce her workload in order to focus her efforts on raising a family she is met with various trade-offs that can hinder her ability to be viewed as a productive worker. If the decision is made to shift to part time work, engage in a flexible schedule, or exit the labor market, the opportunity cost that is associated with such a decision can have a negative affect on a mother's economic status within society due to the financial stability that will be sacrificed in order to

raise a family.

This lack of economic stability leads to several other problems as well. First, decreased income leads to higher rates of long-term poverty among mothers. This is due to the fact that lower incomes beget diminished contributions to retirement plans and social security, which ultimately leads to smaller income streams for women as they age. Second, children suffer as a result of less time spent with parents, poorer quality of childcare received, or the psychological effects associated with not fitting in with peers who have more financially secure parents. Lastly, to put it bluntly, it simply is not fair for parental status to have any influence on a woman's wages.

Once a woman bears children, she can expect to earn less than males and women without children, regardless of the qualification and productivity levels of the individual worker. This phenomenon is known as the *motherhood penalty* (Anderson, Binder, & Krause, 2002; Avellar & Smock, 2003; Budig & England, 2001; Crittenden, 2001). Although the extent of the penalty varies, a number of studies that analyzed U.S. National Longitudinal Survey data between 1968-1998 found that there is a motherhood penalty of 4-7% for one child and an 11-15% for two or more children (Anderson et al., 2002; Avellar & Smock, 2003; Budig & England, 2001; Waldfogel, 1997). This penalty remains present even after accounting for similarities in qualifications such as workforce experience and education as well as organizational commitment and productivity levels (Anderson et al., 2002; Avellar & Smock, 2003; Budig & England, 2001; Waldfogel, 1997).

### ***Who is Affected by the Motherhood Penalty?***

The motherhood penalty is an element of the wage differential between women and men that specifically refers to mothers earning less than people who are similar in all other respects, in terms of education, occupation, and previous time in the labor force. Literature shows that mothers who are highly educated, experienced and/or married are subjected to a larger motherhood penalty than mothers who do not share these same statuses (e.g. Blau & Kahn, 2000; Budig & England, 2001; Waldfogel, 1997). A woman with a college education and substantial work experience will typically earn a higher salary than someone with only a high school diploma; therefore, women who reach this status have more to lose post childbearing. Conversely, women whose human capital factors are less significant typically earn less, thus a smaller penalty is incurred.

Marital status also plays a significant role due to the perceived increase in family commitments. When a partner is present to share the financial responsibilities, it is more feasible for a parent to stay at home with their small children. Consequently, mothers may have more time available to dedicate to their family as opposed to spending this time trying to advance one's career. On the other hand, unmarried mothers are usually more self-supporting, which makes it more likely that they will dedicate more time to career advancement than married mothers (Green & Ferber, 2008), although it should be noted that increased effort by single mothers does not necessarily lead to higher earnings due to the aforementioned motherhood penalties. Furthermore, married men are more likely to have increased job commitment, due to the increase in responsibility that a wife

and children carries. This commitment ultimately leads to increased earnings as a result of newfound pay expectations, given that pay expectations typically grant individuals with higher actualized incomes (Lips & Lawson, 2009). In addition, some employers may carry beliefs that married men with children both need and deserve higher incomes.

When men become fathers there is a tendency for their wages to increase. This is known as the *fatherhood premium*. The premium occurs as a result of the perception that fathers are more able to successfully manage work and family, while becoming more productive and committed to the workplace post-fatherhood. This is due to the fact that employers offer fathers larger salaries as a result of the mentality that men are to serve as breadwinners for the family (Correll, Benard and Paik, 2007; Lips & Lawson, 2009; Mcquillan, Greil, Shreffler, and Tichenor, 2008; Rabin-Margalioth, 2005).

### ***What Factors Influence the Motherhood Penalty?***

A number of studies have analyzed the motherhood penalty, as well as other contributing sources of wage disparity among mothers, from both economic and sociological viewpoints (e.g. Anderson et al., 2002; Blau & Kahn, 2000; Budig & England, 2001; Waldfogel, 1997). This has yielded several potential explanations for why American mothers continue to experience economic disadvantages in modern labor markets. This paper will address a number these issues, such as societal and employer roles as well as discrimination in order to investigate how public policy shapes and perpetuates the occurrence of this phenomenon.

### *Social Expectations*

Traditionally, women have been seen as a family's primary homemaker; therefore, the social expectation that women will continue to fulfill this role, rather than pursuing a career, can contribute to their decisions as they pertain to the labor market. Lips & Lawson (2009) found that since women have a strong tendency to value family more than men, women are also more likely to make the necessary sacrifices to maintain a functional family dynamic. This may come as a result of society's expectation that mothers are *suppose* to engage in such activities. Consequently, mothers commonly spend a significant amount of time participating in childcare duties. Since society expects that mothers will automatically make this sacrifice for the family, mothers tend to work fewer hours, take more time off, and/or shift to part-time work with more frequency than fathers (Stroh, Brett & Reilly, 1992).

Social roles are learned early on in childhood and are reinforced throughout one's normal development cycle. As social roles become engrained, it fosters an environment where each gender is placed into a role that is commensurate with a stereotypical expectation that becomes a norm. For example, fathers are expected to be breadwinners whereas mothers are expected to be homemakers (Eagly, 1987). These roles lead to societal pressures, expectations, and biases that can contribute to the level of career success that is attained among genders due to their attitudes towards these accepted norms (King, 2008).

### *Employer Bias*

It appears that employers perceive the commitment and stability of mothers in the workplace to be less than that of nonmothers. This may come as a result of the aforementioned social expectations. If employers expect women to fulfill certain roles in society, it is no wonder that these ideals carry over into the workplace, regardless of whether a woman's actual behavior mirrors these expectations or not. Consequently, a penalty may come as a result of an employer's expectation that mothers are more likely to split their time between work and family in order to invest more heavily in offspring rather than their careers. Employers may believe that this division of time results in decreased organizational commitment and productivity. Correll et al. (2007) believe that employers become jaded by an either/or fallacy, that is, women can either value motherhood or their work life, but they cannot value both; however, Mcquillan et al. (2008) showed that "there is a significant positive association between valuing work success and importance of motherhood for mothers" (p. 487). In other words, valuing work success *and* motherhood are *not* mutually exclusive. Despite the acknowledgement that biases are a contributing factor in the extent of the wage gap, little is known about the weight that this factor actually carries in determining wages due to the fact that many employers are not willing to openly admit that they carry a bias toward mothers.

### *Labor Market Discrimination*

It has been demonstrated that women may be experiencing significant discrimination in the labor market (e.g. Blau & Kahn, 2000; Budig & England, 2001).

This can have a significant impact one's ability to advance within an organization, thus limiting their earning potential. One way in which gender pay differentials are created are through the division in the types of jobs that the genders are likely to be employed, occupational segregation. Typically, there is a significant representation of males in upper level management, manufacturing, and other blue-collar jobs (England, 2005). Conversely, most of the organizational roles that women have traditionally participated in include service, clerical, or caregiver positions such as nurses, teachers and librarians (Blau, Ferber, & Winkler, 2006; Crittenden, 2001; Hallock 2001). This division in labor proves to be significant due to the fact that female dominated jobs typically pay less than male dominated jobs (England, 2005). Comparable worth, or pay equity, campaigns (discussed below) have attempted to advocate for organizations to pay comparable wages to similar occupations based on the qualifications and responsibilities of the position rather than on whether a job is considered to be male or female dominated.

“Structural discrimination” arises when institutional policies and procedures lead to inequalities among specific groups of people (Lips & Lawson, 2009, p. 668). Examples of structural discrimination are when organizations implement meager leave policies, refuse to promote individuals who have taken parental leave, fail to provide adequate childcare resources, and/or are unwilling to advertise or explicitly state the criteria for using the family-friendly policies that are already in place. Consequently, mothers may feel as if they must choose between work and family based on factors that are beyond their control. When this occurs, mothers, if financially able, temporarily resolve this conflict by withdrawing from the labor

market (Gornick, Meyers, & Ross, 1998); however, not all families can afford for a mother to take extended time off work without pay. Therefore, in the event that mothers continue to work, there is a perception that they will either reduce the amount of hours worked or take more time off when their children are young (Lips & Lawson, 2009; Stoh et al., 1992; Williams & Cohen-Cooper, 2004). Other possible explanations for this occurrence are that some mothers, but fewer fathers, may incur a guilty conscience about not being able to dedicate the time they deem necessary for providing adequate care to their offspring. Also, the limited amount of quality childcare facilities could propel mothers to stay at home with more regularity (Green & Ferber, 2008). In any event, the wage gap continues to be perpetuated disproportionately.

### *Pay Equity*

One of the most prevalent forms of discrimination in the workplace is wage inequality. Pay equity states that a man and a woman are to be paid an equal wage based on an equal value of work as determined by job evaluations regardless of job position (Hallock, 2001). In other words, pay among genders should be determined based on one's identifiable merit rather than on subjective factors. Over the last two decades there have been a number of pay equity campaigns that have pushed for wage equality among the genders. The success of these movements has been moderate at best due to the amount of time that these cases have spent in the court system without significant results. Equality in pay does not frequently occur due to a societal inability to recognize that the skills of women are indeed comparable to their male counterparts. Furthermore, as a result of social expectations, there are



ideals as to what kinds of work that each gender should be engaged in (e.g. teaching v. construction). Consequently, the roles of women within organizations vary, as a result of the perception that their labor force commitment and ability to ascend through the ranks is significantly lower than that of men (Blau & Kahn, 2000).

### *Human Capital*

Human capital refers to an individual's self-investment through on-the-job-training, education, medical care, etc. that substantially improves their physical and mental ability to earn a wage (Becker, 1962). Human capital factors such as workforce experience and education allow one to specialize in a particular function within a society. In the labor market this specialization allows an organization and its employees to be more efficient in the completion of tasks, which ultimately leads to increased revenues and wages (Becker, 1985).

Becker (1985) argues that the reasons why human capital factors contribute to the wage gap are due to the choices that individuals make in regard to the market and the household. That is, it would be more logical for each household member to specialize in either household labor or the labor market, due to the increased efficiency that this division brings to the family unit. Since mothers engage in the majority of the home and child care duties, Becker (1985) posits that this reduces the amount of leisure time that mothers are afforded when children are young and require more attention. Increases in the amount of intensive household labor, when mothers also have careers, have the potential to deplete energy levels. This can lead to decreases in productivity, wages, due to a lack of promotion potential, and perhaps a reluctance toward motherhood altogether (McQuillan et al., 2008).

Secondarily, the amount of time that an individual invests in work-like activities can have a significant impact on their ability to ascend through the organizational ranks. If an employee is more willing to pursue positive education and work longer hours, the likelihood of promotion becomes higher. This level of upward mobility may lead to seniority and an increase in on-the-job training as well as in wage expectations (Budig & England, 2001; Lips & Lawson, 2009). When these factors are combined, it is easy to see how this can contribute to higher earnings for these types of employees and lower earnings for those who are not able to invest their efforts in these arenas. Although the choice to invest in one's education is influenced by social norms as well as other factors, the investment in workforce human capital is ultimately decided on by the employer, not the employee; therefore, an employer's perceptions about who to invest in plays a major role on an employee's path of organizational advancement.

### *Workforce Experience*

Another contributing factor to the wage gap is the amount of time that individuals spend in the labor market. In recent years mothers are spending, on average, approximately 4.6 years out of the labor market (Blau & Kahn, 2000). When there is a gap in employment history one can expect to earn less money upon their return to the workforce due to having to restart a career, the depreciation of job skills, and having fewer contacts within an organization. The wage gap can be further explained by the amount of on-the-job training that one receives because employers may be less willing to devote precious training dollars on those whom they think are more likely to withdraw from the market (Anderson et al., 2002; Blau

& Kahn, 2000; Green & Ferber, 2008). This reduction in skills is especially evident in industries that are continuously evolving in a rapid manner (Blau et al., 2006).

Therefore, the gap in employment may lead to men or women without children being promoted to higher status positions within an organization with much more regularity than women with children (Crittenden, 2001). As a result, women with children who remain in the labor market are more likely to experience a glass ceiling, especially as it pertains to upper level jobs (Blau et al., 2006; Crittenden, 2001).

Timing also plays a critical role as to whether mothers are able to obtain work-family balance. It has been stated (Green & Ferber, 2008; Rabin-Margalioth, 2005) that it is more beneficial for women who value both career and family to start families at a younger age, typically before 30. The reasons for this are threefold: First, the pool of eligible partners tends to be higher at this stage of one's life; therefore, women have greater odds of finding a compatible partner. Second, the pressure involved with the biological clock is minimized, since women are at their most fertile at this point. Lastly, it has been shown that the long-term ramifications associated with earlier labor market interruptions are easier to recover from, whereas exiting later in one's career can cause significantly more harm (Green & Ferber, 2008; Rabin-Margalioth, 2005). Thurow (1984) explains how difficult the decision can be for women when it comes to choosing between work and family by stating:

The years between 25 and 35 are the prime years for establishing a successful career. These are the years when hard work has the maximum

payoff. They are also the prime years for launching a family. Women who leave the job market completely during those years may find that they never catch up (p. 83).

### *Mother Friendly Work*

It would appear as if more mothers are becoming attracted to “mother-friendly” jobs (Budig & England, 2001, p. 207). Mother-friendly jobs are those that make it easier for a mother to combine work and family and are characterized by flexible work hours, safe work environments, and family-friendly policies (i.e. on-site child care facilities, limited evening and weekend work, etc). When combined, these factors make it easier for mothers to combine work and family. However, there is a cost associated with mother-friendly jobs. That is, since these jobs get categorized as being *female jobs*, they also get paid as such. This typically means a lower wage due to the perception that jobs that have been identified as female-oriented (i.e. nurses and teachers) are looked upon as being less valuable than those positions that are classified as male oriented (i.e. management and blue collar jobs) (England, 2005). A further explanation for why these positions are paid less is described below.

### ***Effect on the GDP***

If two-thirds of the wealth in the modern economy is recognized as being based on human capital, and mothers are primarily responsible for the production and nurturing of this capital in the home, it can be argued that the roles of mothers are essential to the development of nations, given that societies benefit from the economic productivity of these future employees (Avellar & Smock, 2003; Budig &

England, 2001; Crittenden, 2001). However, since home duties are not paid monetary transactions, they do not count toward the GDP. If people were to validate the value that mothers create for societies, not only would there be an enormous increase in the GDP, but nations could potentially acknowledge that raising children is the most important job in the world (Crittenden, 2001). Though, it should be noted that this acknowledgement still might not result in the valuing of mothers in the workplace unless their skills are recognized as being valuable.

### ***Policy***

At the public policy level, the United States is in a very unique position in terms of providing adequate benefits to parents. While there are numerous ways to go about enhancing policies to be more family friendly, the focus of this paper will be on leave policies. The two statutes, in the United States, that have had the largest impact on parental leave are the Pregnancy Discrimination Act of 1978 and the Family and Medical Leave Act of 1993. These statutes will be examined to identify the gaps between current policy and what is needed to promote equality between mothers and nonmothers.

The Pregnancy Discrimination Act (PDA) amended Title VII of the Civil Rights Act of 1964. This amendment made it illegal for employers to discriminate against women on the basis of pregnancy, childbirth, or any other related medical condition. Organizations with 15 or more employees are required to abide by this statute. In addition, employers cannot use pregnancy as a basis for hiring and firing decisions, denying leave and health insurance, or in the limiting of fringe benefits that are available to employees who are not pregnant. Essentially, employees who are or

become pregnant are treated the same as temporarily disabled employees, and the inequitable treatment of such employees is considered a form of sexual discrimination.

In 1993 the Family and Medical Leave Act (FMLA) was signed into law. The purpose of this law is to provide leave time for employees in order to care for a newborn or adopted child, an elderly parent, or any other family related issue that may arise. This law affects organizations with 50 or more employees. In order for an employee to be eligible for benefits under FMLA, he must have worked at least 1,250 hours in the preceding 12 months with their current organization. If both of these criteria are met then the employee is eligible for up to 12 weeks of unpaid leave per year.

#### *Problems with the FMLA*

Although both of these statutes provided a boost in the efforts to promote parental equality in the workplace, there is still a large margin for improvement, especially within the FMLA. Based on the eligibility criteria stated above, only 45% of U.S. women qualify for this leave (Guthrie & Ross 1999; Waldfogel, 2001). In 2000, only 16% of those who covered by the FMLA used leave, 90% of which did not exercise their rights to use the full 12 weeks due to a lack of pay while on leave (Waldfogel, 2001). Furthermore, since the Family and Medical Leave Act is only mandatory for businesses with 50 or more employees, there is a portion of the workforce, entrepreneurs and other small business workers, that remain uncovered by the law, which may subject employees to continued abuses that perpetuate the income gap amongst mothers. Lastly, there are a number of employers who do not

comply with the law (Williams & Boushey, 2010), thus further continuing this cycle of wage disparity.

The FMLA also has a number of other limitations. First, the act focuses on traditional families. It does not provide shelters for single parent households, who require an income in order to survive. And until 2010, domestic partnerships were also excluded. Second, a third of all employers that are affected by the law were already providing benefits that were equal to or greater than the benefits described in the statute. Lastly, in order to be eligible an employee must have worked 1,250 hours in the preceding 12 months with their current company; however, since many of the lower paid workers typically have either less than one year of experience, work part time or intermittently, or are individuals who have taken leave, they are not eligible for benefits under the FMLA (Williams & Boushey, 2010).

#### *Proposed changes*

A number of analysts (e.g. Gornick & Meyers, 2003; Jacobs & Gerson, 2004; Rabin-Margalioth, 2005; Williams & Cooper, 2004) have proposed various changes that could potentially aid in reducing the income gap. The most prominent proposals fall into three categories: regulating the workweek, providing benefits to part time employees, and mandating paid leave.

Regulating the workweek can take shape in a couple of different ways. First, policy could create a standardized workweek that would make full time equivalent to 35 hours a week, without any fear of reprisal such as lack of raises, promotions, or bonuses. This would provide individuals with more family and leisure time, which could lead to a more productive workforce, while potentially helping to

redistribute household labor among genders to more equitable levels (Gornick & Meyers, 2003; Jacobs & Gerson, 2004; Rabin-Margalioth, 2005; Williams & Cooper, 2004). However, this would require changes to the Fair Labor Standards Act. For example, overtime laws would need to be adjusted to start at time worked over 35 hours rather than 40 hours. In addition, exemption criteria would have to be reevaluated in order to provide those in management positions the same treatment as subordinate workers. This would also aid in eliminating the glass ceiling that mothers face as a result of not being able to comply with the demanding work schedules that are expected from mid to upper level managers. Another, and perhaps more feasible, change would be to allow flexible scheduling in terms of days and hours worked as well as start and finish times. Although the impact of this change would be minimal, it could allow for more family time in the mornings and evenings.

Second, since a number of parents, primarily mothers, work on a part time basis, due to the family friendly nature of these jobs, benefits could be given to part time employees. These benefits could include retirement as well as medical insurance and leave benefits at the same cost to the part time employee as to full time employees. It is not uncommon for part time employees to have to incur larger portions of their insurance premiums, if any are even offered, while earning a smaller wage. Providing these benefits at an affordable rate would have a considerable impact on workforce equality. Also, retirement benefits would go a long way to narrowing the long-term income gap. Mothers who either work part time or opt to leave the labor market also lose their retirement contributions. This



leads to mothers' continued social and economic struggle not only during peak childbearing years but in the golden years as well.

Lastly, mandating paid leave could perhaps have the most significant impact on a parent's ability to adequately care for a child. However, this would require a great deal of compromise between policy makers and organizations. One such way to appease both sides could be to offer a tax incentive to organizations that provide paid leave. This would allow organizations to continue to maintain their bottom line, while providing parents with the income that they require. The reduction in national tax revenue could be made up by the increased number of individuals who remain in the workforce who otherwise would have dropped out. The more people there are in the labor market, the more taxpayers there are in the pool, which is beneficial to all the parties involved.

Policy reform will be of the utmost importance when it comes to remedying pay discrimination against mothers. Of all the industrialized countries in the world, the United States is among the worst when it comes to instituting family friendly parental leave policies (Aisenbrey et al. 2009; Gornick et al., 1998; Williams & Cooper, 2004). This must change if there is to be pay equality, since there is a strong association between good leave policies and mothers' capacity to reenter and remain active participants in the workforce post-childbearing (Gornick et al., 1998; Guthrie & Ross, 1999). Furthermore, it has been shown that good policies increase workforce attachment among women, for it allows mothers to better balance work and family life without taking extended withdrawals from the market (Gornick et al., 1998). These types of policies may allow mothers to feel as if their contribution to

the workplace is valued, in addition to allowing their relationships with the organization and its members to be nurtured. Ultimately, this increase in experience, rather than extended leave from or exiting the market, will provide mothers with higher salaries, thus helping to close the wage gap.

### ***Conclusion***

It goes without stating that mothers play an invaluable role in the development of societies throughout the world. However, in the United States there is an inexplicable under appreciation for the sacrifices that are made on a daily basis by millions of mothers across the country. Mothers are being relegated to traditional gender roles in the home and are experiencing a glass ceiling in the workplace. If wages are truly determined by a “free” market system, one can conclude that the contributions of mothers in this market are perceived to be less valuable than those of fathers, which is contributing to large wage disparities among genders in the labor market (Hallock, 2001). Despite the increases in the number of women who are college educated, they only reap rewards similar to men when they opt to not have children and maintain a continuous presence in the labor market (Blau et al., 2006); however, this alternative too often comes at the expense of one’s potential family life. Therefore, a choice that many women must consider is one of family and children, career with minimal family interaction, or the career as a standalone.

With that being said, there has been progress made in the past two decades when it comes to women as mothers and workers. In the mid 1980’s, it was estimated that women spent approximately 9 years out of the labor market (Hewlett, 1986). In 2000, this gap narrowed to 4.6 years (Blau & Kahn, 2000). There

are several factors that could explain this shift such as falling real male wages, favorable public and corporate policies, more opportunities for part time employment, and men sharing more of the household duties.

However, in order to continue to take strides toward greater gender equality in the labor market, while ensuring more work-life balance, a paradigmatic shift in societal thinking must occur. As a society we must begin to realize that the gender income gap is not just a woman or mother problem, but it is a family and cultural issue that affects everyone. The current system has not worked because most families simply cannot afford to take unpaid leave without falling into economic hardship. Therefore, in many instances it is not a *choice* for mothers to accept lower paying jobs rather it is an obligation in an attempt to make ends meet. In order for progress to be made it will be vital for our society to start enacting the family values that we so frequently espouse to ensure the facilitation of tangible change in our communities moving forward.

## References

- Aisenbrey, S., Evertsson, M., Grunow, D. (2009). Is there a career penalty for mothers' time out? A comparison of Germany, Sweden and the United States. *Social Forces*, 88(2), 573-605.
- Anderson, D. J., Binder, M., & Krause, K. (2002). The motherhood wage penalty: which mothers pay it and why? *American Economic Review*. 92, 354-358.
- Avellar, S., & Smock, P. J. (2003). Has the price of motherhood declined over time? A Cross-Cohort Comparison of the Motherhood Wage Penalty. *Journal of Marriage and the Family*. 65(3), 597-607.
- Becker, G. S. (1962). Investing in human capital: A theoretical analysis. *Journal of Political Economy*, 70(5), 9-49.
- Becker, G. S. (1985). Human capital, effort, and the sexual division of labor. *Journal of Labor Economics*, 3, 33-58.
- Blau, F. D., Ferber, M.A., & Winkler, A.E. (2006). *The economics of women, men and work* (5<sup>th</sup> ed). Upper Saddle River, NJ: Prentice Hall.
- Blau, F., & Kahn, L. (2000). Gender differences in pay. *Journal of Economic Perspectives*, 14(4), 75-99.
- Budig, M. J., & England, P. (2001). The wage penalty for motherhood. *American Sociological Review*. 66 (2), 204-225.
- Crittenden, A. (2001). *The price of motherhood: why the most important job in the world is still the least valued*. New York, NY: Owl Books.
- Correll, S. J., Benard, S., & Paik, I. (2007). Getting a job: Is there a motherhood penalty? *American Journal of Sociology*. 112 (5), 1297-1338.
- Eagly, A.H. (1987). *Sex differences in social behavior: A social role interpretation*. Hillsdale, NJ: Erlbaum.
- England, P. (2005). Gender inequality in labor markets: The role of motherhood and segregation. *Social Politics: International Studies in Gender, State & Society*. 12 (2), 264-288.
- Ferber, M., & Young, L. (1997). Student attitudes toward roles of women and men: Is the egalitarian household imminent? *Feminist Economics*. 3 (1), 65-83.
- Gornick, J., Meyers, M., & Ross, K. (1998). Public policies and the employment of mothers: A cross-national study. *Social Science Quarterly*, 79(1), 35-54.

- Gornick, J. C., & Meyers, M. K. (2003). *Families that work: Policies for reconciling parenthood and employment*. New York, NY: Russell Sage Foundation.
- Green, C. A., & Ferber, M. A. (2008). The long-term impact of labor market interruptions: how crucial is timing? *Review of Social Economy*. 66 (3), 351-379.
- Guthrie, D., & Roth, L. (1999). The state, courts, and maternity policies in U.S. organizations: specifying institutional mechanisms. *American Sociological Review*, 64(1), 41-63.
- Hallock, M. (2001). Pay equity: Did it work? In M.C. King (Ed.), *Squaring up: policy strategies to raise women's incomes in the United States* (pp. 136-158). Ann Arbor, MI: The University of Michigan Press.
- Hewlett, S.A. (1986). *A lesser life: The myth of women's liberation in America*. New York, NY: Warner Books.
- Jacobs, J., & Gerson, K. (2004). *The time divide: Work, family and gender inequality*. Cambridge, MA: Harvard University Press.
- King, E.B. (2008). The effect of bias on the advancement of working mothers: Disentangling legitimate concerns from inaccurate stereotypes as predictors of advancement in academe. *Human Relations*. 61 (12), 1677-1711.
- Lips H., & Lawson K. (2009). Work values, gender, and expectations about work commitment and pay: Laying the groundwork for the "motherhood penalty"? *Sex Roles*. 61 (9), 667-676.
- Mcquillan, J., Greil, A., Shreffler, K., & Tichenor, V. (2008). The importance of motherhood among women in the contemporary United States. *Gender & Society*. 22 (4), 477-496.
- Rabin-Margalioth, S. (2005). Women, careers, babies: An issue of time or timing? *UCLA Women's Law Journal* 13(Spring): 293-334.
- Stroh, L.K., Brett, J.M. & Reilly, A.H. (1992). All the right stuff: A comparison of female and male managers' career progression. *Journal of Applied Psychology*, 77, 251-260.
- Thurow, L.C. (October 1984). 62 cents to the dollar; the earnings gap doesn't go away. *Working Mother*, 42.
- Waldfoegel, J. (1997). The effect of children on women's wages. *American Sociological Review*. 62(2), 209-217.

Waldfogel, J. (2001). Family and medical leave: evidence from the 2000 surveys. *Monthly Labor Review*, 124(9), 17-23.

Williams, J. C., & Cohen-Cooper, H. (2004). The public policy of motherhood. *Journal of Social Issues*, 60, 849-865.

Williams, J.C., & Boushey, H. (2010). The three faces of family conflict: The Poor, the professionals, and the missing middle. *Center for WorkLife Law, University of California, Hastings College of the Law and The Center for American Progress*, 1-86.

Fact and Fiction:

Liu E's Treatment of Characters in *The Travels of Lao Can*

Henry Lem

Faculty Mentor: Jonathan Pease, PhD

McNair Scholars Program

Portland State University

September 30, 2010

## Introduction

The waning years of the Qing period (1644-1911) were a tumultuous time in Chinese history. Intellectuals witnessed increased contact with foreign powers and were forced to consider how China, still under dynastic rule, could modernize and also maintain the traditions and culture of Chinese civilization. This dichotomy gave rise to several conflicts in the late 19<sup>th</sup> century: the Taiping Rebellion (1850-1864), led by Hong Xiuquan 洪秀全 (1814-1864); the Tongzhi Restoration (1860-1874) that called for the revitalization of traditional Chinese order; the Sino-Japanese War (1894-95), in which China met humiliating defeat, ceding Taiwan to Japan; the Hundred Days Reform (1898) to establish institutional and social changes, rejected by Empress Cixi and her supporters; the political stirring of the southern revolutionaries; and the outbreak of the Boxer Rebellion in 1900.<sup>1</sup> Political and social fragmentation reached a new height, causing distress for intellectuals of this generation. One such figure was scholar, entrepreneur, and writer Liu E 劉鶚 (1857-1909). He was a man of Jiangsu<sup>2</sup> born into a scholarly family, “equally sensitive to the values in traditional Chinese culture,” just as he was a pioneer of his time, aware of the “urgent needs of a new age”<sup>3</sup> when the lack of industrial development made China vulnerable to foreign power and influence.

---

<sup>1</sup> See Jonathan D. Spence, *The Search for Modern China* (New York: Norton, 1990). The latter half of the Qing dynasty may be considered one of Chinese history’s most unstable periods. Hong Xiuquan was a Christian convert who led the Taiping faction and established their capital in Nanjing. After Qing forces put down the rebellion, the Qing court promoted the Tongzhi Restoration, which is associated with the Self-Strengthening Movement that emphasized the combination of Chinese and Western learning. Control over Korea led to the Sino-Japanese War and the invasion of Manchuria, China’s Northeastern region. Reformers such as Kang Youwei, Liang Qichao, and Sun Yat-sen began movements to address China’s political and social problems. When these issues became critical, the Boxers attacked foreigners and their supporters in 1900.

<sup>2</sup> See Liu Dewei 劉德威 and Liu Defen 劉德棻, *Liu E: Liu E guju 劉鶚: 劉鶚故居 [Liu E’s Former Home]* (1997). Liu E’s former home is located in Chuzhou, Jiangsu Province.

<sup>3</sup> Harold E. Shadick, “*The Travels of Lao Ts’an: A Social Novel*,” *Yenching Journal of Social Studies* 2 (1939): 44.



Liu E is remembered as an unconventional scholar of his time. He became known through his novel *Lao Can youji* 老殘遊記 (*The Travels of Lao Can*, hereafter referred to as *Travels*), a novel Chinese reformer Hu Shi 胡適 (1891-1962) praised for its lyrical style. Critics have grouped Liu E with his contemporary Li Boyuan 李伯元 (1867-1906) who wrote *Guanchang xianxing ji* 官場現形記 (*The Bureaucrats*), a scathing novel that satirizes corrupt officials within the Qing bureaucracy.<sup>4</sup> In his influential *Brief History of Chinese Fiction*, Lu Xun describes Liu E's literature in a similar light: that *Travels* "attacks bureaucracy . . . [written to] reveal the damage done by strict officials."<sup>5</sup> Liu E and his contemporaries were aware of the nation's fragmented state and concerned for China's future; critics are therefore justified in emphasizing the castigatory nature of these works.

Yet, aside from some similarities in attacks on Qing officials, Liu E's novel differs from the literature of his contemporaries, for the reader can glimpse into the thinking and vision of an author who felt closely the effects of a country struggling to maintain order. Liu E writes in his preface to *Travels*, "Spiritual nature gives birth to feeling, and feeling gives birth to tears . . . If weeping takes the form of tears, its strength is small. If weeping does not take the form of tears, its strength is great: it reaches farther."<sup>6</sup> In the final passage, Liu E grounds his novel in the

---

<sup>4</sup> For an introduction to Li Boyuan's novel, see Hu Shi, *Zhongguo zhanghui xiaoshuo kaozheng* 中國章回小說考證 (Shanghai: Shanghai Shudian, 1980), 437-456. For an analysis of the novel, see Donald Holoch, "A Novel of Setting: The Bureaucrats," in *The Chinese Novel at the Turn of the Century*, ed. Milena Doleželová-Velingerová (Toronto: University of Toronto Press, 1980), 76-115.

<sup>5</sup> Lu Xun, *Zhongguo xiaoshuo shiliu* 中國小說史略, revised edition (1935), translated by Yang Hsien-yi and Gladys Yang as *A Brief History of Chinese Fiction* (Beijing: Foreign Languages Press, 1959), 382-83.

<sup>6</sup> Harold E. Shadick, trans., *The Travels of Lao Ts'an* (Ithaca: Cornell University Press, 1952), 2. Hereafter, this work will be referred to as *TL* 1.

Chinese past, praising writers whose literature were “tears of strength:” Qu Yuan 屈原 (fl. late 4<sup>th</sup>-early 3<sup>rd</sup> c. B.C.), poet of the ancient Chu Kingdom; the Grand Historian Sima Qian 司馬遷 (35 B.C. - 86 B.C.) who wrote the *Shiji* 史記 (*Records of the Grand Historian*); the Tang poet Du Fu 杜甫 (712-770); and Cao Xueqin 曹雪芹 (?-1763), author of *Honglou Meng* 紅樓夢 (*Dream of the Red Chamber*). In a spirit of praise similar to Jin Shengtan 金聖嘆 (d. 1661),<sup>7</sup> Liu E alludes to past Chinese writers who were distressed at the state of their kingdom and society, writing to express their concerns and thinking.

It can be suggested *Travels* also reflects the broader values, concerns, and beliefs of the author, specifically in his treatment of characters and plot lines. Liu E’s thinking as revealed through his novel is, however, better understood with consideration to his background and life. He was a native of Dantu 丹徒 (modern Zhenjiang, Jiangsu Province) and the second son of Liu Chengzhong 劉成忠 (1818-1884). Liu E’s father attained his *jinshi* 進士 degree and held official post in Beijing, later stationed in Henan Province as provincial censor (*yushi* 禦史).<sup>8</sup> Although born into a scholar-gentry family, Liu E refused to undergo preparation for the eight-legged essay required for the civil service examination. Liu E’s learning has been described as unconventional because of his interest in Western learning and his contact with the Taigu School

---

<sup>7</sup> See David L. Rolston, *Traditional Chinese Fiction and Fiction Commentary* (Stanford: Stanford University Press, 1997), 1.

<sup>8</sup> See Liu Delong 劉德隆, Zhu Xi 朱禧, and Liu Deping 劉德平, eds., *Liu E ji Lao Can youji ziliao* 劉鶚及老殘遊記資料 (Chengdu: Sichuan Renmin chubanshe, 1985), 5. Hereafter, this work will be referred to as *ZL*.

of Thought (*Taigu xuepai* 太谷學派). This was an esoteric, syncretic, semi-religious movement of Confucian doctrine that combined elements of Buddhism and Daoism.<sup>9</sup> In 1880 (age 23), Liu E traveled to Yangzhou and met Taigu spiritual leader Li Longchuan 李龍川 (1808-1885) where he became his disciple.<sup>10</sup> Liu E also met Taigu disciple Huang Baonian 黃葆年 (1841-1924), who later became his intimate friend as evidenced in Liu E's 1902 letter to him.<sup>11</sup>

Liu E never did pass the civil service examinations, but as a member of the Taigu School, he studied core Chinese philosophies and developed a deep sense of compassion for his country and people. In 1888, he became sub-prefect (*tongzhi* 同知) of Henan, serving under Governor Wu Dacheng 吳大澂 (1835-1902) to address the Yellow River's annual flood problems. After preventing major disasters in Henan, he began charting the Yellow River in Shanxi, Henan, and Shandong. The following year in 1889, governor of Shandong Zhang Yao 張曜 (1832-1891) recognized Liu E's abilities and recruited him as an advisor on river management.<sup>12</sup> Liu E later wrote several books in 1893, including *Maps and Studies on the Historical Changes of the*

---

<sup>9</sup> Sources on the Taigu School in connection with Liu E can be found in three articles, two by Liu Huisun 劉蕙孫 and the other by Yan Weiqing 嚴薇青, collected in *ZL*, 591-631. More general sources on the Taigu School can be found in Lu Jiye's 盧冀野 "Taigu xuepai zhi yange ji qi sixiang" 太谷學派之沿革及其思想 [Successive Changes in the Taigu sect and its thought], *Dongfang Zazhi* 東方雜誌 24 (1927): 71-75, and Ma Y.W.'s "Qingji Taigu xuepai shishi shuyao" 清季太谷學派史事述要 [Brief discussion of the historical events surrounding the Taigu sect of the late Qing], *Dalu Zazhi* 大陸雜誌 28 (May 1964): 13-18.

<sup>10</sup> For Liu E's recount of this experience in his *Tieyun shicun* 鐵雲詩存 [*The Extent Poetry of Tieyun*], see *ZL*, 43.

<sup>11</sup> *ZL*, 299-301.

<sup>12</sup> *ZL*, 9.

*Yellow River* (*Lidai huanghe bianqian tukao* 歷代黃河變遷圖考), which covered topics such as mathematics, river conservancy, electricity, and principles of machinery.<sup>13</sup>

Liu E understood that Western learning has its practical uses (*xixue wei yong* 西學為用). He intended to strengthen China's industry through the borrowing and application of Western technology. In 1893, Liu E joined the London-based Peking Syndicate (*fu gongsi* 福公司) as supervisor. He planned to work with foreigners and develop China's industry through industrial projects such as constructing railroads and opening coal mines. At first hopeful about the industrial prospects, Liu E discovered the company's draft treaty violated the rights and interests of Chinese workers. He traveled from Taiyuan to Beijing three times to request changes in the contract, but in the end, he was dismissed from the company. Liu E then left for Shanghai and raised funds with a friend to open a general merchandise store called the Five Story Shopping Mall (*wu cenglou shangchang* 五層樓商場), but Liu E was later forced to close the business.<sup>14</sup>

After the Boxer Rebellion of 1900, Liu E traveled to Shanghai where he met with his friend Lian Mengqing 連夢青 (d. 1914). Lian Mengqing made a living by writing for Shanghai's Commercial Press in a magazine called *Xiuxiang xiaoshuo* 秀像小說 (*Illustrated Magazine*), edited by Li Boyuan, author of *The Bureaucrats*.<sup>15</sup> To assist his friend, Liu E submitted manuscripts to this magazine, which began serializing *Travels* in 1903. After *Travels* was

---

<sup>13</sup> Collected in *ZL*, 118-26. This includes the *San sheng Huanghe tushuo* 三省黃河圖說 [*Handbook for the Three Provinces and Yellow River*]. According to the editors of *ZL*, this is part of Liu E's larger 1893 text.

<sup>14</sup> *ZL*, 12.

<sup>15</sup> *ZL*, 273n. 6. For the issue concerning Li Boyuan's deletion of sections in Chapter 10-12, See Timothy C. Wong, "Notes on the Textual History of the *Lao Ts'an Yu-chi*," *T'oung Pao* 69, nos. 1-3 (1983): 25.

published in 1907, enemies in the official court deemed Liu E a traitor. They accused him of being guilty for allegedly selling government-owned lands to foreigners for personal profit, and being a “profiteer of large granary stores” (*sidao taicang su* 私盜太倉粟). In 1908, Liu E was exiled to Xinjiang where he died of a stroke the following year at the age of 52.<sup>16</sup>

Liu E’s life and background strongly influence his treatment of various plotlines and characters, as well as his attention to landscape and setting in the novel. Specifically, Liu E’s experiences in Shandong working along the Yellow River and his contact with the Taigu School are sources of inspiration for much of the novel’s content. He gives the reader insight into the biographies of real people through his portrayal of the different characters in *Travels*, creating a late 19<sup>th</sup> century depiction of Chinese society.

The novel takes place in the province of Shandong, a year or two before the Boxer Rebellion. The narrator traces the journey of Lao Can: a Jiangnan 江南 (south of the river) man who becomes an itinerant doctor. In Chapter 2, he visits some natural scenery in Jinan 濟南 such as Daming Lake 大明湖 and the Four Great Springs 四大泉. Later on, he speaks with commoners and hears of Yu Xian 玉賢, an honest, but brutal official. Yu Xian falsely accuses citizens in Caozhou *fu* 曹州府 of banditry, torturing them to confession and sometimes to death. In Chapter 7, Lao Can meets the young scholar Shen Ziping 申子平. Lao Can sends him to the mythical Peach Blossom Mountain (*taohua shan* 桃花山) in search of Lao Can’s old friend, Liu

---

<sup>16</sup> ZL, 12-14.

Renfu 劉仁甫: a mountain recluse whose dealings with local bandits and connections in the government are essential to ending Yu Xian's tyranny. Chapter 8-11 describes Shen Ziping's meeting with the beautiful and intelligent Maiden Yu (*Tu Yugu*) 涂瓊姑, with whom he discusses philosophy and politics. Later, he meets Yellow Dragon (*Huang Longzi* 黃龍子), a prophetic and spiritual figure.

The story returns to Lao Can in Chapter 12. He is trapped in Qihe *xian* 齊河縣 because large blocks of ice prevent him from crossing the Yellow River. After admiring the natural scenery, he recalls a few lines of poetry from the *Shijing* 詩經 (*Book of Odes*) and contemplates the fate of his country and society, crying tears that freeze up instantly. He returns to his room, and later meets his old friend Huang Renrui 黃人瑞. He introduces Lao Can to the two courtesans, Cui Hua 翠花 and Cui Huan 翠環. These young women explain how they became courtesans after the Yellow River struck their hometown in a heavy flood, killing several hundred thousand peasants. Huang Renrui later arranges Cui Huan's marriage to Lao Can in order to rescue her and her younger brother from an unpleasant life.

In the last quarter of the novel, Liu E blends elements of the Chinese criminal case story (*gong an* 公案)<sup>17</sup> into the plot. Lao Can hears of another brutal official named Gang Bi 剛弼 who

---

<sup>17</sup> See George A. Hayden, "The Courtroom Plays of the Yuan and Early Ming Periods," *Harvard Journal of Asiatic Studies* (1974): 192. The *gong an* may be translated as "courtroom drama." These stories have three important elements: a crime, the crime's solution or punishment, and a clerk or judge who solves the crime.

wrongly accuses and tortures the Jia 賈 family in an attempt to solve a murder case of thirteen people. In the end, Lao Can visits the recluse Green Dragon (*Qing Longzi* 青龍子) in the Black Pearl Grotto (*xuan zhu dong* 玄珠洞) to obtain an herb that can revive the thirteen victims, and in the process, discovers the culprits behind the murder case. Lao Can's travels continue in the sequel, *Lao Can youji erji* 老殘遊記二集,<sup>18</sup> but this work of literature as a whole cannot be considered finished, for evidence has not surfaced to clarify what the author's final vision of the novel was.

This prompts questions concerning the novel's textual history and when Liu E actually finished the first twenty Chapters of *Travels*. Timothy C. Wong's research explores this issue to understand when the Text Proper (*chu pian* 初篇), the Sequel (*er pian* 二篇), and the Fragment (*wai pian* 外篇) were written and published. Wong clarifies important issues concerning the novel's textual history: Liu E wrote Chapter 1-10 and 12-14 of the Text Proper between 1903 and 1904. He suggests that after the first ten Chapters were serialized in the *Riri xinwen bao* 日新聞報, Liu E continued writing the novel about a year later and finished the Text Proper by the end of 1905.<sup>19</sup>

---

<sup>18</sup> The first six Chapters of this Sequel has been trans. into English by Lin Yutang 林語堂 and published in *A Nun of Taishan and Other Translations* (Shanghai: Commercial Press, 1936). The translation was revised and published again, as part of Lin's *Widow, Nun, and Courtesan* (New York: The John Day Co., 1951). Timothy Wong has translated the last three Chapters of the Sequel in "The Sequel to Lao can youji: Chapter 7-9," *Renditions* 32 (1989): 20-45.

<sup>19</sup> Wong, "Textual History," 24, 31.

Literary critics have also asked how to interpret the different facets of Liu E's novel. C. T. Hsia (1969) confirms *Travels* as a work "grounded in political reality" that addresses "China's fate as a whole."<sup>20</sup> He also explores Liu E's treatment of Lao Can and Yellow Dragon, concluding that both characters represents Liu E's ideal self: Lao Can, the traveling moral figure who helps the oppressed people, and Yellow Dragon, a prophet archetype who views the world's events as connected to the struggle of humanity and China's cycle of rise and decay.<sup>21</sup>

Donald Holoch (1980) later addresses the allegorical nature of *Travels* by explores the plot, description, and structure of the novel. He argues the novel reflects Liu E's philosophical views, supporting Průšek's argument that *Travels* is "the last great apologia of the old Chinese civilization before its fall."<sup>22</sup> Holoch concludes *Travels* can "be interpreted as an allegorical [novel]"<sup>23</sup> through the novel's plot, content, and character Lao Can: a scholar-turned-doctor free from the politics of officialdom, carrying only morality and social responsibility to face the nation's political fragmentation.

Holoch's research also touches on an important point: Liu E's attention to several genres of Chinese literature.<sup>24</sup> Leo Ou-fan Lee (1985) suggests examining the protagonist Lao Can as a solitary traveler, and to read the novel as part of *youji* 游記 literature: traditional Chinese travel writing, as indicated in the title of *Travels*. He discusses Liu E's novel as a series of journeys: first, the examination of the relationship between humanity and nature; second, the observation

---

<sup>20</sup> C.T. Hsia, "The Travels of Lao Ts'an: An Exploration of Its Art and Meaning," in *C.T. Hsia on Chinese Literature*, (New York: Columbia University Press, 2004), 259, 247.

<sup>21</sup> *Ibid.*, 263.

<sup>22</sup> Holoch's translation of Jaroslav Průšek, "Liu O et son roman *Le Pèlerinage du Lao Ts'an*," in *Chinese History and Literature* (Dordrecht: D. Reidel Publishing Company, 1970), 140.

<sup>23</sup> Donald Holoch, "The Travels of Laocan: Allegorical Narrative," in *The Chinese Novel at the Turn of the Century*, ed. Milena Doleželová-Velingerová (Toronto: University of Toronto Press, 1980), 145.

<sup>24</sup> *Ibid.*, 130.



of the sociopolitical climate of Chinese society before the Boxer Rebellion; and finally, the expounding of philosophical and esoteric wisdom in the mythical Peach Blossom Mountain.<sup>25</sup>

Timothy C. Wong (1989) closely examines Liu E and the protagonist Lao Can, urging scholars to reexamine the novel with consideration to Liu E's life and career. He suggests Liu E did not write with intentions to "build a literary monument for the ages," nor was Liu E concerned "whether [the novel] would be identified as his."<sup>26</sup> However, Wong confirms that the traveling doctor Lao Can is "a wishful self-portrait" of the author and suggests examining the novel requires close attention to the "extratextual historical or biographical circumstances"<sup>27</sup> that influenced Liu E to write.

In response to Timothy Wong's call for a historical analysis of Liu E and *Travels*, Luke S.K. Kwong (2001) places Liu E in the greater context of late-Qing culture and society. He explores the "inner world of thoughts, feelings and aspirations of China's educated elite"<sup>28</sup> with attention to Liu E's Confucian message of moral and social responsibility. According to Kwong, the ethical views and actions of Liu E's alter-ego Lao Can reflects Liu E's greater thinking with special attention to statecraft as a Confucian, "balance with an inner calm" as a Daoist, and a "bodhisattva's compassion" as a Buddhist.<sup>29</sup>

Finally, Timothy C. Wong (2002) emphasizes the need to examine the novel outside Western notions of fiction. Instead, he suggests reading *Travels* as part of the *xiaoshuo* 小說

---

<sup>25</sup> Leo Ou-fan Lee, "The Solitary Traveler: Images of the Self in Modern Chinese Literature," in *Expressions of Self in Chinese Literature*, ed. Robert E. Hegel and Richard C. Hessney (New York: Columbia University Press, 1985), 282-85.

<sup>26</sup> Timothy C. Wong, "The Name 'Lao Ts'an' in Liu E's Fiction," *Journal of the American Oriental Society* 109, no. 1 (1989): 105-6.

<sup>27</sup> *Ibid.*, 106.

<sup>28</sup> Luke S. K. Kwong, "Self and Society in Modern China: Liu E (1857-1909) and *Laocan Youji*," *T'oung Pao* 87 (2001): 360.

<sup>29</sup> *Ibid.*, 382-83.

tradition that “indicates pre-existent facts to which all *Chinese* fictional writings at least pretended to adhere,”<sup>30</sup> and to consider Liu E’s commentary (*pingyu* 評語) to the novel as informal or private history (*waishi* 外史 or *yeshi* 野史) that complements official history. Wong contends the commentary is “integral to the text,” because it emphasizes “what is *not* fictionalized.”<sup>31</sup> These points suggest commentary in *xiaoshuo* must be carefully examined, particularly in *Travels*, for the novel’s commentary assists the reader in understanding Liu E’s inspiration for the treatment of character, events, and plotlines in his novel.

To read *Travels* without regard to Liu E’s moral philosophy would deter the reader from understanding Liu E’s greater message: political action will not remedy China’s peril, and revitalizing spiritual, moral values are necessary amidst China’s gradual change towards modernity. From Liu E’s involvement in industrial development and the Taigu School, his view of China’s future undeniably includes both the use of Western technology and the upholding of Chinese tradition. Liu E’s novel may be “the last great apologia of the old Chinese civilization,”<sup>32</sup> but perhaps Liu E did not think “ancient” Chinese civilization would simply end in China’s future. Earlier writers were a source of inspiration for Liu E, and in his efforts to cope with the instability of a broken society and struggling government, he shared their mood, concerns, and inspiration to write. Wong declares Liu E is a writer who “never broke out of

---

<sup>30</sup> Wong, “The Facts of Fiction: Liu E’s Commentary to the *Travels of Lao Can*,” in *Excursions in Chinese Culture: Festschrift in Honor of William R. Schultz*, ed. Marie Chan, Chia-lin Pao Tao, and Jing-shen Tao (Hong Kong: The Chinese University Press, 2002), 160.

<sup>31</sup> *Ibid.*, 163, 166.

<sup>32</sup> Jaroslav Průšek, “Liu O et son roman *Le Pèlerinage du Lao Ts’an*,” in *Chinese History and Literature* (Dordrecht: D. Reidel Publishing Company, 1970), 140.

traditional Chinese paradigms.”<sup>33</sup> Therefore, Liu E’s political, social, and moral philosophy in *Travels* requires attention with regard to his biographical circumstances and the Taigu School of Thought. This research takes Wong’s argument further: to consider the historical and biographical factors that influenced Liu E’s treatment of characters and plotlines in his novel.

For skeptics who treat the novel as strictly a work of fiction, Liu E’s commentary suggests what can be considered fact in *Travels*. Liu E’s commentary on Chapter 13 explains the relationship between fictional characters and their real counterparts in *Travels*:

Unofficial history complements standard history. While the names may be invented out of the blue, the contents must be patterned after actualities . . . [the] courtesans in the north are described without a single bit of fabrication. By extension, you can see that it is equally so for other parts of the narrative.<sup>34</sup>

There are questions as to whether or not the novel’s commentary was all from the same hand,<sup>35</sup> for commentary to *xiaoshuo* was sometimes written by people other than its authors. According to the testimony of Liu E’s son Liu Dashen 劉大紳 and grandson Liu Houze 劉厚澤, however, Liu E wrote the commentary attached to the original manuscript of *Travels*.<sup>36</sup> We can be quite sure he wrote them based on this testimony and because of historical precedent: *pingdian* 評點 commentary to poetry and classical prose began at least in the Tang Dynasty (618-907), which led later “fiction authors [to write] their commentaries so as to add another layer of discourse to

---

<sup>33</sup> Timothy C. Wong, “Liu E in the Fang-shih Tradition,” *Journal of the American Oriental Society* 112, no. 2 (1992): 306.

<sup>34</sup> Translated by Wong, “Facts of Fiction,” 166; cf. *ZL*, 77.

<sup>35</sup> See Zhang Yaquan 張亞權, “*Lao Can youji yuanping kaosuo*” 老殘遊記原評考索 [Thoughts on the Original Commentary to *The Travels of Lao Can*], *Wenxue yichan* 文學遺產 (1988): 122-23.

<sup>36</sup> See Wei Shaochang 魏紹昌, comp., *Lao Can youji ziliao* 老殘遊記資料 (Shanghai: Zhonghua Shuju, 1962), 59, 95.

their texts.”<sup>37</sup> Liu E wrote knowing his novel would not be considered elite, serious literature, but the commentary implies *Travels* can also be read to complement official history, for his use of plotlines and treatment of characters indicate a relationship to real accounts of events and real people in his life.

In this paper, I will pay attention to characters in *Travels* and focus my discussion on their relationship to the author's life and thinking. My reasoning is that, as Wong points out, Liu E in his treatment of characters and plotlines “draws heavily on actual events and persons,” to finally “pull them together into the realm of fiction.”<sup>38</sup> My reading of the characters in *Travels* essentially expands on this line of interpretation, but for the sake of clarity, I leave out Liu E's treatment of landscapes and technology in the novel. First, I examine the two officials in *Travels*, Yu Xian and Gang Bi, to explore Liu E's attention to Chinese statecraft; second, I direct attention to the mountain recluse Liu Renfu and discuss Liu E's awareness of military affairs and other specialized knowledge; third, I examine the protagonist Lao Can and Governor Zhuang to explore Liu E's Daoist thinking and his involvement on the Yellow River; and finally, I look at the religio-philosophical characters Maiden Yu and Yellow Dragon in relation to the doctrine and members of the Taigu School. Liu E is at once a historian and a storyteller who writes *xiaoshuo* to “historicize” (*lun qi shi* 論其世), drawing inspiration from the people and environment around him in the portrayal of these characters, and therefore I suggest Liu E's thinking and treatment of characters in the novel reflect actual teachings and real people in his environment. After examining the relationship between the novel's characters and people in Liu

---

<sup>37</sup> David L. Rolston, introduction to *Traditional Chinese Fiction and Fiction Commentary* (Stanford: Stanford University Press, 1997), 2, 6.

<sup>38</sup> Wong, “Facts of Fiction,” 166.

E's environment who inspired them, I explore the historical and biographical factors that shape the author's ideas towards politics, society, and philosophy in *Travels*: to argue that Liu E, in crafting the novel's characters, blends fact and fiction to voice his distress at the dilapidated state of China and to establish his spiritual self.

### **Arousing the Boxer Faction: Two Types of Officials in *Travels***

Although government officials recognized Liu E's abilities in river management, his business ventures with foreigners provoked the antagonism of his enemies in the Qing bureaucracy. Liu E's "insults and failings he [had] been suffering in his own life"<sup>39</sup> may have led him to write veiled criticisms of government officials in *Travels*. It would be assuming too much to say Liu E conveys his complete political philosophy in the novel, but his treatment of the character prefect Yu Xian sheds light on the author's thinking towards the late Qing bureaucracy: specifically the role and ambitions of the "honest official" (*qingguan* 清官). This term describes an uncorrupt official who may refuse bribes, but on the other hand, he oppresses the common people with his strict statecraft.

Lao Can first hears of prefect Yu Xian during a feast. The minor officials recognize Yu Xian as "very efficient, but much too cruel," and question if his actions are justified: "In less than a year he has choked to death more than two thousand people in his cages. Do you suppose none of these were unjustly treated?" Another guest said, "There certainly have been cases of injustice . . . What nobody knows is the proportion of those not unjustly condemned."<sup>40</sup>

Although Yu Xian is a capable official, these quiet conversations show his methods of punishment and sense of judgment are points of anxiety among minor officials. Lao Can is

---

<sup>39</sup> Ibid., 106.

<sup>40</sup> *TL* 1, 35.

determined to gather information about Yu Xian who, in his drive for ambition and status, “[wounds] heaven and [destroys] all principles of justice.”<sup>41</sup> Yu Xian’s cruel acts against the common people arouses Lao Can’s anger, who may have no intentions of “leaving the mountains and entering official life,”<sup>42</sup> but nonetheless, he consults both locals and officials to stop Yu Xian’s mistreatment of commoners.

Lu Xun wrote that Liu E’s portrayal of Yu Xian “[reveals] the damage done by strict officials.”<sup>43</sup> The author’s description of Yu Xian’s actions reflect this point, but it is also worth asking how previous works and real people influence Liu E’s treatment of the honest, cruel official “incapable” of corruption in *Travels*. Liu E’s commentary on Chapter 3 explains the relationship between minor officials and Yu Xian:

[In] the conversations at the North Pillar Restaurant, everyone is dissatisfied with Yu Xian. They praise him with the well-known phrase “items on the path not picked up,” no one daring enough to bring up [his] treachery. From [Jinan] to Caozhou is quite far, and no one is able to find reliable information.<sup>44</sup>

In this commentary, Liu E explains that minor officials fear Yu Xian and cannot clearly determine how many commoners Yu Xian unjustly condemned; other officials praise Yu Xian with the term “items on the path not picked up” (*lu bu shi yi* 路不拾遺),<sup>45</sup> unaware of Yu Xian’s despotic activities as prefect of Caozhou *fu*. In this portrayal of Yu Xian, Liu E draws inspiration

---

<sup>41</sup> *TL* 1, 71.

<sup>42</sup> *TL* 1, 44.

<sup>43</sup> See note 5.

<sup>44</sup> *ZL*, 75.

<sup>45</sup> This term comes from the *Zhanguo ce* 戰國策 which literally means “the item not picked on the roadside.” It describes a society that is ruled by a just, but strict and Legalist government.

from Sima Qian's thinking from the *Shiji*. In Sima Qian's *Biography of Strict Officials* (*Kuli liezhuan* 酷吏列傳), the Grand Historian's comments:

The virtues of these ten men can be considered examples, their defects as a warning.

Their measures and instructions were designed to curb evil and, taken in the aggregate, were of significance as regards both their civil and military aspects . . . When it comes to officials such as [Feng Dang], the governor of Shu, who savagely oppressed people; [Li Zhen], the governor of [Guanghan], who made mincemeat of men . . . [Luo Bi], the governor of [Dianshui], who tortured people until they confessed . . . [they were all] as ruthless as vipers and vultures.<sup>46</sup>

The line of transmission from Sima Qian to Liu E relates to statecraft and the role of strict officials in Chinese government. Although Sima Qian praises efficient, strict officials in his biography, he is uninterested in recording the biography of more oppressive officials such as Li Zhen, instead commenting how strict officials can lose sight of the common people's interests. In contrast, Liu E acts as an unofficial historian in *Travels*, focusing on the biography of Yu Xian as told through commoners and minor officials. After hearing of Yu Xian's excessive use of standing cages (*zhanlong* 站籠), Lao Can consults a local named Lao Dong 老董 who explains how Yu Xian falsely accused the Yu 于 family of banditry: "[Yu Xian:] 'All lies! What honest people would dare to buy firearms; your family are certainly bandits!'"<sup>47</sup> Yu Xian is unable to capture actual bandits and instead condemns the Yu family on false evidence. As a consequence,

---

<sup>46</sup> Sima Qian, *Records of the Grand Historian*, selected by Po-Hsiang Wang, translated by Yang Hsien-yi and Gladys Yang (Taipei: Wenxin Chubanshe, 1975), 922. Hereafter, changes from Wade-Giles Romanization to Hanyu Pinyin Romanization will appear in brackets.

<sup>47</sup> *TL* 1, 47.

Mrs. Wu commits suicide, and the Yu family is left derelict. Liu at the end of Chapter 5 comments:

Yu Xian is ruthless, Mrs. Wu pure and chaste . . . Chen Renmei praised Mrs. Wu's dedication and chastity because of her human feeling and virtue, which Yu Xian is completely opposite. Yu Xian treats this case with argument and debate, the punishment undeserving of the crimes. This is a tragedy for the victims who met with disaster and misfortune. In the standing cages are ghosts who were choked to death; this is especially distressing.<sup>48</sup>

Liu E shares Sima Qian's thinking that strict officials have an important place in Chinese government. Yet, Liu E criticizes figures like Yu Xian who has ability in statecraft, but lack human feeling (*renxin* 人心) and humaneness (*rendao* 人道). Political power blinds Yu Xian and he fails to capture major bandits. For this reason, he becomes "the bandits' tool" and punishes "honest people, while half-a-tenth are minor bandits."<sup>49</sup> The death of the Yu family worries him, for Yu Xian fears his "position will be endangered,"<sup>50</sup> showing that underneath the honest official persona, he desires wealth and status. These details reveal Yu Xian's lack of compassion for the people of Caozhou *fu*: his sense of justice becomes polluted just as his abilities are misplaced, unable to capture actual bandits or recognize the innocence of wrongly condemned citizens. Liu E's treatment of Yu Xian criticizes the honest, but cruel officials in Qing bureaucracy, for his portrayal of Yu Xian demonstrates how they precipitated China's fallen state in government and society.

---

<sup>48</sup> *ZL*, 75-76.

<sup>49</sup> *TL* 1, 45, 74.

<sup>50</sup> *TL* 1, 53.



Liu E denounces the ambitious, career-driven official in *Travels*, but in the Chapter 5 commentary, he criticizes an actual official in the Qing bureaucracy through his subtle treatment of Yu Xian's name.<sup>51</sup> Liu E identifies him using the surnames Yu 玉 and Yu 毓: the latter referring to the Manchu official Yu Xian毓賢 (d. 1901). Liu E's portrayal of the character Yu Xian in *Travels* and the pun on the two surnames indicate the historical Yu Xian was the inspiration for his fictional counterpart. Liu E's comment on Chapter 4 gives the reader a glimpse into the real Yu Xian's activities:

When he was governor of Shanxi, nearly everyone knew that Yu Xian perpetrated various evil deeds, [such as] mistreating Christian missionaries and ordering his soldiers to rape their women. When he was prefect of Caozhou, he became known as an able and worthy man. Most people did not know what he did at the time. Fortunately, his misdeeds can be made known by this book. In the future, perhaps the standard histories can be said to have made use of materials from *xiaoshuo*.<sup>52</sup>

Liu E elaborates that the real Yu Xian lacked compassion for the common people and, by extension, he failed to uphold the "Father and Mother Official" (*fumu guan* 父母官) ideal. After becoming governor of Shanxi in 1900, Yu Xian supported the Boxer Rebellion and their movement to "aid the Qing and exterminate foreigners" (*fu qing mie yang* 扶清滅洋). Yu Xian directly ordered his subordinates to ignore the demands and complaints of the missionaries and

---

<sup>51</sup> For Liu E's Chapter 5 commentary and his use of the surnames Yu 玉 and Yu 毓, see *ZL*, 75-76.

<sup>52</sup> *ZL*, 75; cf. translation by Wong, "Facts of Fiction," 167.

their converts.<sup>53</sup> He later commanded the Boxers to kill missionaries and several Chinese Christians in the Shanxi capital, Taiyuan.<sup>54</sup> Liu E's treatment of Yu Xian in both novel and commentary expresses the author's political philosophy: aggression will not strengthen China against foreign encroachment, when questionable, "honest" Manchu officials like Yu Xian support anti-foreign sentiment.

Liu E's portrayal of the fictional Yu Xian demonstrates the author knew of the real Yu Xian's political alliance with the Boxers in 1900. Foreign encroachment on Chinese territory and other mistreatments of the Chinese people fueled the Boxer faction's animosity towards foreign nations. Their aggression was only political in part, for social hardship and poor living conditions in years prior to the rebellion aroused the formation of Boxer factions. From 1895-1898, the people of Shandong suffered from agricultural, economic, and natural catastrophes—leading to severe famine and diminished support of the Qing regime.<sup>55</sup> When he was governor of Shandong in 1899, Yu Xian came in contact with two Boxer leaders: Yang Zhaoshun 楊照順 (d. 1899) and Zhu Hongdeng 朱紅燈 (1850-1899). Yang Zhaoshun was a monk before joining the Boxers, while Zhu Hongdeng led the Boxers to oppose Christianity and foreign encroachment on China. Before the Boxer Rebellion of 1900, they trained the masses in martial arts and later dealt heavy casualties to the Qing military force. Their activities ended after Yu Xian captured and executed

---

<sup>53</sup> Immanuel C. Y. Hsu, "Late Ch'ing foreign relations, 1866-1905," in *The Cambridge History of China Vol II: Late Ch'ing, 1800-1911 Part 2*, ed. by John K. Fairbank and Kwang-Ching Liu (Cambridge: Cambridge University Press, 1980), 119.

<sup>54</sup> Hsia, "Art and Meaning," 261, n. 28. His source is the *Ch'ing-shih kao lieh-chüan*, 252.

<sup>55</sup> Marianne Bastid-Bruguere, "Currents of social change," in *The Cambridge History of China Vol II: Late Ch'ing, 1800-1911 Part 2*, ed. John K. Fairbank and Kwang-Ching Liu (Cambridge: Cambridge University Press, 1980), 597.

them.<sup>56</sup> Yu Xian's aggressive acts toward the Boxer leaders in 1899 indicate Liu E's commentary on the historical Yu Xian's may be considered fact: for Yu Xian's sympathizing with the Boxers in 1900 suggest undocumented motivations such as greater wealth and status encouraged this alliance.

Liu E's involvement with the Taigu School explains why he gives close attention to the misdeeds of officials and the suffering of commoners in *Travels*, for he developed a renewed sense of compassion after becoming a Taigu disciple. He first glimpsed into the harsh realities of North China's common people during his assignment to chart the course of the Yellow River within the borders of Henan, Hebei, and Shandong in 1889.<sup>57</sup> Liu E resolved to help the Yellow River's flood victims, using principles of Western technology and Chinese knowledge of river control to engineer solutions. He recognized the peoples' distressing conditions and the worsening effects of political and social unrest that began in the mid-19<sup>th</sup> century, which led to the Boxer Rebellion of 1900.

At the height of the rebellion, Liu E was in Beijing where he witnessed people in the streets suffering from starvation. He discovered the Russian forces were about to burn the rice of an imperial granary, for which they had no use. Determined to help the people, Liu E used his foreign connections to purchase rice from the Russian-controlled imperial granary, and in a humanistic act, he distributed the rice by selling it at a small price, preventing the starvation and death of many.<sup>58</sup> Just as his father sympathized with Henan's flood victims, aiding them after the

---

<sup>56</sup> See Jiang Chunyun 姜春雲, ed., *Shandong sheng qing* 山東省情 (Jinan: Shandong renmin chubanshe, 1986), 978 for their biographies.

<sup>57</sup> For Liu E's 1889 report on his river management project in North China, see *Hegong binggao* 河工稟稿 [*Report on River Conservancy*] collected in *ZL*, 105-17; cf. Kwong, "Self and Society," 363.

<sup>58</sup> *ZL*, 12.

devastation of the Taiping Rebellion a few decades ago,<sup>59</sup> Liu E maintained a sense of compassion and duty to victims of the Boxers. He understood officials like Yu Xian lost sight of the people's welfare and therefore weakened the stability of Chinese society. Liu E could not address this problem safely from a distance like his protagonist Lao Can, but rather, Liu E dedicated himself to strengthen his country through industrial development, serving the people through his abilities in river management and flood prevention. He could not write openly to address China's social and political instability, for in his endeavors to strengthen Chinese industry and technology, he gained many powerful enemies in the government. Instead, Liu E pointed to his country's internal problems by writing *xiaoshuo*: revealing the corrupt power dynamics in scholar-official circles and how the people suffered as a result.

Liu E's treatment of the honest, but inhumane official in *Travels* reveals his thinking towards the historical Yu Xian and Liu E's close attention to Yu Xian's involvement in the violent political activities of the Boxer Rebellion. Other passages in the novel also draw a connection characters, people in Liu E's immediate environment, and historical events. In his portrayal of the character Gang Bi, Liu E juxtaposes honest officials with corrupt officials (*zangguan* 贓官) to comment on the rampant top to bottom corruption in the Qing bureaucracy.

In Chapter 15, the author describes the official Gang Bi as "utterly incorruptible," but oppressive in his dealings with commoners.<sup>60</sup> Liu E draws attention to the problem of ambitious officials through Lao Can's words: "The really bad thing is when men of ability want to be officials . . . The greater the official position man holds, the greater the harm he will do. If he

---

<sup>59</sup> See note 8.

<sup>60</sup> *TL* 1, 171.

controls a prefecture, then a prefecture suffers.”<sup>61</sup> Lao Can’s thoughts describe a man of talent driven by status and wealth, who can harm the livelihood of the prefecture’s citizens after becoming a high official in the government. Accordingly, Liu E emphasizes an important issue in Chinese statecraft: officials with ability and learning who want a government position may not always be pure-minded. Gang Bi later speaks in the hall of justice and uses the issue of bribery to gather evidence for the murder case:

“I said to [*Ju-Ren Hu*], ‘go and tell their major-domo that for killing thirteen people it is one thousand ounces each, so he must pay thirteen thousand ounces.’ [*Ju-Ren Hu*] said, ‘I’m afraid they can’t make as much as that in a short time’ . . . [Gang Bi:] ‘I’ll halve it and say five hundred each. That will make sixty-five hundred ounces. I can’t take less’ . . . I was afraid [*Ju-Ren Hu*] was making a wild promise, so I insisted that he go with this offer of a half-rate to explain to your major-domo that . . . he should send me a promissory note and that a delay in the payment didn’t matter.”<sup>62</sup>

Liu E uses this passage to reveal Gang Bi’s questionable motives, for the reader may speculate, if given the opportunity, would he have accepted thirteen thousand ounces of silver? In other words, Gang Bi is a resourceful official blinded by self-interest, using his position to manipulate the murder case to his own advantage. He creates evidence to produce the illusion of justice: his goal, to gain greater status in the yamen. Gang Bi voices his ambition, stating he is “an official of the Imperial House” and that “the governor has specially deputed [him] . . . in hearing [the case],” claiming that accepting the bribe will only lessen his status in the eyes of the governor.<sup>63</sup>

Although the victims plead against the accusations, Gang Bi orders attendants to apply torture in

---

<sup>61</sup> *TL* 1, 70.

<sup>62</sup> *TL* 1, 176.

<sup>63</sup> *TL* 1, 176.

order to force their confession; he has no qualms about ruining a family's livelihood to protect his rank and wealth.

Liu E's depiction of Gang Bi expresses the author's political view towards Qing officials—honest or corrupt—and how their approaches to statecraft harm the country and people. He writes in his commentary at the end of Chapter 16:

Everyone knows corrupt officials are bad, but the honest official is even more at fault, and not many know this. [At least] the corrupt official knows himself to be diseased and does not dare openly commit faults; the honest official thinks he is free to do as he likes because he does not want wealth: how can this be? Gang Bi in his stubbornness murders people on the small scale and endangers the nation on a great scale!<sup>64</sup>

In this commentary, instead of writing Gang Bi's name in its standard form (剛弼), Liu E mocks him using the word *gangbi* (剛愎), meaning headstrong or stubborn. This passage implies Liu E believes the worst kind of corruption exists in officials who claim to be honest and pure-minded officials, for this persona is a tactic: in gaining reputation there is promotion, and in attaining higher positions, bribes are readily available.

Liu E's portrayal of Gang Bi points to another historical figure responsible for the Boxer Rebellion: the Manchu Official Gang Yi 鋼毅 (d. 1900). The author draws attention to Gang Yi through the description of Gang Yi's alter-ego in *Travels* and the pun of Gang Yi's name in the commentary. As Grand Secretary, Gang Yi had once spoken to the Boxers: "When the legations

---

<sup>64</sup> ZL, 78. my Translation. Lu Xun's partial quotation from this comment has been translated in Yang Hsien-yi and Gladys Yang, trans., *A Brief History of Chinese Fiction* (Peking: Foreign Languages Press, 1959), 382-83.

are taken, the barbarians will have no more roots. The country will then have peace.”<sup>65</sup> In an act against foreign powers, the Boxers banded together to destroy railways and telegraph lines. Gang Yi later commanded the Boxer faction in Beijing to attack the foreign legations—including guards, civilians, and over two thousand Chinese Christians.<sup>66</sup> These acts of violence conflict with Liu E’s philosophy: that political aggression only sharpens the increasing conflict between China and foreign countries.

In addition to Gang Yi’s support of the Boxers, he also contributed to China’s military weakness. In the 1880s, China needed to strengthen its naval power in South China near Guangdong Province, since defenses along the coast were particularly weak. Former Anhui Army Commander Zhang Zhidong 張之洞 (1837-1909) created the Guangdong Naval and Military Officers’ Academy (*shuilu shi xuetang* 水陸師學堂) to address this issue, but later, Gang Yi cancelled the program during his office as governor of Guangdong in 1892-1894.<sup>67</sup> In time of such need to develop Chinese technology and strengthen the Chinese military, one can only suppose desire for political control determined Gang Yi’s actions in the government: to gain wealth, status, and to curb the power of his enemies.

These enemies may have been figures in the Qing bureaucracy who thought as Liu E did and supported China’s “self-strengthening” (*zhiqiang* 自強), for China needed to update technology and industry to defend itself against foreign aggression. After Liu E’s involvement

---

<sup>65</sup> Hsu, “foreign relations,” 122.

<sup>66</sup> *Ibid.*, 119, 122.

<sup>67</sup> Kwang-ching Liu, “The military challenge: the north-west and the coast,” in *The Cambridge History of China Vol II: Late Ch’ing, 1800-1911 Part 2*, edited by John K. Fairbank and Kwang-Ching Liu (Cambridge: Cambridge University Press, 1980), 257-58.

with the Peking Syndicate, the scholar gentry no longer recognized him as a man of Dantu (Liu E's birthplace). Gang Yi later accused Liu E of betraying China to foreigners, requesting that the Liu E's family be punished based on his crimes (*ming zheng dian xing* 明正典刑).<sup>68</sup> Liu E's conflicts with those in power explain why he chose to satirize Gang Yi in *Travels*. The novel reflects the hopes and concerns of the author who was distressed at the events he witnessed; the corruption within the bureaucracy; and his enemies who not only abandoned Confucian principles of statecraft, but also did not support the development China's technology and infrastructure. These biographical and historical elements can therefore be considered points of inspiration for Liu E's treatment of Qing officials in *Travels*.

The novel's commentary also mentions other Boxer supporters and suggests Liu E's portrayal of the character Gang Bi reflects more than one person. It may also include two other people in Liu E's environment: Xu Tong 徐桐 (1819-1900), and Li Bingheng 李秉衡 (1830-1900). Liu E writes in his commentary on Chapter 16:

Consider Xu Tong and Li Pingheng, whose activities were evident of what the *Four Histories* meant by no success over injustice. The author suffers from a bitter heart and hopes the world's honest officials will not obstinately use the fact that they do not take bribes to be an excuse for willful, reckless acts.

Liu E's mentioning of these officials implies a connection between his novel and the political situation of his time. After addressing the character Gang Bi in this commentary (by extension, the Manchu official Gang Yi), Liu E criticizes the ultra-conservative officials Xu Tong and Li

---

<sup>68</sup> Yan Weiqing 嚴薇青, introduction to *Lao Can Youji*; or, *Lao Can Youji*, by Liu E (Jinan: Qilu Shushe, 1981), 4-5.



Bingheng for their involvement in the Boxer Rebellion. As part of the anti-foreign movement, which included the Empress Dowager, Prince Tuan and Gang Yi,<sup>69</sup> Xu Tong support of the Boxers; after all, he “preferred the destruction of his country to reform”<sup>70</sup> and shared a similar animosity towards foreigners. Liu E had been aware of his country’s social and economic problems that precipitated the creation of Boxer factions. He had worked for governor of Shandong Zhang Yao until the governor’s death in 1891.<sup>71</sup> When Li Bingheng succeeded Zhang Yao as governor of Shandong in 1894-1897, he secretly supported the Boxer faction known as the “Big Sword Society” (*da dao hui* 大刀會).<sup>72</sup> Li Bingheng was responsible for advising the throne to disregard developing China’s industry through the use of Western technology, which included railroads, mines, and factories.<sup>73</sup> The treatment of Qing officials in the novel and commentary indicate Xu Tong and Li Bingheng were disguised honest, strict officials. Xu Tong did not mind seeing his country destroyed if he acquired greater status and wealth as a result, while Li Bingheng gained favor in the government by rejecting Western technology and gathered more political power in his support of the Boxer faction. No matter what their political views were, it may at least be suggested Xu Tong and Li Bingheng’s approach to statecraft conflicted with Liu E’s thinking: to make the people’s welfare a priority and to update Chinese industry, technology, and infrastructure.

---

<sup>69</sup> See Arthur W. Hummel, ed., *Eminent Chinese of the Late Ch’ing Period* (Washington: United States Government Printing Office, 1943), 407.

<sup>70</sup> Yen-p’ing Hao and Erh-min Wang, “Changing Chinese views of Western relations, 1850-95” in *The Cambridge History of China Vol II: Late Ch’ing, 1800-1911 Part 2*, ed. by John K. Fairbank and Kwang-Ching Liu (Cambridge: Cambridge University Press, 1980), 178.

<sup>71</sup> *ZL*, 9.

<sup>72</sup> Hao and Wang, “Changing Chinese views,” 186.

<sup>73</sup> Hummel, *Eminent Chinese*, 407.

To conclude, Liu E's treatment of Qing officials in both *Travels* and the commentary reflects his close attention to the political situation and events leading up to the Boxer Rebellion. Liu E's Chapter 6 commentary on Yu Xian complements the biography found in official histories, for the author's description of Yu Xian's misdeeds in novel and commentary can be considered a storyteller or historian's unofficial biography of the real Manchu official. Liu E's portrayal of Gang Bi criticizes the other Boxer supporters Gang Yi, Xu Tong, and Li Bingheng, whose ambitions drove them to support the Boxer Rebellion. Liu E's attention to real figures involved in the Boxer Rebellion, his portrayal of officials in *Travels*, and the puns on their names unquestionably indicate a relationship between fact and fiction. His treatment of actual historical figures in *Travels* and the novel commentary suggests three points: Liu E knew clearly who supported the Boxer factions and questioned their motives as strict officials; Gang Yi deemed Liu E a traitor and requested Liu E's family be punished, making Gang Yi Liu E's personal enemy; and Liu E opposed acts of political hostility, later became distressed at the devastating political and social effects of the Boxer Rebellion. He was not only critical of Boxer supporters in the Qing bureaucracy, but also felt officials in their pursuit of power and status harmed the country and common people—when the country greatly needed developments in technology and industry, institutional change, and stable Confucian statecraft to face the challenges of a transitioning China.

### **Between History and Biography: Martial Arts and Military Affairs**

In 1894, Liu returned to Huai'an where he and Luo Zhenyu 羅振玉 (1866-1940) predicted the outcome of the First Sino-Japanese War.<sup>74</sup> This successful prediction shows Liu E's knowledge of Chinese military affairs. Liu E's contact with people involved in martial arts, military learning, and the Qing army are factors in his treatment of the characters Liu Renfu and the anonymous monk of Mt. Emei (*Emei shan* 峨嵋山). Liu E also grounds Liu Renfu in historical events by referencing the Taiping Rebellion. Thus, the character Liu Renfu may say more about Liu E's concern for China's lack of development and weakness to foreign powers: specifically, his thinking compared to supporters of the Self-Strengthening Movement.

Before discussing who may have inspired the character Liu Renfu, it is important to first consider Liu E's description of Liu Renfu's background. In Chapter 7, Lao Can recommends the help of his old acquaintance to solve the problem of Yu Xian's tyranny:

“This man's name is Liu Renfu, and he belongs to Pingyin *xian* [平陰縣]. His current home is the Peach Blossom Mountain southwest of this region. As a boy of age fourteen or fifteen, he studied martial arts at the Shaolin Temple on Mt Song [嵩山 *Song shan*].

After studying for some time, he felt that place had an undeserved reputation and was in no way exceptional, thereupon he left for some nearby rivers and lakes. After ten years, he met a monk on Mt. Emei of Sichuan whose skill in boxing had no comparison.”<sup>75</sup>

---

<sup>74</sup> Liu Delong 劉德隆, Zhu Xi 朱禧, and Liu Deping 劉德平, *Liu E xiaozhuan* 劉鶚小傳 [A Short Biography of Liu E] (Tianjin: Tianjin renmin chubanshe, 1987), 106. Hereafter, this will be referred to as XZ; cf. Shadick, “a Social Novel,” 47.

<sup>75</sup> Liu E, *Lao Can youji* 老殘遊記, ed. Yan Weiqing 嚴薇青 (Jinan: Qilu shushe, 1988), 79. Hereafter, this work will be referred to as TL 2 and include my translations from Chinese to English.

As a writer of *xiaoshuo*, Liu E uses certain facts collected from actual environments and people to describe the character Liu Renfu. The reference to Pingyin *xian* and the mythical Peach Blossom Mountains in the southwest may refer to mountains well known to locals, such as Mt. Cuiping (*Cuiping shan* 翠屏山). Liu E traces the travels of Liu Renfu, from his beginnings on Mt. Song to some rivers and lakes (*jiang hu* 江湖)<sup>76</sup> where he presumably contacts bandits, and finally to Mt. Emei where Liu Renfu meets a monk and becomes his disciple. Lao Can continues: “[Liu Renfu] asked the monk about the origins of his method . . . The monk said: ‘It is the Shaolin Temple’s method of boxing, but I did not learn it at the Shaolin Temple. Their true boxing methods were lost a long time ago. The ‘Taizu’ [太祖] style of boxing you have learned from me was handed down from the Dharma. The ‘Shaozu’ [少祖] style of boxing was handed down from Shen Guang.’”<sup>77</sup> Liu E’s treatment of martial arts in this passage leaves readers with a few questions: why does the author describe the Shaolin Temple’s style of boxing with disapproval, instead emphasizing the the origin and methods of *Taizu* and *Shaozu* boxing?

Liu E’s motivations for his description of these obscure martial arts in *Travels* are not clear, but the reader may consider where Liu Renfu and the monk are conversing: on Mt. Emei in

---

<sup>76</sup> This term refers to a bandit, but in this case, Liu Renfu is only contacting bandits (*zou jianghu* 走江湖) rather than becoming a bandit (*shang jianghu* 上江湖).

<sup>77</sup> See *TL* 2, 79-80, 90; *TL* 1, 248 n. 4-5. During the Liang Dynasty (502-557), Dharma (known as Bodhidharma 菩提達摩) was an Indian Buddhist monk who lived in the Shaolin temple. He is credited for being one of China’s earliest promoters of Buddhism, and therefore he is referred to as *Taizu* 太祖. Shen Guang 神光 was from Luoyang of the Northern Wei kingdom. It is said when Dharma was at the Shaolin Temple, Shen Guang visited during a snowy night and cut off his left arm to show Dharma his sincerity in becoming a disciple. Shen Guang’s name was then changed to *Huiké* 慧可. Later, he inherited Dharma’s mantle and alms bowl, becoming the second leader (*Erzu* 二祖) of the Chan Buddhist sect, and thus he is referred to as *Shaozu* 少祖.

Sichuan. Various Emperors of China's dynastic past have commemorated this mountain; furthermore, famous poets such as Li Bai 李白 (701-762) and Su Shi 蘇軾 (1036-1101) have visited Mt. Emei.<sup>78</sup> Liu E was at least aware of the history surrounding Mt. Emei, which influenced him to make it the setting for Liu Renfu and the anonymous monk's discussion of obscure martial arts forms. Liu E's commentary on Chapter 7 provides a few lines concerning martial arts, but compared to his other commentary, it obscures the line between fact and fiction: "This method of boxing . . . there are those in this world who still practice it . . . [The author] is unsure who will be able to seek it out."<sup>79</sup> The mystery of what exactly these boxing methods are and their origin continue to elude the reader, but Liu E's treatment of the anonymous monk may refer to one of the founders of the Emei School of Thought (*Emei xuepai* 峨嵋學派), Master Danran 澹然 (dates unknown), fabled to have been a military man before becoming a monk. The author's blending of martial arts and mountainous locations in *Travels* suggest the anonymous monk character was not influenced by one source or person, but rather, Liu E's treatment of the anonymous monk came from a mixture of folklore and legend he either collected in his travels or heard from acquaintances.

Aside from discussing Liu Renfu's background and the origin of his master's martial arts style, Liu E writes in detail of Liu Renfu's relationship with the major bandits, his activities with Lao Can, and his involvement in military affairs. The author draws a connection between actual events and the character Liu Renfu: "[Lao Can:] '[At] the time of the disturbances caused by the

---

<sup>78</sup> See Jiang Chao 蔣超, *Emei shan zhi* 峨嵋山誌 (Shanghai: Shanghai Guju chuban she, 2002). The Original text can be found in the Beijing library, records of the Kangxi Emperor.

<sup>79</sup> ZL, 76.

[Yue] robbers . . . [Liu Renfu] knocked about in the camps of the [Xiang] and Huai armies for some time.”<sup>80</sup> The reference to the Xiang and Huai armies suggests the portrayal of the character Liu Renfu may reflect a military man in Liu E’s environment the author knew intimately. Liu E not only draws inspiration from real people in his creation of Liu Renfu, but also references the Taiping Rebellion (Yue robbers), which had widespread negative economic, social, and political effects on the country. Lao Can later describes Liu Renfu’s rare appearances with officials and his relationship with major bandits:

“The insurance offices in the capital have several times invited him to join them but he would never go, because he would rather hide himself and be a farmer . . . [but] he will sit around in the teashops . . . and will know at a glance which of the passersby are his bandit friends. He will then pay the teashop keepers to give them food and drink . . . Before ten days or half a month are gone, all the big bandit chiefs will know about it and will immediately issue an order that no man may make a disturbance in such and such a person’s territory . . . As for the lesser bandits . . . When a robbery occurs near the city, someone will make a secret report . . . [and Liu Renfu’s] men will have captured the thieves.”<sup>81</sup>

It is unclear why Liu Renfu refuses to help officials in the capital; instead, Liu Renfu hides his identity (*maiming yinxing* 埋名隱姓) and supposedly leads a simple life as a farmer. Yet, he is actually a mountain recluse: officials hold him in high esteem and seek him out for advice, while major bandits are loyal to Liu Renfu, stopping criminal activities upon hearing his message. Liu

---

<sup>80</sup> *TL* 1, 73-4.

<sup>81</sup> *TL* 1, 75.

Renfu's influence even reaches the minor bandits, showing that people of all classes respect him for his prowess in martial arts, involvement in military affairs, and wisdom.

Liu E's close attention to the background of Liu Renfu suggests the author must have known someone similar to this character in his own life. Liu Delong et. al suggest Liu Renfu is a portrait of Liu E's close friend, Wang Zhengyi 王正誼, also known as *Dadao* Wang Wu 大刀王五 (d. 1900).<sup>82</sup> Between 1898 and 1900, Wang lived in Beijing next door to Liu E. He was a traveler escort (*biaoke* 鏢客) and bodyguard; unofficial histories report he controlled the bandits of Hebei and Shandong. Wang was versed in military strategy, martial arts, and known by locals as a knight-errant, described to be like Wu Song 武松 of *Shuihu Zhuan* 水滸傳 (*Water Margin*). When European military forces entered Beijing in 1900, Wang protested against their encroachment and was killed in battle. Upon discovering Wang's death, Liu E was stricken with grief and later buried him.<sup>83</sup> Wang's death may explain the reason behind Liu E's portrayal of officials responsible for the Boxer Rebellion in *Travels*. Furthermore, Liu E's contact with Wang indicates Liu Renfu is a portrait of Wang, for the details about Liu Renfu's involvement in martial arts, military affairs, and bandits originate from Liu E's close friend. Liu E did not forget his memories of Wang Zhengyi; his life and abilities became points of *xiaoshuo* material in Liu E's portrayal of Liu Renfu.

---

<sup>82</sup> XZ, 110.

<sup>83</sup> XZ, 110-13.

Although, Liu E uses his recollections of Wang Zhengyi to recreate a sketch of him in *Travels*, the author also paid great attention to military affairs during his lifetime, blending his military concerns and autobiographical details in describing Lao Can and Liu Renfu's past:

“When Liu Jen-fu was in [Henan], he was my intimate friend. We swore to each other that if a time came when the country could use men like us we would all come forward and work together. At the time our group included experts on geography, military surveying, arsenals, military exercises, and this man Liu was our chief expert on military exercises. Later we all realized that the government of the empire needed another kind of ability and that the subjects we had been discussing and studying were quite useless. For this we all turned to practical professions by which to make some sort of living . . . But in spite of this, the friendship and idealism of that time can never be destroyed.”<sup>84</sup>

The person who inspired the character Liu Renfu unquestionably includes Wang Zhengyi, but Lao Can's intellectual group also factors into Liu E's writing process. Lao Can's description of military learning sheds light on an important part of Liu E's educational development. In his young adulthood, he formed a club of intellectuals called the “Jingli Youth” (*Jingli shaonian* 井裏少年) that studied and discussed subjects such as mathematics, economics, and military science: all with the goal of addressing the current problems of China.<sup>85</sup> Lao Can's dedication to aiding his country reflects the author's concerns for his nation and people when the government's deficient military allowed two rebellions in one decade, in addition to increased foreign encroachment and aggression. Liu E's witnessing of these events suggests he was quite

---

<sup>84</sup> *TL* 1, 76.

<sup>85</sup> *ZL*, 6; cf. Shadick, “a Social Novel,” 44. The information about Liu E's club of young intellectuals comes from Liu E's son, Liu Dashen.



aware of China's military and infrastructural weaknesses: that the country lacked industrial and technological development needed to strengthen the Chinese military and defend itself against both internal and external political hostility.

Liu E's attention to military affairs during his own life and *Travels* reflects his strong support of the Self-Strengthening Movement. The author's contact with people of military and political background influenced his depiction of Liu Renfu's background as a figure versed in military affairs and ex-member of the Anhui military forces. Liu E writes of receiving a letter from Pang Zhige 龐芝閣 (d. unknown) who participated in the trials of Taiping General Li Xiucheng 李秀成 (1823-1864).<sup>86</sup> In another account, Liu E meets with Li Jingmai 李經邁 (1876-1938) who worked with Liu E in his coal refining and steel making businesses, located in Zhuzhou, Hunan. Li Jingmai was the third son of Li Hongzhang 李鴻章 (1823-1901), commander of the Anhui Army.<sup>87</sup> Li Hongzhang was one of the first supporters of China's Self-Strengthening Movement and a key advocate of the Tongzhi Restoration.<sup>88</sup> Li Hongzhang encouraged the reform (*bianfa* 變法) of Chinese institutions to compete with the industrial and technological strength of foreign nations. These ideas of change led Li Hongzhang's reform of the military academy in 1887, which not only required military men to learn Chinese history and

---

<sup>86</sup> *ZL*, 144, 207n. 6.

<sup>87</sup> *ZL*, 212, 274n. 4.

<sup>88</sup> Mary C. Wright, *The Last Stand of Chinese Conservatism: The T'ung Chih Restoration, 1862-1874* (Stanford: Stanford University Press, 1957), 15.

Confucian Classics, but gunnery, military drill, fortifications, arithmetic, geography, and others.<sup>89</sup>

Liu E shared the military thinking of Li Hongzhang, for the author was also swept up in the Self-Strengthening Movement; this suggests current events influenced Liu E's description of Liu Renfu's background. He describes Liu Renfu as an expert in military affairs—particularly military surveying, arsenals, and military exercises. Liu E was involved in the changing events of his generation, when the nation's revitalization of Chinese spirit became necessary after Taiping forces had weakened government stability and damaged the population's morale. Liu E's relationship to figures of military and social standing such as Pang Zhige and Li Jingmai (by extension his father)<sup>90</sup> demonstrates his undeniable attention to military, intellectual, and political changes during China's state of vulnerability. This explains why Liu Renfu's background is filled with ideas about the martial spirit: Chinese boxing, military affairs, experiences in the Xiang and Huai armies, and a connection to suppression efforts against the Taiping Rebellion.

Liu E's biographical circumstances explain why he combines these ideas in his portrayal of Liu Renfu, since his concern for China's weakened military and political state began very early on. After Li Hongzhang put down the Taiping Rebellion, Liu E's father was transferred from his post in Beijing to Henan, ordered to follow Li Hongzhang in the rebellion's aftermath.<sup>91</sup> In 1869-1871 of the Tongzhi Restoration, Liu E (age 11 to 13) followed his father Liu Chengzhong to Henan; Liu E's father was responsible for implementing methods of river control, providing disaster relief, and suppressing peasant revolts. During this time, Liu Chengzhong was

---

<sup>89</sup> Liu, "The military challenge," 268.

<sup>90</sup> See XZ, 70 for the discussion of Liu E's relationship with Li Hongzhang.

<sup>91</sup> ZL, 5.

also studying Western technology.<sup>92</sup> The life of Liu E's father suggests Liu Chengzhong was in favor of the Self-Strengthening Movement, applying Western learning to improve Chinese industry and technology: to prevent future aggressors and foreign powers from destabilizing the recovering Confucian government. Liu E shared the similar values and concerns of his father as reflected through Liu E's path as a scholar, river engineer, industrial entrepreneur, and writer.

Liu E saw in his father an ideal: the Confucian "superior man" (*junzi* 君子) who understood

Western technology was more than just "strange skill and perverted cleverness" (*qiji yinqiao* 奇

技淫巧), nor did he deny the power of developing technology, in which previous Chinese

dynasties had always emphasized before the advent of more groundbreaking Western technology in the late 18<sup>th</sup> century.

To summarize, Liu E's description of Liu Renfu's background in martial arts and military affairs originate from events and people in Liu E's environment; this includes his close friend Wang Zhengyi and the two rebellions Liu E witnessed in his lifetime. Liu E's friendship with Wang may answer why the author chose to write veiled attacks on the Manchu officials who supported it. There is still the question of who the anonymous monk is in Liu E's environment; the monk's background suggests Liu E's inspiration for this character may have been someone familiar with the traditions and folklore of Mt. Emei, the Shaolin Temple of Mt. Song, and obscure traditions of martial arts. In addition to Wang Zhengyi, Liu E's experience in Henan with his father, contact with supporters of the Self-Strengthening Movement, and his own witnessing of the traumatic historical events influenced his portrayal of the character Liu Renfu.

---

<sup>92</sup> For Liu Chengzhong's collecting of writings, *Chui tai sui bi* 吹臺隨筆 [*Informal Jottings of the Windy Terrace*] (written from 1864-1869) which documents this experience, see ZL, 326-43; cf. Kwong, "Self and Society," 367-68.

His suggestion in *Travels* that the government “needed another kind of ability”<sup>93</sup> reflects his own thinking and solutions to the nation’s problems: China needed to strengthen its military, industry, and infrastructure. Yet in considering the audience of *xiaoshuo*, Liu E does not explain Lao Can’s pursuit of other “practical professions,” and only describes Lao Can as an itinerant doctor, while Liu Renfu becomes a recluse on the mythical Peach Blossom Mountain. These characters have both, in different ways, left society to maintain their Confucian beliefs. Therefore, they reflect the author’s own understanding of a key Confucian principle: the choice between service (*shi* 仕) and retreat (*yin* 隱).

### **Activating the Way: The Itinerant Doctor and Benevolent Governor**

The blending of fact and fiction is what makes *Travels* not only a work of social satire, but also part of the larger *xiaoshuo* tradition. Liu E’s versatility as a writer may shed light on the novel’s “unity of feeling”<sup>94</sup> when read with other traditions of Chinese literature in mind. *Travels* may be considered a transitional work of Chinese literature, “a lyrical novel steeped in politics”<sup>95</sup> and at once “the last classic Chinese novel,”<sup>96</sup> with influences from both traditional Chinese travel writing<sup>97</sup> and Chinese unofficial history.

The title of *Travels* denotes the novel as Lao Can’s travel records, which suggest readers visualize Shandong’s environment and its people through the eyes of the protagonist, Lao Can. Lao Can is an autobiographical sketch of the author himself, in which Liu E expresses his philosophical thinking and social concerns. This includes Lao Can’s presence as a traveling

---

<sup>93</sup> *TL* 1, 76.

<sup>94</sup> Shadick, “a Social Novel,” 68.

<sup>95</sup> Hsia, “Art and Meaning,” 268.

<sup>96</sup> Shuen-fu Lin, “The Last Classic Chinese Novel: Vision and Design in the Travels of Laocan,” *Journal of the American Oriental Society* 121 (2001): 564.

<sup>97</sup> For an exploration of *Travels* as a work of traditional Chinese travel writing, see Daniel Y. Hou, “A Landscape of Mind: Liu E’s Treatment of Time and Space in *The Travels of Lao Ts’an*,” *Tamkang Review* 36, no. 4 (2006): 35-82.

doctor of the Way, his knowledge of river management and the Yellow River, compassion towards the common people, and his relationship with the character Governor Zhuang (*Zhuang gongbao* 莊宮保). These details have biographical precedent and shows why Liu E felt the conflict between service and retreat, finding safety in the Taigu School and later writing *Travels* to express his thinking, beliefs, and concerns.

In Chapter 1, the reader glimpses into Lao Can's dream where he meets his friends Wen Zhangbo 文章伯 (leader in literary composition) and De Huisheng 德慧生 (student of virtue of wisdom) at the Penglai Pavilion 蓬萊閣. When the names are read in parallel, it becomes clear Lao Can's two friends reflect in allegory<sup>98</sup> the path of the typical Qing scholar Lao Can refuses to become. He is not the career-driven scholar who feels it necessary to learn and compose the eight-legged essay (literary composition), nor is he a high-minded Confucian strictly concerned with cultivating morality (virtue and wisdom). In contrast, the author depicts Lao Can traveling (and presumably keeping a record) to contemplate man's relationship to nature, feeling a connection to "Heavenly winds and ocean waters [*tianfeng haishui* 天風海水]." <sup>99</sup> Lao Can appears in a Daoist light, his robes "flowing like that of an Immortal [*piaopiao yu xian zhizhi* 飄飄欲仙之致]." <sup>100</sup> He admires the ancient Daoist philosopher Zhuangzi 莊子 (4<sup>th</sup> c. BC), carrying a wood-block edition of *Zhuangzi* during his travels. <sup>101</sup> Lao Can prefers simple cotton clothing to

---

<sup>98</sup> Holoch, "Allegorical Narrative," 131.

<sup>99</sup> *TL* 2, 4.

<sup>100</sup> *TL* 2, 69.

<sup>101</sup> *TL* 2, 32.

the official's cap and belt; he is not seeking office (*touxiao* 投效) nor does he desire merit and fame (*gongming* 功名).<sup>102</sup> Instead, he is a traveling doctor who “activates the Way” (*xingdao* 行道), healing the country one person at a time.

Liu E's description of Lao Can has biographical precedent, for the portrayal of Lao Can reflects the author's career path and philosophy. Liu E's text on Chinese medicine have survived (*Yao yao fen liu pu zheng* 要藥分劉樸正), and in 1885, Liu E arrived in Yangzhou where he practiced traditional Chinese medicine, but he was later forced to pursue other professions.<sup>103</sup> Like his protagonist, Liu E did not follow the traditional path of the scholar-official and was unwilling to prepare for the civil service examinations. Instead, he turned to other ventures with the goal of assisting China during a time of need. After becoming a Taigu disciple, Zhuangzi influenced much of Liu E's thinking, shaping his portrayal of the character Lao Can. Liu E alludes to Zhuangzi in the preface of the sequel to *Travels*: “Life is like a dream. How could it be? Could this be the Old Man of Meng's point? I cannot be sure. All butterflies come and go, and this [cycle] cannot stop.”<sup>104</sup> This preface suggests Liu E's thinking was never very far from the philosophy of Zhuangzi, even during his time as a writer; this is especially clear in his treatment of Lao Can as the wandering Daoist figure. Furthermore, Liu E's commentary to *Zhuangzi* and *Laozi* 老子 has survived, which provides a look into his thinking towards statecraft and

---

<sup>102</sup> *TL* 2, 32-33.

<sup>103</sup> *ZL*, 5.

<sup>104</sup> *ZL*, 80-1.

philosophy.<sup>105</sup> These factors suggest Liu E's interest in Daoist thought greatly influenced his depiction of the character Lao Can. The author himself must have traveled through Shandong during his years in river management taking note of the vast landscape, and contemplating the relationship between humanity and nature. Liu E appreciated the natural spirit of China's past poets such as Tao Yuanming 陶淵明 (365-427) and Su Shi, for the author's extant poetry and poetry in *Travels* reflects a man akin to nature who paid close attention to natural surroundings and changes in weather.

Liu E's Daoist thinking and experience as a doctor of Chinese medicine shaped the portrayal of Lao Can, but the novel also focuses on the Yellow River and its flood victims. This worry is prominent in Liu E's thinking, and thus the author expresses this concern through several plot lines. In Chapter 2, Lao Can visits his patient Mr. Huang Ruihe 黃瑞和, who Lao Can tells, "The weather is now getting colder. Your honorable lord is no longer ill, and your sickness will not break out again. Next year if your honor needs advice, your humble servant [Lao Can] will come and assist you."<sup>106</sup> The author's use of language provides an extra layer of meaning in this passage. First, Mr. Huang (黃 meaning yellow) symbolizes the Yellow River; second, Lao Can meets Mr. Huang between late Autumn and early Winter, the term "break out again" (*zai fa* 再發) subtly referring to the breaking of dikes and flood activity, third, Mr. Huang's sickness (the Yellow River's flooding) will not occur until the following year. Lao Can's

---

<sup>105</sup> See *Liu E yuedu Laozi shouji* 劉鶚閱讀老子手記; *Liu E pizhu, xiaokan Zhuangzi* 劉鶚批注, 校勘莊子; and Zhu Songling 朱松齡, *Liu E pizhu Zhuangzi qianxi* 劉鶚批注莊子淺析, collected in Liu Delong, ed., *Liu E Ji* 劉鶚集 (Jilin: Jilin wenshi chubanshe, 2006), 621-32.

<sup>106</sup> *TL* 2, 13.

knowledge of river conservancy eventually reaches Governor Zhuang, who seeks his advice on managing the Yellow River:

The Governor said, “. . . In [Henan] the river is very wide; but here it is very narrow.”

[Lao Can] said, “The important thing is not that when the river is narrow there is no room for the water, for this only happens during the month or so when the river is in flood. The

rest of the time, the current being weak, the silt is easily deposited . . . [Wang Jing’s 王景]

method of river control was derived in a direct line from that of the Great [Yu]. He

emphasized the ‘curbing’ which is referred to in the expression ‘[Yu] curbed the flood

waters [*Dayu yi hongshui*大禹抑洪水].”<sup>107</sup>

Lao Can’s knowledge of river conservancy hints at his experience prior to becoming an itinerant doctor and establishes his acute understanding of North China’s Yellow River: a river that both provides and takes away life. Lao Can later expresses his sympathy for flood victims, such as the Cui sisters: “Who could have foreseen that when they grow up, either because of famine or because the father was fond of gambling, or smoked opium . . . their parents would be driven to an extremity would sell their daughters . . . to be casually treated by a procuress and to live a indescribable life.”<sup>108</sup> Not only does Lao Can pity the Cui sisters, but he also traces their problems to the lack of support from the local administration that should ideally support the common people, and a father whose destructive habits harm the livelihood of his family. Lao Can feels compassion for oppressed citizens and flood victims; he discovers the Cui sisters were

---

<sup>107</sup> *TL* 1, 38-9.

<sup>108</sup> *TL* 1, 146.



forced to become courtesans after surviving a great flood brought on by the Yellow River. They discuss Governor Zhuang's involvement in this disaster:

“[He] worried to death about this, and they say a certain official, a famous southerner of great literary ability, brought some sort of book and gave it to him to read. The book said that the trouble was that the river was too narrow, that unless it was widened there would be no room for the water, that the people's dikes must be destroyed and they must again use the main dikes.”<sup>109</sup>

In hearing the hardships of the common people, Lao Can criticizes evil officials “prompted by self-interest” who abandon Confucian ethics and sacrifice the people's welfare for wealth and rank.<sup>110</sup> The passage above also poses a few questions, however: whom does the scholar of the south reflect in Liu E's environment, and what is the text that Governor Zhuang read?

The author's treatment of the Yellow River in *Travels* is not without precedent. The symbolism of Mr. Huang, Lao Can's discussion of the Yellow River with Governor Zhuang, and Governor Zhuang's involvement in the Yellow River's flooding all point towards Liu E's past: his projects and journey along the Yellow River, knowledge of river control conservancy, and partnership with governor of Shandong Zhang Yao (known as Zhuang Qinguo 莊勤果).<sup>111</sup> The character Mr. Huang refers to Liu E's work on the Yellow River from 1888-1893. Liu E spoke with flood victims in 1889, which he documented in his report on the Yellow River that year; he understood the struggle of “the common people, who loathed the slandering local authorities, who upon becoming officials blame everything on the will of Heaven [*xia min ze yuan du guan*

---

<sup>109</sup> *TL* 1, 149.

<sup>110</sup> *TL* 1, 157.

<sup>111</sup> See note 12.

*fu, shang guan ze gui zui tian xin* 下民則怨讎官府, 上官則歸罪天心].”<sup>112</sup> Liu E faced

challenges in dealing with these types of officials, specifically advisors who objected to Liu E’s suggestion of deepening the river. His close friend Luo Zhenyu in a biography of Liu E documents this issue:

In 1888 . . . floods had reached the province of Shandong . . . [and] governor of Shandong Zhuang Qinguo requested the help of many learned scholars, but none of them really had knowledge in river management. They all agreed with Jia Rang’s [賈讓] idea of not struggling with the river for land and wanted to use up the land near the river to profit from it. Shanghai’s prominent scholar Shi Shaoqing [施少卿] agreed with this and planned to transfer the country’s disaster relief funds to assist officials in purchasing the peoples’ lands. When Liu E arrived, he argued against this and instead emphasized the need to control the waters. He then wrote the *Seven Methods of River Management* [Zhihe qishuo 治河七說].<sup>113</sup>

To answer the previous question, the flood control text mentioned in *Travels* must refer to Jia Rang’s *Three Methods* (*san ce* 三策),<sup>114</sup> which argues to not struggle with the river for land and instead allow the river to widen. If we accept Liu E’s tendency to historicize in *Travels*, the famous scholar of the south the Cui sisters mention refers to Shi Shaoqing, for his methods of river control conflicted with Liu E’s approaches to river management. Liu E’s knowledge of

---

<sup>112</sup> ZL, 106.

<sup>113</sup> Found in Hu Shi’s “Preface to the *Travels of Lao Can*,” collected in ZL 367-89.

<sup>114</sup> TL 1, 38.

river conservancy was not limited to just text-based learning, however. Unlike typical scholars, he also took responsibility into his own hands to assist common people. Liu E engineered solutions to control the Yellow River, and when needed, he willingly performed the same laborious duties of common workers.

His method of deepening the river came from the Great Yu, one of China's earliest heroes of flood control; this was passed down to a certain Wang Jing of the Eastern Han period (25-220).<sup>115</sup> According to Liu E, Wang Jing's methods were later transmitted to Pan Jixun 潘季馴 (dates unknown) of the Ming dynasty and Jin Wenxiang 靳文襄 (1633-1692). Pan Jixun was an expert on river surveying who built dikes and wrote several texts on flood control. In the same manner, Jin Wenxiang applied Wang Jing's method of deepening the riverbed and using dikes to prevent floods.<sup>116</sup> Lao Can's understanding of the Yellow River in *Travels* reflects Liu E's specialized knowledge in river control. Moreover, floods described in the novel were real accounts the author witnessed during his charting of the Yellow River. His experience surveying the Yellow River shaped his treatment of plotlines and portrayal of the characters Lao Can, the Cui sisters, and Governor Zhuang.

Compared to his description of other characters, Liu E writes in great detail of Governor Zhuang and his discussion with Lao Can concerning the Yellow River, flooding, and river control methods. The character Governor Zhuang holds partial responsibility for the flood that occurred in Qidong *xian* 齊東縣. Lao Can hears of the flood and its devastating outcome from

---

<sup>115</sup> XZ, 7.

<sup>116</sup> TL 1, 38-39, 244 n. 31-32.

Cui Hua: “[Cui Huan] belonged to our town, [Qidong *xian*]. Her family was called [Tian 田] . . . Most of the land on the banks of our [Daqing River 大清河] is cotton-growing land . . . [In less than] three days . . . the [houses were] destroyed and the people dead.”<sup>117</sup> Possessing no knowledge of flood control himself, Governor Zhuang has no choice but to follow the counsel of his advisors, who argue the Yellow River needs to be widened; they suggest destroying the dikes under the reasoning, “if the small do not suffer, then the great scheme is thwarted [*xiao buren ze luan damou* 小不忍則亂大謀].”<sup>118</sup> Although Governor Zhuang worries over the livelihood of the several hundred thousand families, he is forced to carry out the plan of his advisors, failing to warn the people before destroying the dikes. Liu E depicts Governor Zhuang as an ideal benevolent official, for Governor Zhuang—contrary to the counsel of his advisors—wants to “move the people out of harm’s way” (*yi qi min* 移其民). He sheds tears over the lives that will be lost and later sends commissioned boats to distribute bread to disaster victims.<sup>119</sup>

Liu E’s depiction of Governor Zhuang suggests he is a biographical portrait of Liu E’s former employer and friend: Governor Zhang Yao, for the character Governor Zhuang mirrors the concerns and temperament the actual governor of Shandong. Zhang Yao was a native of Zhenya, Henan Province who spent time in Henan suppressing rebellions in the 1860s, where he met Liu E’s father, Liu Chengzhong.<sup>120</sup> Liu E then served under Zhang Yao as advisor on river

---

<sup>117</sup> *TL* 1, 149.

<sup>118</sup> *TL* 1, 155; *TL* 2, 174.

<sup>119</sup> *TL* 1, 156.

<sup>120</sup> *XZ*, 9.

management from 1889-1891. These two factors shed light on why Liu E praises Zhang Yao in his Chapter 13 commentary:

Zhuang Qinguo [Zhang Yao] was kind and easy going. Even now, the people of Shandong think of him. It is only in flood control that was unavoidably a disaster; the people below the bank of Jiyang were abandoned and the levees were given up, even more a travesty the famine that ensued. One could not help but hear of this tragedy, let alone witness it. From this, the author's tears fell.<sup>121</sup>

The commentary refers to the flood of Jiyang in 1889 when Liu E was surveying the Yellow River.<sup>122</sup> During this project, he witnessed over a thousand villages immersed in water.

According to Liu E's commentary, he provided disaster relief by purchasing and distributing fifty catties of steamed bread.<sup>123</sup> During this time, Liu E also visited Qidong *xian* to gather

information on the Daqing River, where he discovered the aftermath of a flood in the town of Ting'an 延安. These facts come from his 1889 report on the Yellow River, which was given to

Zhang Yao upon completion of Liu E's surveying project.<sup>124</sup> Liu E's commentary indicates his description of character Governor Zhuang in the novel is a biographical account. According to

the imperial records of the Guangxu Emperor, Zhang Yao was involved in flood control and disaster relief throughout his whole term as governor.<sup>125</sup> Liu E's portrayal of the character

Governor Zhuang represents the actual governor of Shandong: the ideal "father and mother official" who never neglected his responsibility to support and aid the people.

---

<sup>121</sup> *ZL*, 77.

<sup>122</sup> *ZL*, 78; cf. Wong, "Facts of Fiction," 165-6.

<sup>123</sup> *ZL*, 78.

<sup>124</sup> See note 57.

<sup>125</sup> See entries from the *Dezong shilu* 德宗實錄, 1886-1890 (The 12<sup>th</sup> to the 16<sup>th</sup> year of the Guangxu Emperor) selected in *Qing shilu Shandong shiliao xuan* 清實錄山東史料選 (Jinan: Qilu Shushe, 1984), 1846-863.

To sum up, Liu E pulls events from his life and people in his environment into the realm of fiction. It can therefore be suggested Lao Can represents Liu E's Daoist thinking and the author's knowledge of river conservancy, while the character Governor Zhuang is Liu E's portrait of the governor of Shandong, Zhang Yao. In addition, the Cui Sisters depicted in the novel were actual flood in Liu E's environment as stated in his commentary.<sup>126</sup> Liu E was part of a generation concerned with the revival of Confucian ideals, to "secure the lives of the people" (*an minsheng* 安民生) and to "secure the hearts of the people" (*gu minxin* 固民心).<sup>127</sup> These principles are inherent in the author's autobiographical protagonist Lao Can, who dedicates himself to rescuing people from injustice, and the character Governor Zhuang, who made his best attempt to prevent flood disaster and provide disaster relief. Mary C. Wright asserts the Tongzhi Restoration was dedicated to "preventing the perennial rages of the Huai and Yellow Rivers," which led to the development of solutions throughout the 1860s; however, funding was lost and relocated to strengthen China's military<sup>128</sup> to protect China from further foreign encroachment and to prevent future rebellions. Liu E's father's activities along the Yellow River and the author's research of the Yellow River influenced his Liu E's portrayal of Lao Can. Liu E felt he inherited his father's avid interest in river conservancy and concern for flood victims, as Liu Chengzhong was active helping disaster victims in Henan during the great flood of 1867-68:<sup>129</sup> in charge of the same responsibilities Liu E would have two decades later. During this time, Liu Chengzhong wrote *Hefang chuyi* 河防芻議 (*My Humble Opinion on Flood*

---

<sup>126</sup> ZL, 77.

<sup>127</sup> ZL, 162-63.

<sup>128</sup> Wright, *Last Stand*, 63.

<sup>129</sup> ZL, 134. See note 92 for Liu Chengzhong's records of his experience in Henan, written from 1864-1869.

*Prevention*), in which he emphasized “building dikes to control waters [and] controlling the waters to attack the silt [*zhu ti shu shui shu shui gong sha* 築堤束水束水攻沙].”<sup>130</sup> These ideas are inherent in Liu E’s thinking towards river control, specifically the controlling of silt (not widening the river) and building dikes to control the water. Like his father, Liu E kept travel records, recording his successes and tracking the development of his river projects in several works during his career in river conservancy. Amidst the plains of North China, Liu E pondered the future of Chinese civilization. In a similar spirit to the *fang shi* 方士 of China’s past,<sup>131</sup> he combined both traditional and unconventional learning to address the problems of a country in dire straits. Liu E admired Governor Zhang Yao for his acts of kindness towards victims of flood and famine, inspiring Liu E to render a portrayal of his friend and employer in *Travels*. In recent times, Zhang Yao has been given the title “Great Ruler of the Yellow River” (*Huanghe dawang* 黃河大王) in memory of his collaboration with Liu E and their success in curbing the Yellow River’s floods.<sup>132</sup>

### **Otherworldly Figures: The Origin and Doctrine of the Taigu School of Thought**

Liu E’s philosophical thinking in *Travels* appears most prominently in Chapter 9-11, which takes place on the mythical Peach Blossom Mountain. The author’s portrayal of the characters Maiden Yu and Yellow Dragon represents the Taigu School on several levels: their

---

<sup>130</sup> XZ, 5.

<sup>131</sup> Wong, “*Fang-shih* Tradition,” 306.

<sup>132</sup> Zhao Qi 趙琪, ed., “Governor of Shandong Zhang Yao is deemed the Great Ruler of the Yellow River; the author of the *Travels of Lao Can* Liu E was his assistant” [*Shandong xunfu Zhang Yao bei chengwei Huanghe dawang, Laocan youji de zuozhe Liu E shi ta de zhushou* 山東巡撫張曜被稱為黃河大王, 《老殘遊記》的作者劉鶚是他的助手], *Shenghuo ribao* 生活日報 (Jinan, Shandong), July 7, 2010, 14.

syncretic doctrine, which includes Confucian, Daoist, and Buddhist thought; Taigu founder, Zhou Taigu 周太谷; Taigu spiritual leader, Li Longchuan; and Taigu disciple, Huang Baonian. Liu Houze suggests “researching Liu E’s thinking and his motivations requires special attention to his relationship to the Taigu School.”<sup>133</sup> In contrast, Liu E’s treatment of the novel’s content suggest the author blends actual teachings and real people in his portrayal of characters in *Travels*. Many passages that include Maiden Yu and Yellow Dragon resonate with Confucian rationalism, which deterred people from relying on deities, rites, or the supernatural. Their discussions with Shen Ziping provides a connection to the larger arena of the Three Teachings (*Sanjiao Heyi* 三教合一).<sup>134</sup> Although no evidence has surfaced of direct transmission, Judith A. Berling draws a comparison between Lin Zhaoen 林兆恩 (1517-1598) and the Taigu School on many levels: their similarities in Confucian rationalism, moral cultivation, and embracing of the Three Teachings.<sup>135</sup> With this in mind, a thorough examination is needed: to explore Liu E’s motivations for the creation of characters Maiden Yu and Yellow Dragon in connection to the origin and doctrine of the Taigu School.

After arriving on the Peach Blossom Mountain, the young official Shen Ziping begins engaging in a series of discussions with Maiden Yu and Yellow Dragon. Shen Ziping sees three poems and notes their Daoist and Buddhist overtones:

[Shen Ziping] asked, “Who composed the poems on this set of scrolls . . . is he a Buddhist monk or a Taoist priest? Why does he put his poems in a sort of Taoistic

---

<sup>133</sup> ZL, 7.

<sup>134</sup> The Three Teachings refers to Confucianism, Daoism, and Buddhism. Later generations combined these traditions of thought as one, syncretic teaching.

<sup>135</sup> Judith A. Berling, *The Syncretic Religion of Lin Chao-en* (New York: Columbia University Press, 1980), 229-30.



language? And isn't there also a lot of Buddhist lore?" [Maiden Yu] said, "He is neither a Taoist priest or a Buddhist monk . . . He always says, 'the three schools – Confucianism, Buddhism, Taoism – are like the signboards hung outside three shops. In reality they are all sellers of mixed provisions . . . All teachings have two layers: one can be called the surface teaching, one the inner teaching' . . . for this reason Mr. Yellow Dragon doesn't hold to any one teaching, but freely chants them all."<sup>136</sup>

The character Yellow Dragon and his teachings reflects the Taigu School and Liu E's philosophical thinking on several levels: first, Yellow Dragon's poetry expresses the author's knowledge of Buddhist and Daoist thought; second, in a similar light to the Taigu School, Yellow Dragon embraces qualities from all three teachings and believes surface teachings of Daoism and Buddhism are only different in human perception;<sup>137</sup> finally, after Yellow Dragon appears, he discusses the changing brightness and darkness of the moon, comparing it to human nature's tendency towards both good and bad. Aside from Yellow Dragon's expounding of human nature and perception, this character emphasizes the inner teachings of Daoist, Buddhist, and Confucian thought, which encourages man to cultivate morality.

In several passages of *Travels*, Liu E's portrayal of Yellow Dragon draws a clear connection to the syncretic nature of the Taigu doctrine. According to Yan Weiqing, the Taigu School has been called several different names, including the Taizhou School (*Taizhou jiao* 泰州教), the Great Perfection School (*Da cheng jiao* 大成教), and the Yellow Cliff School (*Huang*

---

<sup>136</sup> *TL* 1, 97-98.

<sup>137</sup> See *TL* 1, 98. In Chinese philosophy, the term *yan er bi she* 眼耳鼻舌 (sight, hearing, smell, and taste) is commonly used to describe human perception.

*ya jiao* 黃崖教.<sup>138</sup> Their fortress was located on Mt. Yellow Cliff between Changqing and Feicheng in Shandong Province. The Taigu School attracted many disciples, but some members were opposed to the Qing government. In 1866, governor of Shandong, Yan Jingming 閻敬銘 (1817-1892) commanded the military to burn down their fortress and eliminate the followers: on the pretense that the Taigu School was a perverse religious sect (*xiejiao* 邪教) that opposed the Qing government.<sup>139</sup> Yet, the Taigu School's political position towards the Qing regime still remains unclear. If there was any opposition toward the Qing government, one might ask how early it started, for political resistance is often quiet and rooted in local objections and dissatisfaction.

Although Liu E alludes to the Taigu School in the dialogue between Shen Ziping, Maiden Yu, and Yellow Dragon, two central questions remain: who created the Taigu School, and how deeply was Liu E involved with this school of thought? As a member of the Taigu School, their founder's teachings undoubtedly influenced Liu E's thinking and writing. The Taigu doctrine can be traced to Zhou Taigu, who was active between the *Daoguang* 道光 and *Xianfeng* 咸豐 periods (1821-1851). In Yangzhou, he advised his disciples: "One's learning should pay respect to *liangzhi* [良知] and praise *shi xing* [實行], to learn closer the ways of Lu Jiuyuan [陸九淵 1139-1192] and Wang Yangming [王陽明 1472-1529], and to also understand Buddhist and

---

<sup>138</sup> ZL, 635.

<sup>139</sup> ZL, 635-67.

Daoist teachings.”<sup>140</sup> Zhou Taigu encourages his disciples to cultivate knowledge from Confucian, Daoist, and Buddhist thought. The term *liangzhi* can be translated as the innate ability to distinguish right, wrong (*shi, fei* 是非) and good, evil (*shan, e* 善惡),<sup>141</sup> while the second term *shixing* means to practical action. He mentions these two principles to encourage his disciples to cultivate a pure mind, morality, and to take action without dishonest or harmful intentions. Similar to Zhou Taigu, the Yellow Dragon supports the cultivation of morality and embracing of the Three Teachings. In this light, Liu E’s knowledge of Zhou Taigu and his teachings strongly influenced his portrayal of Yellow Dragon in *Travels* as the prophetic, spiritual figure of Confucian, Daoist, and Buddhist wisdom.

Although the Taigu School supported Confucianism, Daoism, and Buddhism, Liu E’s portrayal of Maiden Yu suggests their doctrine favored Confucian teachings. She continues her discussion of the Three Teachings with Shen Ziping:

“Their similarity consists in ‘encouraging man to be good, leading man to be disinterested.’ If all men were disinterested, the Empire would have peace. If all men scheme for private advantage, then the Empire is in chaos. Only Confucianism is thoroughly disinterested . . . [Confucius] said, ‘To attack heterodoxy, this is truly injurious.’ Now the Buddhists and Taoists indeed were narrow-minded. They feared lest later generations should not honor their teachings, so they talked a lot about heaven and hell in order to frighten people.”<sup>142</sup>

---

<sup>140</sup> ZL, 635.

<sup>141</sup> See Lu Erkui 陸爾奎, *Ciyuan* 辭源 (Beijing: Commercial Press, 2006), 2609. This term was first mentioned in *Mengzi* 孟子.

<sup>142</sup> TL 1, 98.

Although Maiden Yu argues all three teachings encourage man to be moral and disinterested—for example, having fewer desires and reducing one’s ambitions—she argues Buddhist and Daoist teachings have been distorted: that ultimately Confucian thought is the most “disinterested.” She reasons that compared to Buddhists and Daoists, Confucians do not encourage superstition or beliefs to convince people to honor Confucian teachings. Her discourse refers to Confucian rationalism, but more specifically, Confucian principles of morality, righteousness (*ren yi* 仁 義), and the fact that Confucian thought only dealt with human affairs (e.g. “the Five Relationships” or *wulun* 五倫) prior to developments of metaphysically charged schools of Confucian thought in the late Tang and Song periods.

Although Liu E portrays Maiden Yu as a supporter of Confucianism, there is still the question of how the Taigu School was similar or diverged from earlier Confucian philosophy. Maiden Yu later attacks the Song Neo-Confucians for distorting the original meaning of Confucian teachings. She states they “made many mistakes [but] were right in some places,” concluding that their “various deceptions . . . are too many to be recounted.”<sup>143</sup> Particularly, she disagrees with Zhu Xi’s absolute division of human desire (*renyu* 人欲) and heavenly principle (*tianli* 天理), arguing that Confucius’ selection of poems in the *Book of Odes* clearly express these two principles do not conflict once a person combines feeling (*qing* 情) with right behavior (*li* 禮).<sup>144</sup> These passages suggest two points: the Taigu School may not have fully supported

---

<sup>143</sup> *TL* 1, 101.

<sup>144</sup> *TL* 1, 101.

Zhu Xi's philosophy, and/or Liu E's Confucian philosophy may have differed from the Taigu doctrine. Nevertheless, Liu E understood the conflict between these competing Neo-Confucian schools during the Song dynasty as shown in his portrayal of Maiden Yu, who discusses the conflict between Zhu Xi, who led the School of Principle (*Lixue* 理學), and Lu Jiuyuan, who led the School of Mind (*Xinxue* 心學).<sup>145</sup>

As a member of the Taigu School, Liu E must have studied these two branches of Neo-Confucian thought, for the Taigu doctrine had, at least, some similarities with their philosophies. The relationship between Liu E's thinking and Taigu philosophy becomes clearer in his portrayal of the Yellow Dragon in *Travels*, who predicts several events: the Boxer Rebellion, the uprising of the Southern revolutionaries, but also the future of China when "the introduction of new culture from Europe will revivify [the] ancient culture of the Three Rulers and Five Emperors . . . [and] achieve a universal culture."<sup>146</sup> Yellow shows a deep understanding of the *Book of Changes* (*Yi jing* 易經 or *Zhou yi* 周易), referring to himself as the "field dragon" (*tianli de long* 田裏的龍), which alludes to the first hexagram (*qian* 乾) associated with the "hidden dragon" (*qian long* 潛龍).<sup>147</sup> Yet, it would be assuming too much to say these details reflects Liu E's complete philosophical or spiritual thinking. Liu E was unquestionably aware of Confucian, Buddhist, and Daoist teachings as a member of the Taigu School; however, one cannot be sure,

---

<sup>145</sup> *TL* 1, 100.

<sup>146</sup> *TL* 1, 120.

<sup>147</sup> *TL* 1, 116. For information on the hexagram, see Richard Wilhelm, trans. into English by Cary F. Baynes, *The I Ching or Book of Changes* (Princeton: Princeton University Press, 1977), 3-10.

he truly believed in reproducing an ideal past, for he was concerned with the current times and how to better China's troubled situation.

Liu Dashen's explanation of Yellow Dragon's poems are a clear indication of how members of the Taigu School—spiritual leader Li Longchuan, and disciple Huang Baonian— influenced Liu E's treatment of the character Yellow Dragon.<sup>148</sup> In the same manner, Liu E's portrayal of Yellow Dragon as a prophetic, spiritual figure indicates this character closely resembles Zhou Taigu. The commentary to Zhou Taigu's writings supports this argument, for Liu E himself wrote this commentary in 1893: “Master Zhou Taigu was talented in many ways, skilled in Chinese medicine and in understanding the meaning of the *Book of Changes*.”<sup>149</sup> In this entry, Liu E refers to himself at the end as Lao Can, indicating a connection between the protagonist in his future novel and Zhou Taigu; furthermore, Liu E's comment suggests Yellow Dragon's knowledge of the *Book of Changes* in *Travels* comes from Liu E's familiarity with Zhou Taigu's ability in divination. As a member of the Taigu School, Liu E was encouraged to “establish merit and writing [*ligong* 立功 and *liyan* 立言] . . . when in dire straits, moralize the self [*qiong ze du shan qi shen* 窮則獨善其身]; and when successful, aid the world [*qiong ze du shan qi shen* 窮則獨善其身].”<sup>150</sup> Zhou Taigu encouraged his disciples to learn from Lu Jiuyuan and Wang Yangming, showing he supported the School of the Mind.<sup>151</sup> On the other hand, Yan Weiqing argues that outside of some similarities in spirit, there is no evidence of transmission

---

<sup>148</sup> *TL* 1, 251 n. 4.

<sup>149</sup> See Liu Delong, *Liu E Sanlun* 劉鵬散論 (Kunming: Yunnan renmin chubanshe, 1998), 213-219.

<sup>150</sup> *ZL*, 641.

<sup>151</sup> See note 140.

between the thinkers of School of Mind and the Taigu School.<sup>152</sup> Yan is correct in arguing the lack of clear, direct transmission of teachings, but perhaps lines of transmission are not always visible, nor are these connections often documented in writing.<sup>153</sup>

Liu E at least studied, if not influenced, the teachings of Wang Yangming. In his preface, Liu E refers to himself as *Hongdu bai lian sheng* 洪都百鍊生, or “The Scholar of Hundred Temperings from Hongdu.” It is still unclear why he deliberately changes the initial character from 洪 to the homophonous 鴻 as his original manuscript provides the former character.<sup>154</sup> His preface suggests, however, the pseudonym may have additional meanings:

We people of this age have stirred feelings about ourselves and the world, our families and country, our society, and about the various teachings. The deeper the feelings, the more bitter the weeping: this is why The Hundred Times Tempered Scholar of Hongdu writes this book, *The Travels of Lao Can*.<sup>155</sup>

The use of the word “temperings” in his pseudonym may refer to several different events in his life: his experience as a Taigu disciple; efforts in flood control and river conservancy; various attempts to industrialize China; and his enemies’ accusations of being an expert in foreign affairs (*yangwu* 洋務) and a traitor to the Qing Empire.

---

<sup>152</sup> See ZL, 635; Shadick, “a Social Novel,” 413 n. 13. Liu E’s son Liu Dashen believed the Taigu doctrine originated from the teachings of Wang Yangming.

<sup>153</sup> For a study of Wang Yangming and Lu Jiuyuan’s influence on his thinking, see Carson Chang, *Wang Yang-ming: Idealist Philosopher of Sixteenth-century China* (New York: St. John’s University Press, 1962).

<sup>154</sup> See Wong in “Liu E’s Fiction,” 104n. 9, and in “Fang-shih Tradition,” 302-3. He discusses this change, which appears in the early publication of the sequel in the Tianjin newspaper *Riri Xinwen* 日日新聞, and again mentions the use of Liu E’s pseudonym in the Fragment text (*waipian* 外篇) that was discovered in 1929.

<sup>155</sup> TL 2, 2.

Liu E's use of Hongdu 洪都 (modern day Nanchang 南昌) and later pun on this name in his pseudonym suggests Liu E studied Wang Yangming's philosophy during his lifetime, for Liu E's reference to Hongdu may hint at the esteem he held for Wang Yangming. Wang Yangming spent time in Hongdu according his official biography: his marriage at age 17, his return to Hongdu as governor of Jiangxi, and the funeral procession for his death in this same location.<sup>156</sup> His disciple Chen Jiuchuan 陳酒川 (1474-1555) writes in conversation records that Wang Yangming was in Hongdu "busy with military affairs," but was still active engaging his disciples.<sup>157</sup> Wang Yangming created the idea of "unity of knowledge and action" (*zhixing heyi* 知行合一) and believed hardships gave people an opportunity for spiritual practice; in his exile to Longchang 龍場 (modern Guizhou), he lived among barbarians where he "stimulated his mind" (*dongxin* 動心) and "hardened his nature" (*renxing* 忍性).<sup>158</sup> In this light, Wang Yangming's experience shows similarities to the "hundred temperings" Liu E experienced, for he faced several challenges in his life: failed entrepreneurial ventures, accusations by powerful enemies in the government, the labor and hardships of river management, and dealing with the current events of foreign hostility and violent rebellions during his lifetime.

---

<sup>156</sup> Wang Yangming, *The Philosophy of Wang Yang-ming*, trans. Frederick Henke (New York: The Open Court Publishing Co., 1916), 6, 24, 39.

<sup>157</sup> Wang Yangming, *Instructions for Practical Living and Other Neo-Confucian Writings*, trans. Wing-tsit Chan (New York; Columbia University Press, 1963), 189.

<sup>158</sup> See Chan, *Neo-Confucian Writings*, 265; Lu, *Ciyuan*, 1101. The term *dongxin renxing* 動心忍性 comes from *Mengzi* in Mengzi's dialogue with Gaozi.



Liu E began his Confucian education at an early age. In his youth, he studied the Song philosophers with his father, later studying poetry, medicine, and astronomy.<sup>159</sup> Liu E's Confucian learning must have included key ideas such as “unity of knowledge and action,” “investigation of things” (*gewu* 格物), and “acquisition of knowledge” (*zhizhi* 致知). His educational background explains why he depicts Maiden Yu attacking schools of thought that distorted the original meaning of Confucian teachings. Wang Yangming also makes a similar point, criticizing the followers of Zhu Xi<sup>160</sup> in his denouncements:

Confucians of later generations . . . have lost the truth and drifted into the four schools of memorization and recitation, composition, success and profit, and textual criticism, and thus at the bottom are no different from the heterodox schools . . . They seem to compare unfavorably with the Buddhists and Taoists, whose minds are pure, whose desires are few, and who are free from the worldly bondage of fame and profit.<sup>161</sup>

Liu E cultivated not only Western learning, but also traditional Chinese learning. One might suggest he shared Wang Yangming's opinion that Confucians of later generations were learned, but lacked principle due to their obsession with text-based knowledge and preparation for the civil service examinations. To Liu E, their ambitions for wealth and fame could not solve China's political and social problems. Compared to scholars of his generation on the path toward officialdom, Liu E turned to philosophical inquiry as a Taigu disciple and began investigating “true knowledge” (真理), a term first used by Huigao 慧皎 (497-554) to describe the purest type

---

<sup>159</sup> ZL, 6; cf. Shadick, “a Social Novel,” 44.

<sup>160</sup> See Chan, *Neo-Confucian Writings*, 263-67 for Wang Yangming's “preface to Zhu Xi's Final Conclusions Arrived at Late in Life.”

<sup>161</sup> Chan, *Neo-Confucian Writings*, 41.

of understanding.<sup>162</sup> Liu E rigorously studied Confucian Classics, Buddhist Scriptures, and the 100 Schools of Thought: his philosophy taking a syncretic shape as he cultivated knowledge and principles of Confucian morality.<sup>163</sup>

The content in *Travels*, Liu E's biography, and the teachings of Zhou Taigu establish Liu E's treatment of Chinese philosophy in Chapters 9-11 reflects his understanding and relationship with the Taigu School. Liu E's 1902 letter to fellow Taigu disciple Huang Baonian clearly shows the author's dedication to the Taigu School throughout his life:

Your letter said you will exert yourself inside [the organization] and that I should exert myself outside [in the world]: “We are both the descendants of Kongtong [Zhou Taigu], and both cultivate the ancient and modern tradition of the Way, united in body and destiny. Even if the sea dries up and the stones rot, there will be no disloyalty between us, because we are not restricted by outside appearance nor do we harbor doubts because of differing goals” . . . In the end, I make the world my responsibility. The ordinary man also has responsibility in the safety and danger of the world. The sickness of our country today is in the people's loss of support . . . When people are in trouble their thoughts are confused . . . The great principles of sagely merit lie in nothing other than the two paths of teaching and cultivation. You take as your responsibility to teach the world, I take as my responsibility to nourish the world. We do [our tasks], each of us exerting the utmost strength of our minds and support each other.<sup>164</sup>

---

<sup>162</sup> Lu, *Ciyuan*, 2209-10.

<sup>163</sup> ZL, 6.

<sup>164</sup> ZL, 299-300; cf. Stuart H. Sargent, “Lao-Ts'an and Fictive Thinking,” *Journal of the Chinese Language Teachers Association* 12 (1977): 215-16.

Aside from their association with the Taigu School, the letter reveals Liu E and Huang Baonian clearly took different paths in their later lives. The following year in 1903, Huang Baonian (*zi*: Xipeng 錫朋) attained his *jinshi* degree<sup>165</sup> to “teach the world;” at the same time, Liu E began writing *Travels*, assisting his country in need as an entrepreneur, river engineer, and writer to “nourish the world.” Compared to his friend Huang Baonian, Liu E refused to undergo the training for the eight-legged essay; instead, he turned to more practical professions to address China’s technological and industrial, eventually entering the realm of *xiaoshuo* writing. His letter reflects a man caught in the social and political turbulence of a struggling nation and unstable government, his concern: the common people and the future of Chinese civilization.

To conclude, it can be suggested Taigu founder Zhou Taigu is one of the main influences in Liu E’s treatment of the characters Yellow Dragon and Maiden Yu in *Travels*, particularly Yellow Dragon’s similarities to the Taigu founder’s teachings: to cultivate morality and take true action; to embrace Confucianism, Daoism, and Buddhism; and to investigate the writings of Liu Jiuyuan, Wang Yangming, and texts such as the *Book of Changes*. Liu E’s education from his youth to his entrance into the Taigu School suggests he had unique philosophical and spiritual views; however, there has been little evidence of what Liu E’s true philosophical thinking was outside of the Taigu doctrine. If his philosophy included the *nourishment* of the world to help the Chinese people in a time of need, one finds his drive to *investigate* Western technology and industry are tied closely with his Confucian thinking. Liu E combine traditional learning with his knowledge of technology; in the similar spirit of Wang Yangming’s “unity of knowledge and

---

<sup>165</sup> Jiang Qingbai 江慶柏, ed., *Qingchao jinshi timing lu* 清朝進士題名錄 (Beijing: Zhonghua shuju, 2007), 1316.

action,” Liu E applied his knowledge to river management, industrial development, and writing *xiaoshuo* to support his country in a time of need.

## Conclusion

Liu E’s treatment of characters and plotlines in *Travels* draws influence from actual events and persons. For this reason, the author’s portrayal of several characters parallels actual people: Prefect Yu, the counterpart of Yu Xian (d. 1900); the official Gang Bi, a satire of Gang Yi (d. 1899), Xu Tong (d. 1900), and Li Bingheng (d. 1900); Liu Renfu, the portrait of Liu E’s friend Wang Zhengyi (d. 1900); Lao Can, an autobiographical sketch of the author; Governor Zhuang, the portrayal of Lao Can’s employer and friend governor of Shandong, Zhang Yao (1832-1891); and the intelligent Maiden Yu and spiritual figure Yellow Dragon, characters inspired by both the Taigu School and its founder, Zhou Taigu. Liu E’s involvement in the Self-Strengthening Movement and witnessing of the devastating rebellions during his lifetime undoubtedly influenced his treatment of various plotlines and details in *Travels*. He is both a storyteller and an historian who writes in the *xiaoshuo* medium to express his political, social, and philosophical thinking, combining fact and fiction in *Travels* to state his concerns for China’s fallen state and to establish his spiritual self.

Considering the research conducted regarding Liu E’s biography and his novel, there are still many questions left for reflection: if we consider *Travels* an incomplete work of literature unfinished by its author, how should one define the elements that unify the novel in theme and feeling? Scholars have explained the novel’s autobiographical nature, as well as its underlying social, political and philosophical stance. Why Liu E felt compelled to write the novel in the first place still remains unresolved. The answer could be very simple: to help his struggling friend Lian Mengqing, author of *Words from the Girl Next Door* (*Linnu yu* 鄰女語). Yet, Liu E’s novel

is not simply the fiction of social criticism (*qianze xiaoshuo* 譴責小說) that Lu Xun has led us to believe, nor is it a work of literature completely critical of the Qing bureaucracy like Li Boyuan's novel. *Travels* is a combination of many genres, showing influence from several Chinese traditions of writing. It can be considered one of the earliest novels of late Imperial China to borrow elements from Western traditions of fiction—making it not only a political, social, and philosophical work of literature, but also a Chinese novel of transition.

This idea of *Travels* as a precursor to modern Chinese literature poses questions about Liu E's treatment of the commentary to *Travels*. He creates a realm of fiction and reality between novel and commentary; thus, present scholars may ask in what ways the commentary adheres to traditional commentary of past Chinese literature and how Liu E's commentary shows influence from Western traditions of writing during this transitional period. Questions aside, the novel is presumably a kind of travel record that traces the journey of Liu E's alter-ego, Lao Can. Furthermore, the author adopts the pseudonym "Scholar of a Hundred Temperings from Hongdu," perhaps to protecting himself from his enemies and those in power. He also adds a third person: a commentator. Through this third identity, Liu E writes from the tradition of *xiaoshuo*, revealing certain aspects of his life to place fact over fiction: his acquaintances, locations he visited, and current events of his lifetime. It is worth asking who he was writing to—for consumers of *xiaoshuo* of course, but possibly also for writers or writers to be as well. Nonetheless, a more thorough examination is needed to understand the relationship between Liu E, the commentary to *Travels*, and the protagonist Lao Can.

Liu E draws inspiration from several events and people in his treatment of plotlines and characters in *Travels*, and therefore attention should be paid to Liu E's acquaintances, such as figures recorded in official histories and less known people in his environment. He was at least

aware of intellectuals Kang Youwei 康有為 (1858-1927) and Liang Qichao 梁啟超 (1873-1929), yet their relationship with Liu E has not been discussed, nor is there research comparing Liu E and their thinking, written works and biographies. In contrast, less famous people in Liu E's environment with at least local reputation may answer who inspired Liu E to write of certain characters, such as the drum singer Little Jade Wang (*Wang Xiaoyu* 王小玉, Lao Can's friend Huang Renrui, and the mountain recluse Green Dragon.

There may be precedent regarding Liu E's treatment landscapes as well: specifically his attention to the various locations of Shandong, the Yellow River, and his treatment of mountains such as Mt. Song, Mt. Emei, and Spirit Cliff Mountain (*Lingyan shan* 靈岩山). Liu E's attention to landscape reflects his awareness of more specialized learning, as well as local histories and folklore; these kinds of knowledge suggest he may have visited several locations during his mission to chart the Yellow River in Shandong, where he conversed with people of many classes. Liu E's treatment of these locations in *Travels* may tell us more about his thinking and his own travels, and therefore more qualitative research is needed to discuss Liu E's biographical circumstances.

Liu E's biographical circumstances inform readers why he chose to blend elements of his life, figures he knew, and his concerns in *Travels*. What can be considered fact in his novel is better perceived when read with his commentary. Liu E's thinking unquestionably includes the use of technology, and the frequent references to it in *Travels* shows he was more overt with his support of Western ideas and technology than other intellectuals of his time. In contrast, as evidenced in his preface, Liu E as a scholar and writer paid great attention to several different Chinese literary traditions: the unofficial history, traditional Chinese travel literature, China's

tradition of historiography, vernacular literature, and China's tradition of poetry. The issue is, however, not much is known about Liu E's training as a novelist. We know he immersed himself in traditional Chinese learning and Western learning: that his experience as a Taigu disciple led him to seek wisdom in the esoteric traditions of the Chinese past, swept up in China's self-strengthening and the revitalization of Confucian principles. Liu E *unified* his new knowledge and took moral action through his unswerving dedication to develop Chinese industry and manage the Yellow River. For his actions, he was deemed a traitor by his enemies when he was in *service*, causing him to *retreat* and fictionalize. Liu E's writings provide a glimpse into the life of a Chinese entrepreneur, scholar, and writer who he felt the tensions of Chinese tradition and Western influence as the Qing Dynasty approached a closing. What awaits scholarly attention is the comparison of Liu E's literature to other, less known writers of his time—for his contemporaries can be said to share a similar concern for China, struggling to maintain its Confucian order.

## Bibliography

- Bastid-Bruguiere, Marianne. "Currents of social change." In *The Cambridge History of China Vol II: Late Ch'ing, 1800-1911 Part 2*, edited by John K. Fairbank and Kwang-Ching Liu, 535-602. Cambridge: Cambridge University Press, 1980.
- Berling, Judith A. *The Syncretic Religion of Lin Chao-en*. New York: Columbia University Press, 1980.
- Chang, Carsun. *Wang Yang-ming: Idealist Philosopher of Sixteenth-century China*. New York: St. John's University Press, 1962.
- Chang, Hao. "Intellectual change and the reform movement, 1890-8." In *The Cambridge History of China Vol II: Late Ch'ing, 1800-1911 Part 2*, edited by John K. Fairbank and Kwang-Ching Liu, 274-338. Cambridge: Cambridge University Press, 1980.
- Ching, Julia. *To Acquire Wisdom: The Way of Wang Yang-ming*. New York and London: Columbia University Press, 1976.
- Hayden George A. "The Courtroom Plays of the Yuan and Early Ming Periods." *Harvard Journal of Asiatic Studies* (1974): 192-220.
- Hao, Yen-p'ing and Erh-min Wang "Changing Chinese views of Western relations, 1850-95." In *The Cambridge History of China Vol II: Late Ch'ing, 1800-1911 Part 2*, edited by John K. Fairbank and Kwang-Ching Liu, 142-201. Cambridge: Cambridge University Press, 1980.
- Holoch, Donald. "The Travels of Laocan: Allegorical Narrative." In *The Chinese Novel at the Turn of the Century*, edited by Milena Doleželova-Velingerova, 129-49. Toronto: University of Toronto Press, 1980.
- Holoch, Donald. "A Novel of Setting: *The Bureaucrats*." In *The Chinese Novel at the Turn of the Century*, edited by Milena Doleželová-Velingerová, 76-115. Toronto: University of Toronto Press, 1980.
- Hou, Daniel Y. "A Landscape of Mind: Liu E's Treatment of Time and Space in *The Travels of Lao Ts'an*." *Tamkang Review* 36, no. 4 (2006): 35-82.
- Hsia, C.T. "The Travels of Lao Ts'an: An Exploration of Its Art and Meaning." In *C.T. Hsia on Chinese Literature*, 247-268. New York: Columbia University Press, 2004. Originally published in *Tsing Hua Journal of Chinese Studies*, new series 7, no. 2 (1969): 40-68.
- Hsu, Immanuel C. Y. "Currents of social change." In *The Cambridge History of China Vol II: Late Ch'ing, 1800-1911 Part 2*, edited by John K. Fairbank and Kwang-Ching Liu, 70-141. Cambridge: Cambridge University Press, 1980.
- Hummel, Arthur W., ed., *Eminent Chinese of the Late Ch'ing Period*. Washington: United States Government Printing Office, 1943.



- Hu Shi. *Zhongguo zhanghui xiaoshuo kaozheng* 中國章回小說考證. Shanghai: Shanghai Shudian, 1980.
- Kwong, Luke S. K. "Self and Society in Modern China: Liu E (1857-1909) and *Laocan Youji*." *T'oung Pao* 87 (2001): 360-392.
- Jiang Chunyun 姜春雲, ed., *Shandong sheng qing* 山東省情. Jinan: Shandong renmin chuban, 1986.
- Jiang Qingbai 江慶柏. *Qingchao jinshi timing lu* 清朝進士提名錄. Beijing: Zhonghua shuju, 2007.
- Lee, Leo Ou-fan. "The Solitary Traveler: Images of the Self in Modern Chinese Literature." In *Expressions of Self in Chinese Literature*, edited by Robert E. Hegel and Richard C. Hessney, 282-289. New York: Columbia University Press, 1985.
- Lin, Shuen-fu. "The Last Classic Chinese Novel: Vision and Design in the Travels of Laocan." *Journal of the American Oriental Society* 121 (2001): 549-564.
- Liu Delong 劉德隆. *Liu E san lun* 劉鶚散論. Kunming: Yunnan renmin chubanshe, 1998.
- Liu Delong 劉德隆. *Liu E Ji* 劉鶚集. Jilin: Jilin wenshi chubanshe, 2006.
- Liu Delong 劉德隆, Zhu Xi 朱禧, and Liu Deping 劉德平, eds. *Liu E ji Lao Can youji ziliao* 劉鶚及老殘游記資料. Chengdu: Sichuan renmin chubanshe, 1985.
- Liu Delong 劉德隆, Zhu Xi 朱禧, and Liu Deping 劉德平, *Liu E xiaozhuan* 劉鶚小傳 [A Small Biography of Liu E]. Tianjin: Tianjin renmin chubanshe, 1987.
- Liu E 劉鶚. *Lao Can Youji* 老殘游記 [The Travels of Lao Can], ed. Yan Weiqing 嚴薇青. Jinan: Qilu Shushe, 1981.
- Liu, Kwang-ching. "The military challenge: the north-west and the coast" In *The Cambridge History of China Vol II: Late Ch'ing, 1800-1911 Part 2*, edited by John K. Fairbank and Kwang-Ching Liu, 202-273. Cambridge: Cambridge University Press, 1980.
- Liu Houzi 劉厚滋. "Zhang Shiqin yu Taigu xuepai" 張石琴與太谷學派 [Zhang Shiqin and the Taigu sect]. *Fu ren xue zhi* 輔仁學誌 9 (1940): 81-124.
- Lu Erkui 陸爾奎. *Ciyuan* 辭源. Beijing: Commercial Press, 2006.

- Lu Jiye 盧冀野. "Taigu xuepai zhi yange ji qi sixiang" 太谷學派之沿革及其思想 [Successive changes in the Taigu sect and its thought]. *Dongfang Zazhi* 東方雜誌 24 (1927): 71-75.
- Lu Xun. *Zhongguo xiaoshuo shilue* 中國小說史略, revised edition (1935), translated by Yang Hsien-yi and Gladys Yang as *A Brief History of Chinese Fiction*. Beijing: Foreign Languages Press, 1959.
- Ma, Y. W. "Liu E." In *The Indiana Companion to Traditional Chinese Literature*, edited by William H. Nienhauser, 580-583. Bloomington: Indiana University Press, 1986.
- Ma, Y. W. "Qingji Taigu xuepai shishi shuyao" 清季太谷學派史事述要 [Brief discussion of the historical events surrounding the Taigu sect of the Qing]. *Dalu Zazhi* 大陸雜誌 28 (May 1964): 13-18.
- Rolston, David L. *Traditional Chinese Fiction and Fiction Commentary*. Stanford: Stanford University Press, 1997.
- Průšek, Jaroslav. "Liu O et son roman *Le Pèlerinage du Lao Ts'an*" In *Chinese History and Literature*. Dordrecht: D. Reidel Publishing Company, 1970.
- Sargent, Stuart H. "Lao-Ts'an and Fictive Thinking," *Journal of the Chinese Language Teachers Association*, 12 (October 1977): 215-220.
- Shadick, Harold E., trans. *The Travels of Lao Ts'an*. Ithaca: Cornell University Press, 1952.
- Shadick, Harold E. "The Travels of Lao Ts'an: A Social Novel." *Yenching Journal of Social Studies* 2 (1939): 36-69.
- Sima Qian. *Records of the Grand Historian*. Vol. 1. Selected by Po-Hsiang Wang, Translated by Yang Hsien-yi and Gladys Yang. Taipei: Wenxin Chubanshe, 1975.
- Spence, Jonathan D. *The Search for Modern China*. New York: Norton, 1990.
- Wang Yangming. *The Philosophy of Wang Yang-ming*. Translated by Frederick Henke. New York: The Open Court Publishing Co., 1916.
- Wang Yangming. *Instructions for Practical Living and Other Neo-Confucian Writings*. Translated by Wing-tsit Chan. New York and London: Columbia University Press, 1963.
- Wei Shaochang. *Lao Can Youji Ziliao* 老殘游記資料. Shanghai: Zhonghua shuju, 1962.

Wong, Timothy C. "The Facts of Fiction: Liu E's Commentary to the *Travels of Lao Can*." in *Excursions in Chinese Culture: Festschrift in Honor of William R. Schultz*, edited by Marie Chan, Chia-lin Pao Tao, and Jing-shen Tao, 159-171. Hong Kong: The Chinese University Press, 2002.

—— "Liu E in the Fang-shih Tradition." *Journal of the American Oriental Society* 112 (1992): 302-306.

—— "The Sequel to *Lao can youji*: Chapter 7-9," *Renditions*, 32 (1989): 20-45.

—— "The Name 'Lao Ts'an' in Liu E's Fiction." *Journal of the American Oriental Society* 109 no. 1 (1989): 103-106.

—— "Notes on the Textual History of the *Lao Ts'an Yu-chi*." *T'oung Pao* 69, nos. 1-3 (1983): 23-32.

Wright, Mary C. *The Last Stand of Chinese Conservatism: The T'ung Chih Restoration, 1862-1874*. Stanford: Stanford University Press, 1957.

## Women and Tenure Transition:

An Examination of Land Access and Gendered Land Rights in Kanungu District, Uganda

Emmalee McDonald

Faculty Mentor: Ellen Bassett, PhD

McNair Scholars Program

Portland State University

### **Abstract**

Access to land and land rights are critical to development and poverty reduction. Currently Uganda, like many countries around the globe, is undergoing transformation of its land tenure systems, away from traditional, community-based institutions towards private individual freehold property. Privatizing land rights, however, is controversial; critics fear that this will negatively impact vulnerable groups, such as women. In the Ugandan context while new privatization reforms have passed, they have not been fully implemented. This tenure transition is creating confusion and reportedly leading to a weakening of the traditional systems and an erosion of women's land rights. I examine women's land rights in rural southwestern Uganda, with a specific focus on women's ability to access land subsequent to the 1998 Land Act. In my work I ask: how do women perceive their land rights? What strategies have women developed to facilitate their access to land? Do women believe the 1998 Land Act inhibited or aided in their struggle for land? The research utilized three data collection methods: document analysis, informant interviews with local elites, and semi-structured interviews with rural female farmers. Data analysis revealed three main themes: women lack awareness of the new land laws, issues around security of tenure occurred due to the transitioning tenure system combined with gender inequality, and women are utilizing informal channels to access land tenure while focusing on development.



## **1. Introduction**

In 1998 the Uganda Parliament passed a new Land Act that provided the legal framework for the transformation of customary land to freehold. This was a key part of the land reform agenda that has been a focus for the government since coming into power in 1986 (Adoko & Levine, 2008). The movement towards freehold tenure and away from customary systems of land regulation and distribution had its foundation set during the colonial period, and has gained momentum through time by being represented as a poverty alleviation method. Uganda is one of many countries that have undergone such a transformation. The widespread transformation of land tenure has led to a heated debate about whether the movement towards individualized tenure systems is beneficial or harmful for the diverse set of countries in which it is being applied. In addition, many theorists argue that this move towards private tenure systems diminishes women's rights, which they contend were well protected under the customary systems of land tenure.

Within the Ugandan context, the passing of the 1998 Land Act was controversial due to the movement away from the customary, as well as the inclusion, or lack thereof, of women's rights. This controversy revolved around the Co-Ownership Amendment, which would have provided equal ownership for married couples for the land on which they resided. However, during the passing of the bill, this amendment was omitted. As a result, women have only one provision of the 1998 Land Act to rely upon, which is the Consent Clause that requires the consent of both spouses for the sale of land.

This legislative history represents an interesting contradiction in the Ugandan setting. Most notably, the Ugandan Government acknowledged and took action to empower women so that they could take dynamic roles in society. The most important step was to intentionally include women in political positions. In the 1995 Constitution, gender equality was highlighted through allocating one third of the local council government member positions for women (Ahikire, 2007). Gender equality has also been acknowledged to be a key factor in alleviating

poverty, as described in The National Action Plan On Women (Ministry of Gender, Labor and Social Development, 2007), yet there is still strong hesitation in taking action to protect women's land access. As customary systems of tenure are weakened due to the passing of the Land Act, women's rights are left to slip through the cracks of the overlapping and transitioning land tenure system in Uganda. Thus, a decade after the Land Act was passed one can ask: what has been the implication of the Act for women in terms of access to land? Specifically in rural settings (where information is not as readily accessible and land ever more important) how are women navigating the overlapping systems of customary and freehold tenure? What sort of awareness is there of the Land Act; and what preferences do women have concerning the best means of accessing land?

This paper examines these questions, first by exploring the theoretical debate between customary and freehold, then going into a brief history of land tenure in Uganda including a section specifically on women's inclusion in politics and the 1998 Land Act. After an explanation of the methodology the paper is rounded out by presenting the findings from field research and is wrapped up with a brief discussion and a look at the potential next steps.

## **2. From Customary Towards Freehold**

Uganda is not alone in its process of land tenure transformation from customary to freehold. This has also occurred in Uganda, Kenya, Tanzania, and Rwanda, (Englert and Daley, 2008) as well as many other countries across Africa. These programs have been promoted and made possible through funding from bi and multi-lateral aid organizations such as USAid, the World Bank and the Department for International Development (DfiD) (Manji, 2006). These land reforms have been pitched as a method to address issues of inequality, and poverty, as well as a means for investment, sustainability and innovation in agriculture.

Empirical studies show that results have been mixed, much inefficiency has arisen, and the guarantees that were supposed to come with a freehold tenure system have yet to come to fruition (Manji, 2006). With the lack of positive results many analysts have criticized the push

towards a freehold system (Manji, 2006, Lastarria-Cornhiel 1997). This school of thought acknowledges the merit in customary tenure systems and argues that not only are freehold tenure systems not working, but they also can have detrimental effects. Thus the debate is between those who believe in protecting and enhancing the communal and traditional rights, and those who see the need to take part in the global free market system by creating private property systems through land titling. As Catherine Boone (2007, p.557) states, this debate is “pitting those who advocate growth-promoting individualization and transferability of property rights against those who want to use land tenure policy to protect the use rights and subsistence rights of farmers”.

The push towards freehold tenure has been popularized by the work of Hernando De Soto (2000), a Peruvian economist in his book *The Mystery of Capital: Why Capitalism triumphs in the West and Fails Everywhere Else*. He argues that to increase productivity and growth in the developing world, the poor living in the global south need capital, and the road to capital must be paved with legal titling. Titling, he argues, would free up “dead capital”, meaning that with a title individuals and families excluded by informal status can turn their home into an asset and thus be able to access loans, and have a chance to enter into the global market. . De Soto (2000) states, “They hold these resources in defective forms: houses built on land whose ownership rights are not adequately recorded...because the rights to these possessions are not adequately documented, these assets of narrow local circles where people know and trust each other, cannot be used as collateral for a loan, and cannot be used as a share against an investment” (p.6). He argues that it is capital that has made the West wealthy and it is the lack thereof that has left the other five sixths of humanity behind (De Soto, 2000). Poverty thus, is caused not by a lack of assets in poor communities, but a lack of legal registration for those assets and the benefits that come with them (Sjaasdtad & Cousins 2008).

While the argument is persuasive, during the last two decades in which De Soto’s ideas have prevailed and effected land law reform throughout Africa and the developing world, evidence has accrued that has strongly contradicted his theory. It has been found that not only is



there a lack of ability to implement and uphold titling systems, but that there are also many negative effects that can and do occur when titling is implemented (Sjaasdtad, 2008). Due to this reality there have been a number of critiques of De Soto's including that he: oversimplifies the solution to poverty, assumes that there is a desire for and an ability to access credit markets, assumes that governments have the ability to implement and uphold a legal paper land title system once it is passed, and fails to consider the exclusionary effects of the titling process on women's access to land and thus is not acknowledging the vital role that women must play in poverty alleviation.

A key critique of De Soto's work is that the emphasis on privatization does not take into consideration the local social structures within which these ideas are being implemented (Manji, Lastarria-Cornhiel, Nyamu-Musembi). Within the African context access to land is regulated primarily by social arrangements rather than the market system, land transactions are overseen by the local community usually by an elder or chief and the transference of land is not something that is taken lightly (Lastarria-Cornhiel, 1997). A legally recognized peace of paper (a title) doesn't hold as much weight as ones surrounding community, which provides one of the most necessary ingredients of property, recognition by others in society (Platteau, 1996). A common presumption of the West is that everyone views the freedom to dispose of land as they see fit as central to their land rights, but in the African context many have argued this is not the case. (Nyamu-Musembi, 2008) Focusing on the law as the means of regulating tenure, reduces land to an economic object alone, and thus misses the intricate social fabrics that are tied to land and the many different manners in which individuals view land. As Manji (2006:20) states,

“The multitudes of ways in which people relate to and perceive of land as well as their fellow landholders are denied by legal centralism. In deprecating informal land tenure arrangements as backward and economically inefficient, advocates of formalization suggest that it is only by bringing these arrangements into the formal legal system of the state that their value can be realized. This approach fails to acknowledge the multitude of ways in which people deal in land”.

There is evidence that the social fabric is indeed being weakened in Uganda. As the customary system of land tenure is impacted by the increase of influence of the market system, sales become more common (Lastarria-Cornhiel, 1997). The increase in land sales has occurred due to a decrease in social ties as well as a change of understanding of land as an asset, rather than as a source of food, changing the value of land from its ability to provide sustenance to a commodity that has cash value (Lastarria-Cornhiel, 1997). This process of joining in the market system releases communities from the systems of protection and increases transferability, which in many cases has led to increased insecurity (Adoko & Levine, 2008). A recent empirical study conducted in the Apac District of Uganda found an increased in sales of customary held land. Predominantly these sales were conducted without the knowledge of the female head of family and occur due to pressure from impoverished living conditions (Adoko & Levine, 2008). Implementing a system that is rooted in market system ideologies as a means of alleviating poverty does not consider the well established understanding that the possibility for transferability can lead to the sale of land by the poor in times of economic hardship and insecurity (Fortin, 2005). These sales lead to loss of land for women and children and should in theory be stopped by customary law (Adoko & Levine, 2008).

Implementation of new tenure systems has proved to be a struggle for many countries (Manji, 2001), due to cost, combined with the lack of social acceptance. Expenses come in the form of titling, surveying and registration. These processes are estimated to cost hundreds of dollars per property and billions for a nation (Sjaasdtad, 2008). Countries are facing the high cost of implementing a titling system while simultaneously struggling with the social challenges that come with attempting to gain acceptance of a new tenure model. In most African countries the implementation process occurred without clear definition of who was responsible or evaluation of the government's competency (Deininger & Castagnini, 2006). In Uganda many important land tenure regulating institution are either missing all together or barely functional due to lack of financial support (Adoko & Levine, 2008). De Soto (2000) himself discusses the need for

providing an easy pathway into the legal titling system for this transition to be successful. He reports that the only way to bring people into this new legal system of land tenure is if the “government makes it easy, safe, and cheap” (p.179). With the state’s inability to implement, the population must choose between a well-established local customary system and a state system that is deficient. When faced with these options, the community will choose the customary (Bromley, 2008).

Another critique of De Soto is his failure to acknowledge that the titling process may have negative distributional consequences. Certain groups may be better positioned to gain titling (e.g. urban elites); while others may be strongly disadvantaged. Within the African context women have been historically the losers as this transition to individualized freehold occurs (Englert and Daley, 2008).

To understand how this transpires it is important to understand how women predominantly access land. To do this we must make the distinction between access and control of land. Control of land is based on the idea of ownership; this establishes the command of that individual over the land and the benefits that are derived from the land. Access, on the other hand does not include ownership, but establishes the individual’s ability to make use of the land (Lastarria-Cornhiel, 1997). African women predominantly have user rights that they have acquired from their husband through the customary system (Nyamu-Musembi, 2008). This occurs when a woman is married and moves from her home to the husband’s land, the husband allocates a plot of the family land to the wife for cultivation of food for family consumption and through this process she is given the right to utilize that piece of land (Lastarria-Cornhiel, 1997). Within the allocation of user rights, women have limited say in the transference or dispossession of land (Adoko and Levine, 2008). This limitation in terms of power over land is exacerbated during the transition into a private property system (Lastarria-Cornhiel, 1997).

The creation of an individualized land ownership system puts at risk those with secondary or indirect rights to land such as women (Bikaako & Ssenkumba, 2003). Titling and

registration programs tend to award land to individual heads of household, granting the owner more exclusionary rights. “Thus one impact of land titling to individual persons is to significantly decrease a customary community’s ability to ensure the subsistence of all its members (i.e. women) through land access” (Lastarria-Cornhiel, 2003, p.6). This is due to the concentration of land rights in the hands of the head of household (generally a man). This combined with a lack of joint registration leads to a weakening of women’s ability to access land (Nyamu-Musembi, 2008; Bikaako & Ssenkumba, 2003).

Protecting women’s land rights is necessary to address issues of poverty and inequality in Africa. Land is a pivotal issue due to the fact that it is the base of life in Uganda; as in all of Africa—people depend on it for their livelihoods as well as for subsistence. Women take a huge part in food production (Tripp, 2004); according to Bikaako and Ssenkumbas, (2003: 276) women account for 70-80 percent of the labor in agricultural production but only own about 7 percent of the land (Sebina-Zziwa, 1995, 6). The importance of this issue is apparent when looking at the direct connection between access to land and quality of life in an agrarian society. As women are the backbone of food production for their family, their ability to access land directly connects with their ability to provide food for their family unit (Tripp, 2004).

The issue of women’s role in society as a means of alleviating poverty is being addressed on the global scale—many leaders and well known activists see it as the issue of our time. Hillary Clinton recently said:

I happen to believe that the transformation of women’s roles is the last great impediment to universal progress — that we have made progress on many other aspects of human nature that used to be discriminatory bars to people’s full participation. But in too many places and too many ways, the oppression of women stands as a stark reminder of how difficult it is to realize people’s full human potential (Landler, 2009).

A: Brief History of Land Tenure in Uganda:

The history of land tenure in Uganda can be broken down into three main stages; pre colonialism, the colonial period and post-colonial period up to present day. The historical context

casts light on the manner in which women's land rights have transformed, or been slowly diminished, through time. Within this section I will summarize the first two stages. Two sections will follow this, one that explores the current political setting in Uganda, and another that looks at the 1998 Land Act.

In Uganda there are many stories, legends, and much literature that would lead us to believe that women in many cases owned land on the same footing as men in pre colonial times (Sebina-Zziwa, 1995). Although there are mixed understandings of how land was managed and who had access to what resource, a common understanding is that land served the whole community and acted as a foundation for strong social ties. In Bikaako and Ssenkumbas (2003) chapter in the book *Women and Land in Africa* they discuss the history of land rights in Uganda. They point out that in most areas land was vested in the community with the elder/ruler as owner or trustee. As the head of the tribe or clan, the elder had the authority to allocate land, settle disputes, and over see the community. With this position came great influence but also responsibility to manage the land in the interest of the community. Historically distribution of land between genders was mixed, while in some areas it was men who inherited the land; there were also some tribes (such as the Toro) that practiced matrilineal inheritance (Bikaako & Ssenkumbas 2003). Toro women could inherit property and could get the right of occupation of customary land from the chief (Bikaako & Ssenkumbas 2003). While historically not all tribes practiced matrilineal inheritance, it is argued that women's rights to land were still well protected through user rights under the customary tenure system (Adoko & Levine 2008; Bikaako & Ssenkumbas 2003).

During the 1900's the British had a transformational influence on the land tenure system in the country, pulling it away from what they considered to be the "backward" communal tenure model towards the individual freehold system (Adokok & Levine 2008). The colonialists introduced the idea of individual land holdings with the "mailo" tenure system. The mailo system was introduced in areas where the land was previously communally owned; chiefs were given

large estates of land, which were held by them under “mailo” tenure with the previous customary holders of the land becoming tenants. These smallholding farmers still had the legal right to cultivate the land but soon this was accompanied with rent that needed to be paid to the chief (Bikaako & Ssenkumba 2003). The initial Kingdoms grant of mailo rights included were the Buganda, Toro and Ankole, but by 1926 the groups involved included all of the Ugandan Protectorate, which encompassed 5 Kingdoms (Kingdoms: Ankole, Buganda, Toro, Busoga, Bunyoro) and 10 Districts (Districts: West Nile, Madi, Acholi, Karamoja, Lango, Teso, Sebei, Bugisu, Bukedi, Kigezi) (Batunig, 2008). The implementation of the “mailo” tenure system by the British was the beginning of a tenure method that resembled a freehold tenure system (Bikaako & Ssenkumba 2003). Freehold means a tenure system in which the owner has full ownership rights under the law, thus concentrating all aspects of land access into the hands of the individual owner (Tripp, 2004). In *Women and Land in Africa*, Bikaako and Ssenkuma point out that during this time freehold tenure was still uncommon, it was held only by privileged groups, such as kings, chiefs and owners of large-scale agricultural developments. Although uncommon, the freehold system introduced the idea of transference rights, meaning that those with land under freehold had the right to lease, mortgage or sell their land. The authors discuss how these rights were introduced with the understanding that the transference of land was still beholden to the public good, but this understanding was diminished over time as legislation was implemented that focused the rights to land in the hands of the head of household. (Bikaako & Ssenkumba 2003).

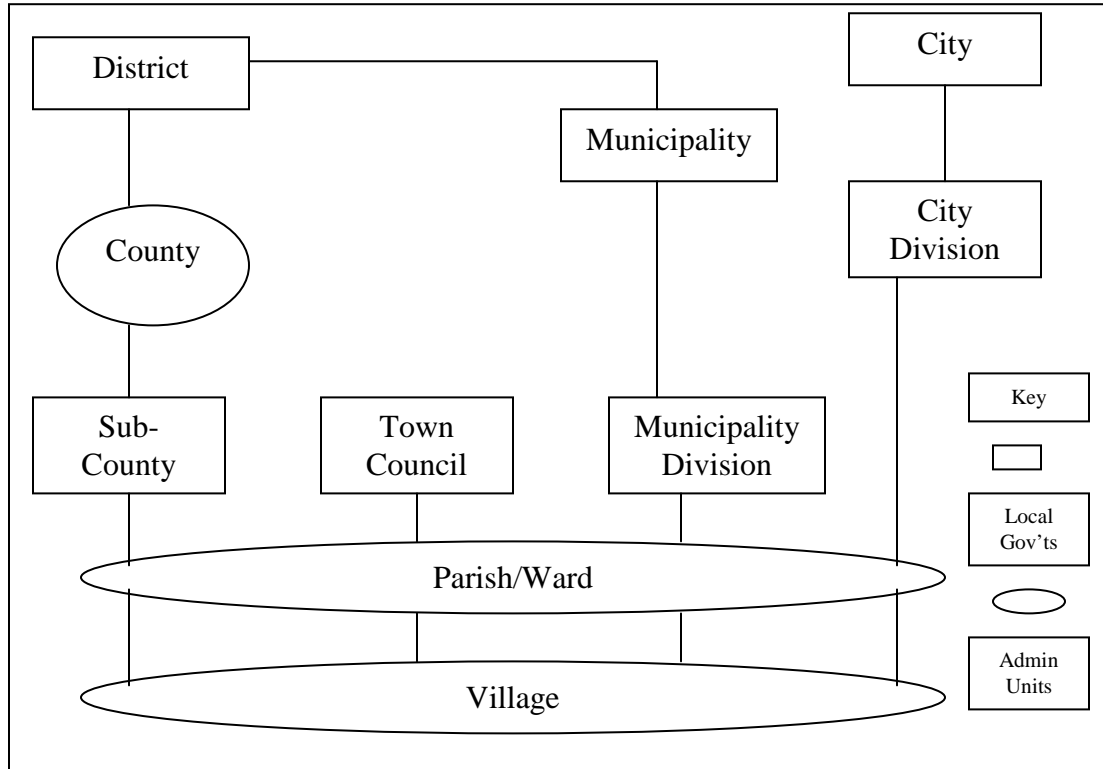
During the colonial period women’s rights to land were weakened through this legislation that promoted the rights of the head of household, while also diminishing the importance of subsistence agriculture (Tripp 2004). The legislative reforms passed in this period include the 1962 Public Land Ordinance, the 1969 Public Land Act and the 1975 Land Reform Decree, in which the British colonialist government introduced new tenure models (beyond mailo), including both leasehold and freehold. In these colonial land laws, women’s use rights were not valued, due to a lack of understanding that the value of land could be perceived in terms of use

(Bikaako & Ssenkumba, 2003). The colonial promotion of individual rights assigned to the head of household, reflected the colonial administration's desire to redefine land for Africans in the western tradition. This diminished the social and customary laws protecting women's land rights (Tripp 2004).

#### B: Post Colonialism, Women's Inclusion in Politics and the 1998 Land Act:

Currently Uganda has a decentralized form of government. This means that the central government transfers a portion of its power of financial, managerial and political decision making to local government, which in turn gives them the power to manage the local affairs in the context of a unitary state (Nsimambi, 1998). This is done through a five-tiered system of elected councils that connects every village to a district, and the districts to the central government (Ahikire 2007). In theory the smaller localized government provides an easily accessible avenue that draws in the local population and thus creates a government that has an active populace who are informed and involved in the workings of its leaders. Through this process of empowerment the hope is that community members will use their voice to take control of their political, social and economic destiny (Nsimbambi, 1998).

Graphic 1: The Ugandan Local Council Structure



(Source: Ahikira 2007, p. 187)

The current government, the National Resistance Movement (NRM) gained power through force in 1986. Many women were involved in this struggle to get the NRM into power; this fact gave them strength in their argument to be included in the government. The insertion of women into the political structure was set up by allocating a third of all Local Council positions for women. At each level, village, parish, sub-county, division and municipality and district, women must hold a third of the positions (Bikaako & Ssenkumbus, 2003). While this has changed the political picture from one dominated by men to one that brings women into the public sphere, there is some well founded criticism that sees this transformation as more symbolic than based in a true desire to change gender norms. Josephine Ahikira (2007, p. 14), a faculty member of Social Science at the Department of Women and Gender Studies, at Makerere University in Kampala discusses how there is concern that women were put in political positions simply as tokens of change rather than as symbols of real transformation. The author argues that women's



involvement in politics has only reached the upper class and thus has not transformed the way in which the general population of women in Uganda interacts with the state (Ahikira, 2007). The struggle over land rights has served as an example of women’s inability to protect and promote their rights through politics and the law.

In 1998 the Government of Uganda passed a new Land Act, the purpose behind the new set of regulations was to provide security of tenure through a demarcation and registration process of all the existing forms of land tenure, both formal and informal. The four forms of tenure are recognized as the following:

**Graphic 2: Land Tenure Descriptions**

Name of Tenure System	Definition
Customary Tenure	<ul style="list-style-type: none"> <li>• System of land tenure that is regulated by customary rules</li> <li>• Administered and regulated by a clan leader or elders</li> <li>• Predominant form of land tenure in Uganda</li> <li>• Does not usually have any form of papers indicating ownership but rather verbal agreements are utilized</li> <li>• Includes both individual and communal customary tenure (Tripp, 2004)</li> <li>• The individual customary tenure system, “embraces any situation where the local community recognizes the individual’s exclusive use rights over a specific piece of land” (Batungi, 2008)</li> </ul>
Freehold Tenure	<ul style="list-style-type: none"> <li>• The holding of registered land under the law, which states that the owner has full ownership rights</li> <li>• Most common form of tenure in the West</li> </ul>
Leasehold Tenure	<ul style="list-style-type: none"> <li>• Involves a lease agreement between the lessor and the lessee in which agreements are reached in terms of the length and conditions of the lease. Lessee is usually the state and leases run from 33 to 99 years.</li> </ul>
Mailo Tenure	<ul style="list-style-type: none"> <li>• Mailo land tenure is the holding of registered land in perpetuity with roots in the allotment of land pursuant to the 1900 Uganda Agreement</li> <li>• Agreement between the Buganda clan in central Uganda and the British individuals were provided land through the clan or lineage head, and in turn these kings, family heads, or clan chiefs received freehold titles for this land that they oversaw. (Tripp, 2004)</li> </ul>

(Source: Tripp, 2004; Batungi 2008)

The passing of the Land Act resulted in the state law recognizing customary tenure under the state legal system, along with the other three forms of tenure. Due to the fact that eighty five percent of the land in Uganda was held under customary tenure, (Batungi 2008) the change in tenure regulation, away from this system had potentially large implications. Urban elite women

took note of this and during the lead up to the passing of the 1998 Land Act women's groups utilized their new political power to rally around and promote the co-spousal amendment (Bikaako & Ssenkumbi, 2003). The importance of this amendment was that it included a co-ownership clause, which would have made it so that all married couples would own the land they live on equally but as stated in the introduction the amendment was excluded at the last moment due to a procedural irregularity. Whether this was intentional or not is debated but how the amendment has been handled since has shown that the Parliament and the president are unwilling to pass the co-spousal amendment into law. This has left women in a position of having weaker rights over the land just as the country was moving into a time of land rights transition. Currently the co-spousal amendment has been included in the Domestic Relations Bill, which has been in debate for over a decade. This protracted debate is due to its controversial content, which includes provisions on bride price, female genital mutilation, polygamy and marital rape. The bill is currently tabled.

The most important protection for women in the Land Act, thus, is the consent clause, which requires that before any sales transactions occur on land where a family lives, or from which subsistence is provided, the spouse and adult children should be consulted. This has the potential to secure women's tenure security but it is unclear how effective this has been. The reality is that without the co-spousal ownership clause women are mostly viewed as witnesses to land ownership and not as an owner. They have the legal right to buy land but this only tends to occur in the upper class. For the average Ugandan woman, her access to land is via her husband. Although the family owns customary land, the legal owner of the land is represented by the head of family, which in most cases is a male (Lastarria-Cornhiel, 2003).

When discussing the impact of the 1998 Land Act it is important to differentiate the law itself from the reality of how it has been implemented. The Land Act had strong potential to protect women's land rights, especially if it had included the spousal co-ownership amendment. While the Land Act includes an array of land titling systems, including Community Land

Associations, which had strong potential to protect women's rights, the government has focused on freehold as the best means of securing land rights.

The Ugandan government's unwillingness to include women as equals in the land law represents a direct conflict with its recognition of the importance that women play in poverty alleviation. The government asserts that to achieve sustainable development gender inequality must be addressed (The Uganda Gender Policy, 2007) and recognizes that the lack of ownership of land by women retards development and contributes to poverty (Latarria-Cornhieal, 2003).

In sum, there is evidence which indicates that women's land rights have decreased through time due to promotion of freehold titling, combined with the influence of the free market system (Manji, 2006). During a time of tenure transition there is potential for tenure insecurity's, in Uganda this has been exacerbated by the fact that politically the government is giving mixed signals surrounding women's role in society and is not taking proper action in terms of implementation of the Land Law (Adoko & Levine, 2008). The government has acknowledged the benefits of women's political and social involvement, as a means towards alleviating poverty and promoting sustainable growth, (Ministry of Gender, 2007) while simultaneously being unwilling to provide women strong legal protection of their land rights (Adoko and Levine, 2008). While the political and academic debate continues on tenure security, titling and development, we have little knowledge as to how this land transition is playing out on the ground in Uganda. This paper begins to address this gap in the literature. Specifically, it explores the impact of the Land Act in rural Uganda in the last decade and asks the following questions: How has the Land Act impacted women's lives, and what are their opinions about it? How is it being utilized? What is its effect on customary systems? What are women's concerns and perspectives surrounding the land rights issue? What forms of tenure do women prefer and what do they see as steps forward?

## **Methodology**

This paper utilized three main research methods: 1) review/archival analyses, 2) observation and 3) interviews which included two categories: elites and rural female farmers. For the archival research and literature review, the researcher examined current and past relevant literature as well as a wide array of documents such as district plans, laws, and locally produced studies on land issues. To understand what women in rural Uganda know about the Land Act, and to gain insight into women's reactions to it, fieldwork was conducted in the Kanungu District in Southwestern Uganda. The fieldwork was conducted in the summer of 2009 and consisted of: observation, which occurred through field visits to local farms, key informant interviews with local elites, as well as semi-structured interviews with female farmers. The data reported in this paper came out of fieldwork conducted during July and August of 2009 in which the researcher conducted four key informant interviews and 29 semi-structured interviews with local female farmers. The elite interviews were conducted in English at the local council buildings in Kanungu. These interviews provided a broad overview of the issues surrounding gender based land issues and provided the researcher with an understanding of women's land rights and the Land Act from the elite perspective. The interviews with the local female farmers took place with the support of a research assistant who provided interpreting skills as well as general support and knowledge of the area. The assistant was the daughter of the Local Council Chair Person (LC5) but was not well known in the area due to the fact that she did her primary and secondary schooling elsewhere. The interviews were conducted in Luchiga and took place in a variety of locations including a small salon, a church, a local council building, and a women's co-op meeting center. A convenience sampling was utilized and meetings were arranged through the LC5, thus while the sampling was not random it was still significant in size and variety of age, class standing and education. One potential limitation of the sampling was the prevalence of Anglicans; while this is a potential bias the researcher did not feel that this hindered the study. The interviews were documented through notes and voice recording. These were transferred into

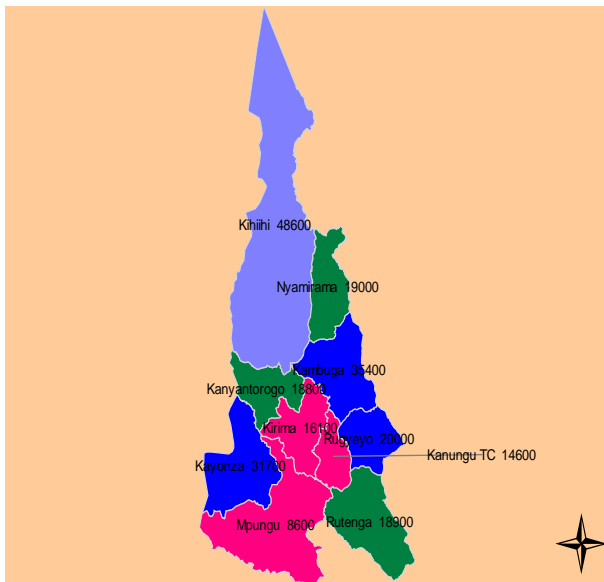
written form through transcription. On the completion of the transcription, themes arose out of the date through close reading and content analyses.

**Map 1: United Nations Maps of Uganda by District**



(Source: <http://www.ugandamission.net/aboutug/map1.html>)

**Map 2: Kanungu District**



(Source: Kanungu District Local Government District Development Plan, 2009)

## Research Setting

Kanungu District, the setting in which the research was conducted, is a relatively new District having been established in July of 2009. It is comprised of 9 sub counties, 508 villages and 46 parishes (see graphic on p. 16 for structure reference). Kanungu District is located in the southwest corner of Uganda, just south of the equator and is bordered by the Democratic republic of Congo on the west, Kabale District on the southeast, Kisoro in the south and Rukungiri in the north and east. The District lies in the fringe of the Western Rift Valley, receives approximately 1200m rainfall that is well distributed annually but slightly more concentrated during the months of March- May and Sept-Dec. Most of the population of the District is categorized as rural as only 14 percent are considered urban dwellers. Subsistence agriculture is the major economic activity and the main form of land use, with 60 percent of the District (1,228,28 sq km) being utilized as small-scale farmland. Land is held predominantly through customary practices, although a small portion is held under leasehold by a few well off farmers (Kanungu District Local Government, 2009).

**Table 2: District Profile**

Category	#
Percentage of working persons in agriculture	81%
Average household size	4.7
Average population density per square kilometer	187
Average family land holding	0.4 hectares
Total Population	231,700 (2008)

(Source: Kanungu District Local Government, 2009)

Kanungu District has a three-year development plan from 2009-2012. This plan provides data on the current state of affairs in the District as well as many ideas and strategies for improvement. Two main issues that were addressed in the development plan were land use planning and gender equality. Land is the base of the economy in this region with much of the future development

plans focusing around agriculture (Kanungu District Local Government, 2009), Kangungu is an agriculturally rich area with good rainfall. While most prospective development focuses around agriculture, there is also the acknowledgment of the problem of shrinking land plot sizes, land fragmentation, as well as soil degradation, and the need for more land conservation and environmental awareness. In terms of gender equality, the District Development Plan focuses on the need to have equal opportunities between men and women as a key part of alleviating poverty. The plan highlights the persistence of gender norms that keep men in control of the family resources while women are responsible for keeping the family life running smoothly and have little time for outside activities to improve upon their situation. The unequal balance of resources results in the fruits of these resources not being utilized for the whole family. As the plan states,

The division of ownership, access, and control over resources between women and men contributes to poverty in the household because it leads to resources owned by or entering the household not being used for the benefit of the whole household. (Kanungu District Local Government, 2009, p. 69)

The Development Plan highlighted three main factors that have contributed to land issues: rapid population growth, land fragmentation, and soil erosion. For the last three decades the population has been growing at an annual rate of 2.1 percent (compared to a national growth rate of 3.3) thus growing from 118,658 in 1980 to 226,100 in 2007, equaling a 75 percent population increase over the last 27 years. Inheritance practices in the area include the parent's distribution of their land between their children. Previously distribution was just between the sons but the norm is changing and parents are starting to include their daughters in this distribution process. As the population increases the land is becoming increasingly fragmented. The Development Plan states, "The land is highly fragmented due to traditional practices of inheritance and high population density" (Kanungu District Development Plan, p. 10). With high population growth and land fragmentation comes the issue of land degradation which is occurring

due to poor agricultural management practices, such as: bush burning, overgrazing, loss of vegetation due to clearing for farming, and wetland drainage. The combination of these issues has led to a high occurrence of land disputes and instances of land grabbing in the District.

**Table 3: Agriculture Activities: Broken down by gender**

Key ACTIVITY	Gender of person involved
Purchasing/owning land	Men
Planning for land use	Men
Tilling of land	Mainly women
Procurement of seeds and other inputs	Men
Planting seeds and weeding	Women
Harvesting	Women and girls
Attending agricultural workshop and meeting	Mainly men

(Source: Kanungu District Local Government, 2009)

Women are mainly involved in subsistence agriculture, which involves producing food for the family, whereas men are involved in producing commercial crops such as coffee, tea, and tobacco. In Kanungu as elsewhere men also have more control over the resources, in most situations they have ownership of the land and they make decisions surrounding possible sale of the land. While the 1998 Land Act included the Consent Clause, which requires that both spouses give consent for the sale of land, this is still a point of contention. The Development Plan acknowledges that the Consent Clause has not taken root and it states: “In many house holds, land is owned by men. All decisions pertaining to use, transfer, mortgage or selling are made by men” (Kanungu District Local Government, 2009), while simultaneously “Women can only till the land and produce mainly food for home consumption” (Kanungu District Local Government, 2009, p. 63). The plan acknowledges that this unequal balance of power over resources between the genders holds the district back, in terms of forward movement towards development and a fully productive society,



Gender is an equity question asked on the realization that if development is to be made, equal participation between men and women should be ensured (Kanungu District Local Government, 2008, p. 60)

### **3: Research Findings**

My research examined women's ability to access land, with a specific focus on whether the 1998 Land Act has affected that access. Of particular interest was women's awareness of the land law, their understanding of their rights, whether they have a preference for the traditional or the new freehold system, and what informs their preference. The over arching research questions are: How do women perceive their land rights? What strategies have women developed to facilitate their access to land? Do women believe the 1998 Land Act inhibited or aided their struggle for land?

To answer these questions I conducted four key informant interviews and 29 interviews with female farmers in the Kanungu District. The key informant interviews were conducted in English, thus the quotes are in the first person. The subsequent interviews with the rural female farmers, were conducted in the local language and required a translator, thus the quotes are in the third person. Some of the quotes are grammatically incorrect, due to the fact that the researcher felt it was important for authenticity to leave them in their original form. All of the interviews followed the same outline, starting with simple questions about family, including family size, marital status, and education level as well as a bit of family history. The next set of questions focused on day-to-day life, including a ranking of most important needs, and how time was spent. The third set of questions focused on land issues, asking where the interviewee lives, how they came to live there, and what type of agreement they have regarding tenure security and use rights on the land on which they live and cultivate. Lastly the interview format touched on issues around preferences for land tenure, asking whether the interviewee preferred the customary/traditional methods of tenure or whether they preferred to utilize the freehold/law tenure system.

### *Key Informant Interviews*

To understand the current context of land issues in the District, I conducted interviews with four key informants prior to interviews with rural female farmers. The key informants were local elites in the district who held a range of public positions; three were female and one was male. The researcher felt that interviewing the male elite would provide breath to the research; also the position held by this individual was considered an important point of view and source of information. Positions held included: District Councilor, Secretary for Land Finance and Administration, Secretary to the Land Board, and Senior Mobilizer in the Resident District Commissioner's office. The interviews were conducted in a more discussion-based manner; they adhered to the general structure of the questionnaire but followed a more organic pattern and included many additional questions (See appendix A). The main topics covered were: 1) implementation and awareness of the Land Act; 2) land scarcity and insecurity due to marriage issues; 3) and gender norms. Many of the opinions and themes that arose during the key informant interviews are representative of the themes and ideas that were laid out in the District Plan.

When discussing the 1998 Land Act with the key informants all four had faith in the new laws to protect the land rights of Ugandans, including women. But simultaneously they had some strong critiques of the implementation process including its slow pace, lack of awareness, and inaccessibility for the average Ugandan in terms of cost of a land title. All of the key informants were well versed in land issues and felt that land was a very important topic because of its direct connection to quality of life for all. Also, all four stated that the empowerment of women and girls was important to the development of their District and the country as a whole.

...land is directly correlated with the ability to provide schooling for the family and be able to pay school fees, because when you have land and are growing food then you reduce expenditure, automatically then you have an income for school fees. (7/23/09 - #1)

...we have put emphasis on girl's education... Because you know when you educate a girl you educate a nation. So we know that at one time when we get everyone getting educated it will bring change to our society. (7/23/09 #3)

### *Implementation and awareness of the land law*

All the key informants identified difficulties with the implementation of the law including: lack of awareness at the community level, insufficient financial support from the government, and unfeasible cost of titling process for the rural individuals in the District applying for a title. Interviewee 2 (7/23/09 #2) acknowledged a lack of titling applications in the District. The interviewee estimated that the Land Board received about ten a month, and stated that very few of them were from women. The interviewee estimated that out of one hundred applications two would be from women, and these applications tended to come from women's groups, not individuals.

All interviews explained the low level of titling by indicating that the process to get a title is extremely expensive. Interviewee 2 (7/23/09) estimated the cost to be about five hundred dollars for an individual to go through the full titling process. The interviewee stated: "To do land titling for one acre could cost you five hundred dollars, so you can see its quite a lot and if it (the land) is off of the road, thus lacking infrastructure, it could be as much as one thousand dollars" (7/23/09 #2). In response to questions about the impact of the cost on titling applications the interviewee stated, "of course it has serious implications, it has deterred many because raising five hundred dollars is quite a lot" (7/23/09 #2). The cost of the titling was seen as a huge obstacle that would need to be surmounted if the government was truly dedicated to a private, freehold tenure system. Interviewee 2 (7/23/09 #2) also discussed the lack of financial support from the government to facilitate the local land committee. Land committees are key administrative component in the Land Acts. The local level committee provides a report of any land dispute to the District Land Board, and is the first step in any title application process. Currently no central government funding is provided, thus the local communities have made due

by acquiring financial support locally through fundraising. Interviewee 2 brought up a possible solution to the problem of how inaccessible the land law is, suggesting decentralizing the title application process. This would bring the administrative office to the local District level (from Kampala, the capital city). This would greatly reduce the cost for the individual in terms of travel costs and also hopefully raise awareness. Interviewee 2 saw this as a necessary step if the government was truly dedicated to the implementation of the Land Act.

All the key informants shared the view that in rural settings the Land Act was not understood as thoroughly as in the urban areas. There was an awareness of the fact that in the more rural setting it was more difficult to utilize the land law, more specifically all informants stated that even within the District none of the title registration applications came from the rural areas. The reasons for this were thought to be the increased cost to have the land survey due to difficult access from main roads as well as a lack of understanding of the land law. One interviewee touched on how few land title applications they were receiving due to these different obstacles saying: “The process is very bureaucratic, very difficult to go through, very expensive...” (7/23/09, interviewee 2).

All four informants agreed on the need for more sensitization on the law. In response to a question about awareness of the land law, interviewee 3 stated that, “it isn’t enough, it can’t be enough, there is a lot to be done, so far as sensitization and mobilization” (7/23/09 #3).

### *Land Scarcity*

When asked questions about land, inheritance and family, all of the key informants touched on the scarcity of land, resulting in smaller plot sizes and the inability to distribute to family members in the traditional method.

“...want to see my children owning their own property....would be very sad if they had to go back and fight for their family land that is not there.” (7/23/09 #3)

This deeply affects the norms of inheritance practices and pushes families to promote alternative forms of accessing land. Children are encouraged to procure their own land through

purchase or rental because they cannot rely on inheriting land from their family to support them. Arising frequently in my interviews, this was a topic of high concern in the area. Another factor in the change in inheritance practices is the push to include females within the family land distribution process. While the government is promoting this it still is not the norm. If girls are included they tend to have to share one piece while the male counterparts each get their own piece of land. All of the key informants were included in the distribution of their family's land. Out of the three females two shared a plot with their other sisters and one believed that she would get her own plot, under her name but was unsure as the distribution had not yet occurred. They all acknowledged that it was the norm for the boys to get their own piece of land and for the girls to get one piece to share. When asked about inheriting from their parents, one of the interviewees stated,

“I will have the land in my name I think but normally most parents distribute the land between all of the boys and then the girls all share one piece of land. Whether you are five or ten you co-own but the boys get their own.” (7/23/09 - #1)

#### *Insecurity due to Transitioning Tenure System and Gender Norm*

All the key informants still saw the need for improvement in women's rights. While they all thought the Consent Clause was beneficial, they felt that without co-ownership there is and will be a lot of insecurity of tenure for women. Interviewee 1 (7/23/09 - #1) talked about how they were fighting for equal rights so that in the case of divorce, which is reportedly a common occurrence, each partner can leave the marriage with their equal share of the property, which they have bought together. As interviewee 1 said:

“But we are fighting for females to also be able to access land. When a husband is buying land let it be that we both buy the land and own it together. So for us now as women, what do we want? We want to own land. Because you know, (well you are not married), but over time things change and you will find that your husband is chasing another wife, you can no longer stay together and you had better go. When you have toiled together for fifty years and you have bought the land together, but now that the agreement says that Joe has

bought Justine is a witness, then you go empty handed. So what we want is that we buy jointly and we own jointly. So that if marriage issues change then we share, you stay with your part and I stay with my part” (7/23/09 - #1)

When discussing women rights, all of the key informants brought up the Domestic Relations Bill. They discussed how this bill had the potential to make a large impact on women’s security, both in terms of land tenure as well as gender equality because of its provisions that include co ownership (thus affecting wives inheritance) and the legislation of cultural norms such as bride price and marital rape. The bill has been tabled, and there is skepticism about when or if it will be passed. All the key informants expressed a desire as well as a need for change in cultural norms in all sections of society. However, while they have changed within the upper class and well-educated parts of society, this transformation is slow in reaching the average Ugandan.

“The cultural norms are no longer there, just down in the grassroots where the women are not yet empowered, but where the women have reached empowerment economically, socially and politically the cultural norms no longer work”(7/23/09 #3).

“Believe that women’s ability to access land will keep improving because not even ten years ago people thought that women didn’t own land, because we have a paternalistic society because women come to husband’s land without anything. What did you come with? You came with nothing, so she doesn’t own anything. But now they own together, the wife has ownership where she lives (through consent clause) so it is an improvement. Think that Domestic Relations Bill will help move forward.” (7/23/09 #2)

The key informant interviews set the context for the next round of interviews with rural women who are most affected by cultural norms around land and inheritance. They provided insight into the government position on women’s land rights as well as the individual’s perspective. These interviews gave the researcher insight into the perspective of the upper class and well educated within the District. The underlying message was that there was faith in the possibility of the Land Act but that currently it had not been properly implemented. A key concern was enhancing

women's access to land, which was expressed in both the need to change the law as well as cultural norms.

### *Findings from Interviews with Local Female Farmers*

To conduct the main interviews with the local female farmers the researcher made contacts through local government and local elites who identified community members to act as a liaison into differing sub-counties. Within the sub county the local community member would gather a group of women who were willing to share their stories. All of the women were involved in subsistence farming, but were a mixture of different educational backgrounds and age. The sampling came from three sub-counties: Kihhihi, Kirima and Rutenga as well as from the Kanungu Town Center (see map on p. 17).

The following are the main themes that arose during the interview process: 1) lack of awareness of the Land Act; 2) insecurity due to marriage issues and inheritance practices; 3) utilization of alternative and informal channels to access land. The overarching theme that incorporated all of the sub themes was the importance of land access for women's lives. I heard repeated statements how daily existence is directly tied to their land and because of this they feel having access to land was a necessity for survival. For most of the interviewees it is their land that provides food for themselves and their family and provides the space for their home, thus it is their land that sustains them. Land is seen as such an important part of life that one of the interviewees indicated that everyone should have a small piece of land because she knew that it was her small piece of land that kept her going. She felt that everyone should have at least that basic piece for survival. Access to land is representative of an individual's opportunity in life and the power they hold in the community. When asked about the necessity for women and men to own land equally, one of the interviewee's (7/27/09, # 2) stated that "...it is important because ideally they are supposed to have the same opportunities in life and here (Kanungu, Uganda). Land is the base measure, the beginning point of what you are going to be. So the same piece of

land kind of means equal rights or power". Women had strong opinions about land's importance and felt that having equal ownership between women and men was necessary and would be extremely beneficial. Example statements include:

All of them are human beings and because of that they should all be entitled to the same opportunities in land (7/25/09 #1);

(Equal ownership is) Important because the women usually has donated to the buying of the land so it is only fair (7/28/ 09 #1);

Its very necessary because these days a majority of the women are contributing to the money that they use to buy the land so because if that they deserve an equal chance to be the owner (7/25/09 # 15).

Women understood that owning land equally would be beneficial for women's land access and security as well as for development; some saw that it had the potential to bring cohesion in the home, while also expressing fear concerning the possible conflict that would arise when attempting to navigate equal ownership. An exemplary expression of this perspective:

(Equal ownership) "It's important because it brings harmony in the home and can be very developmental because land is a valuable asset, so any decision around it is a big decision. So if they have the same opportunities they can make the same decisions to better themselves, but if the man has selfish motives and you don't have an opportunity to stop him it can cause a rift" (7/27/09 #3).

Women's desire for equal rights over land revolves around the aspiration to keep the land for their children and to be able to pursue their development ideas. Many women expressed the strong conviction that women are more focused on development than men, and that with the unequal rights over land women are not able to engage in their ideas for social and economic advancement due to male control. When asked about how they would most like to access land women favored the customary system; they felt that the customary could provide better protection due to its connection with the community.



### *Lack of Implementation and Awareness of the Land Act*

During the interview process the interviewees were asked a series of questions related to the Land Act, from these responses an obvious lack of awareness and understanding of the land Act emerged. This also ran parallel with the apparent lack of implementation, which leads to women's inability to utilize the land law to protect their land interests. The research found that of the 29 interviewed, 16 said that they had heard of the Land Act but most were vague on the specifics. When asked directly if they had heard of the Consent Clause, 21 women said that they had heard of it but many were not sure what it said or how to make use of it and this left them in a vulnerable position. As one interviewee expressed: "they need to sensitize people to their rights because they might have a vague idea of what it is about but since they don't know they suffer at the hands of the men" (7/24/09 #1).

Inability to uphold the law, issues of domestic violence and general disregard for women's legal rights, were common topics. Women have little trust in the law's ability to protect them, and law and legal process were looked at as something outside of the community, foreign, and difficult. Many women felt that it was ineffective and that men would do what they wanted regardless of what the law says. Women made statements about the man doing what he pleases and there was a lack of possible effective recourse. One of the interviewees had a personal story of intense struggle that illustrated women's inability to utilize the law to protect them: "Husband rents some of the land to get money to drink, so if it were up to her she would end that. Also he sells some bits without asking her" (7/24/09 #2). She knew that a law was passed that required the husband to get the wife's consent to sell the land but she did not know what the law was called and stated that if she said anything then he would simply beat her up until the point of hospitalization. She knew this from attempting to hold him accountable by getting an injunction from the LC1 (District level government), an incident which ended with her in the hospital. While this was acknowledged to be an extreme case, similar types of scenarios were considered to be a common occurrence. There were a lot of comments about the government's inability to uphold

what the law says, “As much as there is the government policy which says that they need to consent, many women fear their husbands so they are bound to do it under duress, so in the end the man has the say with what will happen with the land” (7/27/09 #2).

The issue of women’s inability to exert control over the land of her husband is highlighted in the case of the husband’s death. In many cases the husband’s family members lack any respect for the woman’s right to that land. This can result in the family attempting to take the land; one such case was gathered during the interview process. The researcher interviewed a woman whose husband had been killed by his brothers over land disputes. The brothers were still threatening her and her children because they would inherit the land once they turned eighteen. She stated “ here as a widow you can’t sell land when the children are young but they (her brothers in law) are saying that they will kill them before they get old, so that way she won’t have title to the land” (7/25/09 #3). She was trapped between the laws: the customary system was not protecting her and she was unable to access the formal system set up by the Land Act. Unable to protect herself she left her land and moved back to her parents with her children.

There were some more hopeful perspectives that saw improvements in women’s rights while simultaneously acknowledging that there was still a long way to go in terms of women being aware of what their rights are. One of the interviewees discussed the improvements over time saying:

If she compares her generation and her mother’s generation, her mother’s generation never had any say and the men aren’t very developmental so they would just squander the land, they would sell it just to drink, but now her generation . . . women have rights and know them but not of all women know so there needs to be more sensitization (7.29.09 #2).

#### *Utilization of Alternative and Informal Channels to Access Land*

During the interview process the interviewees were asked a series of questions about the land tenure method they utilized as well as which one they preferred. From the responses a theme arose that demonstrated the utilization of alternative and informal channels of land access.

Through discussing both what form of tenure the interviewees had and also what methods they used or would use for handling any sort of land dispute the researcher was able to gather data that indicated a strong preference for the customary land tenure systems in the area.

Utilizing the customary tenure system rather than the freehold was accepted as the social norm within this area, and in the cases where interest in a title existed the cost was preventative and therefore unattainable. Most of the women interviewed thus were utilizing the customary system. The researcher found that out of the 29 interviewees, 20 of the women specified that they had customary agreements for their land, while only three had a title. Not having a title but rather utilizing the customary land tenure system was accepted as a social norm. Interview (7/27/09 #2) stated, “she has not thought of getting a title because it’s the norm not to have one, she doesn’t think it’s a big deal. Most people she knows do not have one”. In the cases where women had thought of getting a title, cost was targeted as prohibitive, along with a general lack of need. Statements were made such as the following: “It’s expensive, costly, they have to pay surveyors: it’s a long tedious process” (7/24/09 #4); “She would want to get it but she has asked around and it is very, very expensive, she knows that it is very expensive” (7/25/09 #4); “She knows that it is very expensive and that alone discourages her from even trying, because of that she doesn’t want to go through the whole process, she doesn’t have the money” (7/25/09 #5).

In terms of how women would like land to be governed, women showed a strong preference for employing the customary system through utilizing the elders in dispute situations or when asked to speculate about possible changes in land access and control. When asked about which method women preferred to utilize for resolving land issues, 17 of the 29 women stated that they would prefer to go to the elders over the law. Most women felt that the elders know the area and the land well and thus were better suited to make decisions regarding it. They felt that overall the community respected the decisions of the elders more because they were more active within the community-it was the elder’s opinion that was considered to be more important. When

asked about whether interviewees preferred the customary system or the law to make changes in how land is accessed and controlled, the responses included the following:

She would rather go to the elders because they give spot-on (on the spot) decisions, than the law which takes forever; she doesn't think the law can help her. (7/25/09 #1)

She would go to the elders first because they know the land, they were there when you bought the land, they will stand by you when you go to the LC level, they know the land and the procedure so it's important to go to them first (7/25/09 #5)

They would understand the land better and the villagers respect their decisions more and the people that she would possibly have a dispute with would respect their decisions more (7/25/09 #6)

A few women did show interest in making use of the new Land Act. Out of the 5 that expressed interest in utilizing the law, two of them felt that *both* the law and the customary system should be utilized. All of them, while expressing interest in utilizing the law, also expressed skepticism about its ability to be effective. One example is interviewee (7/24/09 #1) who stated that she would utilize the law when given the choice between the law and the informal tenure system but when answering a question about the government formally recognizing rights, she said "Even if the government gave them (women) the right, when their husband or someone else locally did not want them to do it locally then the government probably wouldn't be there to help" (7/24/09 #1). Another woman who expressed interest in the law had the belief that both the elders and the law should be utilized. She said "It's important to look at both because if you go straight to the law the elders eventually will know what you are up to and eventually it always come down to the elders, use both" (7/29/09 #2). While another also felt that there was a need for a combination of the two that stressed a bottom up approach. She said:

"Ideally you need to use a bottom up approach because its more effective, so you start with the elders because they know what is happening but in the event that they don't side with you then you always have a recourse, you can go to the law because they are not the same people as the elders, the law is the alternative but if she wanted to change something she would use the bottom up approach" (7/29/09 # 3)

### *Women's Focus on Development and Future Generations*

The last theme arose not through a specific set of questions but rather emerged throughout the whole interview process and was repeated extensively in different manners but the over arching message was that women see themselves as the force behind development. Women see themselves as the ones that need to take action to move forward, they are the “developmental minds/brains”, and they feel that it was their duty to keep their land for their children, protecting it from anyone who would like to sell it. In connection to their desire to keep their land for their children, women have an intense opposition to the transference of land. The term that was repeated with high frequency was “developmental”, for women this means focusing on self-improvement for the family and development that includes focus on the future generations.

A recurring point that kept coming up throughout the interview process was the plethora of statements that depicted women as more inclined towards development. Women believe and acknowledge that they are the ones with the more “developmental brain/mind”; they are focused on education for their children, opportunities for financial stability, as well as opportunities for self-improvement. In contrast, there is a strong belief that many men make rash decisions, sell land for bad reasons, use money to drink and do not think of the future, or the family. One of the interviewees said: “The women are more developmental, they are the ones who start unions and they are the ones that are very keen on their kid’s education. The men are the ones who just go eat meat and drink beer,” (7/27/09 #4). They also feel that men need to be superior and thus see problems as a sign of weakness, which causes them to make rash decisions that can hurt the family. On the other hand they expressed that women are comfortable talking about their problems, so they will share and discuss the issue and through this look for the most probable answer. “You’re probably smarter than he is and appropriate you want to make decisions concerning the land but you can’t because ultimately he also has to agree for example like if you had a problem he would probably fix it quickly by selling the land”.

There is a strong awareness of the increased pressure on land, because the land that is gained through inheritance has been fragmented to the point that it is not enough to provide for the family. People are forced to rent or look to buy other land to have enough to live on and farm. Interviewee (7/25/09 #7) stated that “the one (farm) they have is not enough” and thus they wanted to buy a piece of their own, while another woman stated that “the land that they have is not big enough so she rents land to farm...” (7/24/09 #4). It was common to live on one piece of land and then to farm on another piece of land.

With the increased pressure on land, combined with a perceived increase in rash land sales, there is urgency and potency to the desire and need to maintain and defend the land that one had. One of the interviewees talked about her family’s method of increasing protection even within the family. The interviewee described a system that her parents had devised in which an agreement had been made within the family to give each other first right to the land, when one of them wants to sell. The parents demarcated the land for the children but kept the documents, this way the children are unable to sell the land without parental consent and the family gets first priority. When asked about the effectiveness of this arrangement, the interviewee stated that she believes that it is beneficial because it prevents the inconsiderate siblings from selling the land they were given and then coming back for more (7/24/09, #1).

The intensity of the fight to protect the land is palpable at times. Women describe it as an obligation and feel that they need to have equal rights so as to protect the land for the future generations.

#### **4: Conclusion**

The interviews in this study illuminated the fact that there was a lack of awareness of the Land Act and that a decade after its passage women are still either unaware of the Land Act and /or prefer not to utilize it. What arose as the main instigators of land insecurity for women in the area was the transitioning of gender roles, family land disputes and increased land pressure. These

issues were exacerbated by the lack of possible recourse for women when conflicts arose.

Overall women preferred to utilize informal channels to access land but also saw the strength in combining the utilization of the formal with informal tenure methods. Whichever method they preferred, all women saw land as imperative to their well being and viewed themselves as the strength behind future development.

Throughout both the elite and rural female farmer interviews, there was extensive discussion about the transformation of women's role in society. Women expressed more concern over women's equality than over the means of land tenure. This concern seemed very practical because as the interviews illustrated gender norms are an overarching issue that impact many different aspects of life including land tenure. Women are working to be viewed as equals, in part because as many stories illustrated, without more socially expected norms of gender equality, men will do what they please with the land regardless of the tenure system.

The other key factors affecting women's tenure insecurity were increased land pressure and family disputes both of which seem to be deeply affected by gender norms. As land becomes more fragmented and the need for additional plots of land is common, the need for access to land through ownership or inheritance is increased. This increased pressure on land seems to be leading to land disputes between neighbors and within families. Women's inability to protect their land seems to take place quite often within these dispute situations. Many women did not trust the law to protect them but preferred to utilize the elders, despite the fact that in many cases the elders were unable to protect them and their land.

A local organization called the Land Equity Movement of Uganda is responding to these issues of land tenure insecurity by calling for the integration of the two systems of land tenure regulation. They see the need for the state "to integrate the customary justice system with its own" (Adoko & Levine 2009), in hopes of being able to better protect women's land access. Promoting a system that integrates customary tenure forms with the state regulated system may

increase land security by bridging the gap that is being left in the transition between the two systems of tenure.

Through this investigation of the impact and awareness of the 1998 Land Act, it became clear that creating a titling system when there is no means of implementation leave us unable to truly judge what the potential could be for this system of tenure. Rather it gives us the opportunity to see that in this time of tenure transition there is confusion, loss of land, and high levels of insecurity for women as well as the population as a whole. There needs to be a shift towards a system that actively incorporates women, for as the research noted, they are the ones that are looking for productive opportunities to help better their situation in life. Rather than looking towards titling as a means to alleviate poverty, improving women's roles need to be prioritized as a means of meeting the average Ugandan basic needs. While it is wonderful that women have been empowered within the political structure, without the equal protection of women's rights to land political empowerment falls short in terms of improving women's standing in society as a whole. Women need to be politically, socially and economy empowered if we wish to see movement towards viable poverty-alleviating development.



## References:

- Adoko, J. & Levine, S. (2008). Falling between two stools: How women's land rights are lost between state and customary law in Apac District, northern Uganda. In B. Englert, and E. Daley (Eds.), *Women's land rights and privatization in eastern Africa* (pp.101-.120). Cumbria: Long House Publishing.
- Adoko, J., Levine, S. (2009, April 17). "Women land and development: In search of a titling to the family holding". *The Guardian Weekly*.
- Ahikire, J. (2007). *Localised or localizing Democracy: Gender and the politics of decentralization in contemporary Uganda*. Kampala: Fountain Publishers.
- Batungi, N. (2008). *Land reform in Uganda: Towards a harmonized tenure system*. Kampala: Fountain Publishers.
- Boone, C. (2007). *Property and constitutional order: Land tenure reform and the future of the African state*. *African Affairs*, 106/425, 557-586, doi:10.1093/afraf/adm059
- Bromley, D.W. (2008). Formalizing property relations in the developing world: The wrong prescription for the wrong malady. *Land Use Policy*, 26, 20-27. doi: 10.1016/j.landusepol.2008.02.003
- Bikaako, W. and Ssenkumba, J. (2003). Gender, land and rights: Contemporary contestation in law, policy and practice in Uganda. In L. M. Wanyeki (Eds), *Women and Land In Africa: Culture, Religion and Realizing Women's Rights*. London, Zed Books Ltd.
- De Soto, H. (2000). *The Mystery of Capital: Why Capitalism Triumph in the West and Fails Everywhere Else*. New York, Basic Books.
- Deininger, K., Castagnini, R. (2005). Incidence and impact of land conflict in Uganda. *Journal of Economic Behavior and Organization*, 60, 321-345. Doi: 10.1016/j.jebo.2004.04.008
- Englert, B., Daley, E. (2008). Introduction. In B. Englert, and E. Daley (Eds.), *Women's land rights and privatization in eastern Africa* (pp.101-.120). Cumbria: Long House Publishing.

- Fortin, E. (2005). Reforming land rights: The World Bank and the globalization of agriculture. *Social Legal Studies*, 14, 147-177. doi: 10.1177/09646639051217
- Kanungu District Local Government. (2009). Kanungu district local government three year district development plan. Kanungu, Uganda.
- Landler, M. (2009, August 23). "A new gender agenda". The New York Times Magazine, Retrieved from <http://www.nytimes.com/indexes/2009/08/23/magazine/index.html>
- Lastarria- Cornhiel, S. (1997). "Impact of privatization on gender and property rights in Africa". *World Development*, 25, 1317-1333. doi: 10.1016/s0305-750x(97)00030-2.
- Lastaria-Cornhieal, S. (2003). *Uganda country brief: Property rights and land markets*. Madison, Wisconsin: Univeristy of Wisconsin-Madison, Land Tenure Center.
- Manji, A. (2001). Land reform in the shadow of the state: The implementation of new land laws in Sub-Saharan Africa. *Third World Quarterly*. 22,327-342. doi: 10.1080/01436590120061633
- Manji, A. (2006). *The Politics of Land Reform in Africa: From Communal Tenure to Free Markets*. New York: Zed Books.
- Ministry of Gender, Labour and Social Development. (2007). The national action plan on women. Kampala, Uganda: St Christian Graphics.
- Ministry of Gender, Labour and Social Development. (2007). The Uganda gender policy. Kampala, Uganda: UNFPA
- Nsibambi, A. (1998). Decentralization and Civic Society in Uganda: The Quest for Good Governance. Kampala, Uganda: Fountain Publishers.
- Nyamu-Musembi, C. (2008). "Breathing life into dead theories about property rights in rural Africa: Lessons from Kenya". In B. Englert, and E. Daley (Eds.), *Women's land rights and privatization in eastern Africa* (pp.101-.120). Cumbria: Long House Publishing.

Platteau, J-P. (1996). The evolution theory of land rights as applied to Sub-Saharan Africa: A critical assessment. *Development and Change*, 27, 29-86. doi: 10.1111/j.1469-7660.1996.tb00578.x

Sebina-Zziwa, A. J. (1995). *Gender perspectives on land ownership and inheritance in Uganda* (Res. Paper. No 16). Madison, Wisconsin: University of Wisconsin-Madison, Land Tenure Center.

Tripp, A. M. (2004). Women's movements, customary law, and land rights in Africa: The case of Uganda. *African Studies Quarterly*, 7, 1-19, retrieved from <http://web.africa.ufl.edu/asq/>

## Appendix A- Interview Instrument

### **Introductions:**

- (Start with name-general introduction)
- How are you?
- Have you had a good morning?
- How is your family?

### **Explanation:**

- I would like to start by telling you a little bit about what I'm doing. I'm interested in how women in this area gain access to land and what views they have on how land should be distributed and what should define ownership. I want to hear the personal stories of what women have done to gain access to land and how this has impacted their life.
- As a foreigner who lives in a city, I know little about the day-to-day life of women like you in this area. I'm interested in your story.
- (General thoughts----- including the work that you do, how you provide for your family, and how much time you spend cultivating land? Are you able to have access to land and if so through what means?)

### **Descriptive:**

- Can you describe an average day for you- from when you wake up in the morning until you go to bed, what fills your day?
- How did you or your family come to live on this land/ or at this location in the Kanungu District?
- In terms of day-to-day needs, what is most important for you? If you could rank your three most important needs, what would they be and how would you rank them?

### **Structural:**

- About how much of your day do you spend working you/your families land?

- Is this production purely for your family's consumption or are some of the crops sold at a market?
- (Optional- depending on situation) How are agreements reached, when dealing with what will happen on the family land, such as what will be grown or in the case of it being sold who would make this decision?
- (Optional- depending on situation). What sort of agreement do you have with the owner of the land that you cultivate?
- So earlier you told me a bit of your family history and how you came to live in this area, could you take me through step by step process of how you acquire this land? What methods were used?
  - (if they express struggle-focus in on key issue)
    - Have you seen other women have similar struggles?
    - What sort of action have you seen other women take in similar situations?
    - How are women able to help each other in these situations?
- Do you know about the 1998 Land Act? (Probe: The Amendment to include co-spousal ownership in the Land Act? )
  - (If Yes) What do you know about it? Do you believe that this would have been beneficial to women?
  - (If No- briefly explain the Land Act and then ask previous question)
- Do you think it is necessary for women to equally own land? (Probe: That is, for the government to formally recognized women's land rights? Do they feel adequately covered by informal channels?
- Do you think a law like this-requiring women to have equally recognized rights-is important, somewhat important or not at all important for Ugandan women?

**Contrasting:**

(If they see issue)

- What differences do you see between the over all struggle for land in Kanungu and the specific issues that women face? Do women face different issue, is it more difficult for women, or is the struggle the same for everyone?

(If don't see issue)

- From what you said I've understood that you feel comfortable with your ability to access land. Do you feel that your situation is unique? Are most women in a similar situation as you in terms of their ability to access land?
- So you have discussed the issue of..... and the issue of..... How do you see these relating?
  - What sort of steps could be taken to address these issues?

**Hypothetical Situation:**

If you were able to create the structure that determined how all the people (citizens) of Kanungu access land, both male and female, what would this look like? (Probe: Would you use the law? Would you use a different method? If law, what type pf laws would you create?)

**Express Cultural Ignorance**

Well I have learned a lot, thanks. I had no idea about.....thanks this was very informative.

**Friendly Questions:**

Can I know a little bit more about your family?

What is your favorite part of this area? As a foreigner what do you think I need to see or do or eat?

Experiential Self-Referential Processing & Autobiographical Memory Retrieval:

A Preliminary Look

Kathryn L. Mills

Mentor: Robert Roeser, PhD

Ronald E. McNair Scholars Program Thesis

Portland State University

## **Abstract**

Self-referential processing can be defined as the process of experiencing stimuli as they relate to one's self (Northoff, 2006). Two distinct modes of self-referential processing, an "experiential mode" of self-referential processing, and a "narrative mode," have been proposed, and subsequently supported by neuroimaging research (Farb et al., 2007; Gallagher, 2000; Tagini & Raffone, 2010). Previous studies examining self-reference and memory utilize methods that may only engage a narrative form of self-reference (Macrae et al., 2004; Rogers, Kuiper, & Kirker, 1977; Symons & Johnson, 1997), leaving the relationship between the experiential mode of self-reference and memory processes open for investigation. In this study, we examine how mindfulness training may affect (a) the cultivation of mindfulness, a present-oriented, non-judgmental state similar to the experiential mode of self-reference; (b) executive functions related to mindfulness that make shifting and sustaining awareness in this state possible; (c) the frequency of rumination, a state of self-evaluation similar to the narrative mode of self-reference, and (d) the characteristics of the self-relevant memories one retrieves when asked to during a behavioral task. The study was a 2 x 2 quasi-experimental mixed design with a within-subject (pre-test vs. post-test) and between-subjects factor (mindfulness group vs. control group).



## **Introduction**

Self-referential processing is defined as the process of experiencing stimuli as they relate to one's self (Northoff, 2006). Two distinct modes of self-referential processing have been proposed, and subsequently supported by neuroimaging research (Farb et al., 2007; Gallagher, 2000; Tagini & Raffone, 2010). These dual modes include an "experiential mode" of self-referential processing, characterized by momentary awareness of the psychological present, and a "narrative mode" of self-referential processing involving past experiences and future goals that constitute a key source of representations supporting our continuity of identity over time (Farb et al., 2007; Gallagher, 2000; Tagini & Raffone, 2010). Although the relationship between self-reference and memory has been explored, these studies utilize methods that may only engage a narrative form of self-reference (Macrae et al., 2004; Rogers, Kuiper, & Kirker, 1977; Symons & Johnson, 1997), leaving the relationship between the experiential mode of self-reference and memory processes open for investigation. The present study investigates the relationship between these distinct modes of self-referential processing and behavioral measures of autobiographical memory retrieval and executive functioning in a population of college attending adults receiving mindfulness training.

Our memories provide the foundation for our sense of self, and are often retrieved and adapted to fit with the conception and goals of our current self (Conway & Pleydell-Pearce, 2000). The memories that serve our sense of self are called autobiographical memories, and the self that is created from these memories is referred to as our autobiographical self. Conway (2005) proposed a Self-Memory System (SMS), composed of a working self that holds an individual's set of active goals and associated self-images, an individual's subjective memories, and the reciprocal relationship between the two. This theory maps onto William James' theory of

the self being composed of two separate components, the *I* and *me*, in which one aspect of the self encompasses the collected experiences of the individual (*me*), and the other is characterized as the present-moment self (*I*) that experiences (*me*) (James, 1890). In Conway's model, the working self is both constrained by one's autobiographical knowledge, and modulating of what autobiographical knowledge is maintained and retrieved (2005). Conway (2005) argues that having a memory system that is conceptually organized and is automatically brought to bear on one's current goals and contexts when relevant is an evolutionary adaptation that has allowed humans to work efficiently and often automatically on tasks in the present moment, and to effectively plan and pursue goals over the longer term.

Aspects of autobiographical memory retrieval can tell us about different aspects of self-processing, including the influence of motivations in self-evaluation (e.g. self-enhancement, self-verification), as well as the roles of affect and cognition in these processes (D'Argembeau, Comblain, & Van der Linden, 2005; D'Argembeau & Van der Linden, 2008; Sutin & Robins, 2008). Previous studies have measured how memory retrieval can give insight into our self-referential processes in which we refer to our autobiographical memories to direct our future behaviors (Williams et al., 2007). The Autobiographical Memory Test (AMT) is a measure that allows us to measure autobiographical memory retrieval processes (Williams & Broadbent, 1986). The AMT is a primarily a task that measures autobiographical memory specificity, however, other studies have explored other aspects of these retrieved memories with supplemental questions about the vividness and vantage perspective (Kuyken & Moulds, 2009). Memories can be retrieved from a first-person "field" perspective, where the retriever is looking at the memory through their own eyes, or from a third-person "observer" perspective, where the retriever is looking at the memory from a disembodied observer's perspective (Nigro

& Neisser, 1983). The vantage perspective in autobiographical memory retrieval has been hypothesized to reflect motivations underlying self-referential processes (Sutin & Robins, 2008).

*The narrative mode as “default”*

Research has revealed that in the absence of the demand to attend to external stimuli, humans automatically engage in what is considered the narrative mode of self-referential processing – they retrieve memories about self and fantasize about future selves (McKeirnan et al., 2006). This suggests that a stream of self-relevant mental images, beliefs, and feelings are running rather constantly as a means of non-consciously interpreting “reality” and organizing and directing behavioral responses to that perceived reality. Nonetheless, moments of new learning, creativity, and social intimacy all require a present-oriented state of mind in which past and future are temporarily suspended in favor of the new possibilities of the present moment (Roeser, 2010, personal communication). Thus, shifting from the narrative mode, which is our default mode, into the more present-centered mode, requires training. Mindfulness training, in which one develops an ability to concentrate on and clarify one’s present-moment experience, is an ideal means to induce engagement in a more experiential mode of self-referential processing and the benefits it may hold for learning, living, and loving (Roeser, 2010, personal communication). In addition, by definition, such training would be expected to reduce unconstructive narrative modes of self-reference such as rumination by offering an alternative (e.g., returning to the present moment). This study utilizes mindfulness training as a means of inducing participants into engaging more frequently in an experiential mode of self-referential processing. We utilize a self-report measure of rumination and a self-report measure of mindfulness to assess engagement in the narrative and experiential modes of self-referential processing, respectively.

Moment-to-moment, non-judgmental awareness of experience is the definition of both the experiential mode of self-referential processing, as well as *mindfulness*, making mindfulness training the ideal means to induce engagement in a more experiential mode of self-referential processing. Indeed, distinct neural correlates of the two proposed modes of self-referential processing were more pronounced in individuals who had received mindfulness training (Farb et al., 2007). Mindfulness practice is thought to lead to a dissociation of the two modes of self-reference, with hypothesized benefits for learning and well being when narrative processes become ruminative, pessimistic, and overly general (Robert Roeser, personal communication, 2010). Furthermore, a previous study found that mindfulness training changes the specificity of retrieved autobiographical memory, possibly by increasing cognitive flexibility (Heeren, Van Broeck, & Philippot, 2009). Thus, another way mindfulness training, through its cultivation of a present-centered, flexible, and controlled form of awareness, may affect self-referential processing is by making the retrieval of specific (rather than overly general) self-memories more likely thinking about oneself (see Figure 1 for graphical illustration). This study utilizes mindfulness training as a means of inducing participants into engaging in the experiential mode of self-referential processing. We utilize a self-report measure of rumination and a self-report measure of mindfulness to assess engagement in the narrative and experiential modes of self-referential processing, respectively.

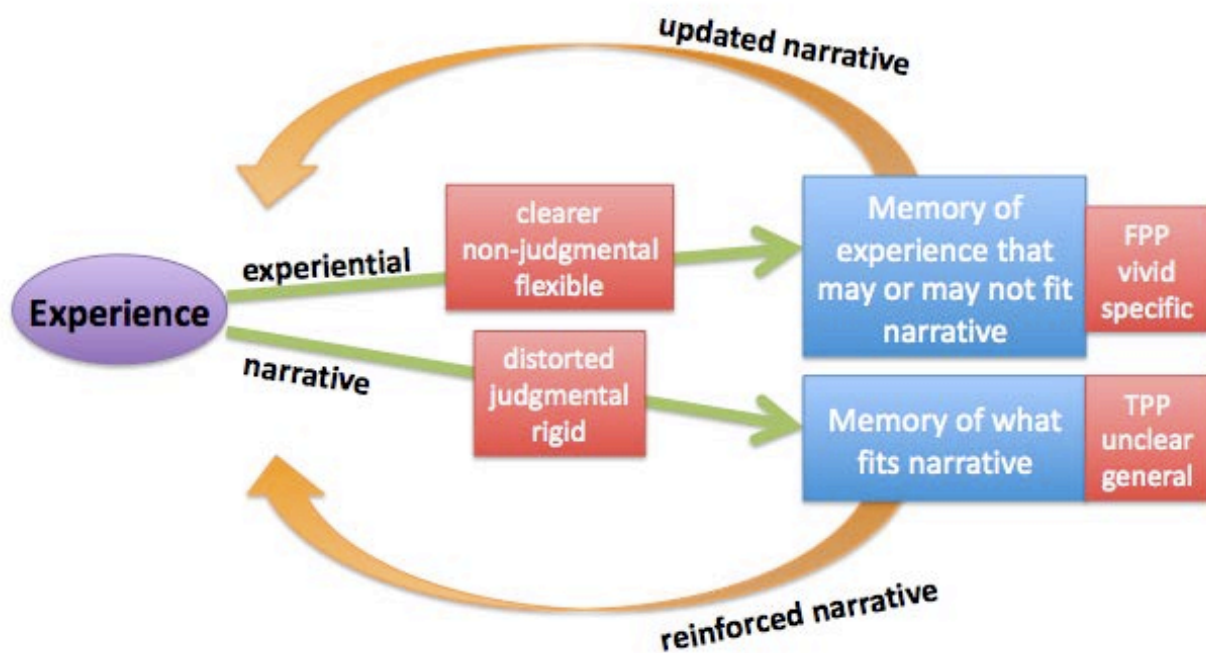


Figure 1: Model illustrates theory of how one’s mode of self-referential processing can affect one’s memories and self-narrative. Any given experience can be processed through an experiential or narrative mode of self-processing. The experiential mode of self-processing is clearer, non judgmental, and flexible, creating a memory that may or may not fit one’s self narrative. The narrative mode of self-processing is distorted, judgmental, and rigid, creating a memory that often fits one’s narrative. Memories created while in the experiential mode of self-processing are theorized to be recalled from the first person perspective (FPP), as more vivid, and as more specific, while memories created while in the narrative mode of self-processing are theorized to be recalled from the third person perspective (TPP), as less vivid (unclear), and less specific. The newly created memories are then incorporated back into one’s self- narrative, either updating the narrative, or reinforcing the narrative.

This present study examines the effects of mindfulness training on young adults’ mindfulness, related executive functioning, and autobiographical memory retrieval using a pre/post-test control-group design. Our theory predicts that mindfulness training will cultivate (a) the practitioner’s frequency of engaging in the experiential mode of self-processing (i.e.,

mindfulness), (a) related abilities regarding cognitive flexibility and working memory, and (c) characteristics of the autobiographical memories retrieved during an experimental task.



Figure 2: Theory of Change Model. The mindfulness training will increase mindfulness and executive functioning in the students receiving the intervention. This increase in mindfulness and executive functioning will change aspects of autobiographical memory retrieval, presumably increasing the vividness of the memories retrieved, increasing the amount of memories recalled from the first person vantage perspective, and reducing the amount of memories recalled from the third person vantage perspective. The increase in mindfulness and executive functioning will also reduce ruminative processes.

The specific hypotheses addressed in the present study include that the experimental group will (1) increase in self-reported mindfulness at post-assessment; (2) decrease in self-reported rumination at post-assessment; (3) increase in working memory capacity at post-assessment; (4) increase in cognitive flexibility at post-assessment; (5) recall more specific, first person perspective, and vivid autobiographical memories at post-assessment. (6) In relation to the mindfulness group only, increased mindfulness will correlate with decreased rumination. (7) The change in autobiographical memories predicted above will correlate with strengthened executive functions and increased mindfulness.

## **Methods**

### *Participants*

The study was a 2 x 2 quasi-experimental mixed design with a within-subject (pre-test vs. post-test) and between-subjects factor (mindfulness group vs. control group). Those in the

mindfulness group were recruited from a class offered by the psychology department at Portland State University titled “Contemplative Education and Psychology.” The control group was recruited from another class offered by the psychology department titled “Human Development.”

Research assistants visited the classrooms in the first week of spring term to recruit participants for the study. Those enrolled in the Contemplative Education class were offered extra credit for their participation, whereas students in the Human Development class were offered monetary compensation for their participation in each data collection time point. In an attempt to control for inherent bias, control group participants were included only if they expressed interest in enrolling in a class on Contemplative Education on a pre-screen enrollment form. To control for age effects, anyone over the age of 33 was excluded from the analyses.

Sixteen students were recruited for the mindfulness group, and ten students were recruited for the control group. Three students from the mindfulness group, and two control participants, were excluded in the analyses because they did not complete the post-assessment. Demographic characteristics for the mindfulness group (n=13) and control group (n=8) are displayed in Figure 2. There were no significant ( $p>.49$ ) differences in age between groups.

**Figure 3: Demographic Characteristics**

	Mindfulness Group (n=13)		Control Group (n=8)	
	Mean	Std. Dev.	Mean	Std. Dev.
Age	26.85	4.00	25.5	4.38
Gender	%	N	%	N
<i>Female</i>	54%	7	63%	5
<i>Male</i>	46%	6	38%	3

*Intervention*

Students enrolled in the Contemplative Education class received an 8-week, 16-hour mindfulness intervention by a trained facilitator. The mindfulness intervention used in this

study, the Music-Based Mindfulness Training (MBMT) program, was developed by Shinzen Young as a program was designed to teach college students basic mindfulness skills and their application as coping techniques for everyday stressors.

### *Assessment*

During the first two weeks of the academic quarter, and again during the last two weeks of the academic quarter, each group completed a battery of validated behavioral measures and self-report questionnaires. Each participant was administered the battery of behavioral measures alone in a quiet room by a trained research assistant. The assessment itself lasted 90-120 minutes, and consisted of five behavioral measures. The Automated Operation Span Task, Sustained Attention to Response Task, Autobiographical Memory Test, and Michigan Fish Task were all administered on standardized laptop computers. The Five Point Test was administered by hand. This study concerns the results from three behavioral measures: the Automated Operation Span Task, Five Point Test, and Autobiographical Memory Test.

Students completed a self-report survey. Surveys were sent participants through a secure online survey program. The self-report questionnaires measures used included the Attentional Control Scale, Five Facet Mindfulness Scale, Rumination-Reflection Questionnaire, Self-Theories of Intelligence, Self-Construal Scale, Self-Compassion Scale, Achievement Goals Scale, Positive and Negative Affectivity Scale and Self-Forgiveness Scale. The self-report questionnaire measures used in this study included the Five Facet Mindfulness Scale and the Rumination-Reflection Questionnaire.

### *Measures*

Participants completed the Automated *Operation Span Task* (OSPAN: Unsworth et al., 2005), a validated measure of an individual's working memory capacity. The OSPAN asks



participants to switch back and forth between cognitive processes while at the same time holding certain objects in working memory. Participants are instructed to complete mathematical operations and memorize words in alternation (Turner & Engle, 1989). Individuals who perform well on this task are thought to have more limited-capacity attentional resources available to them and therefore are better able to perform tasks requiring sustained, voluntary attention (e.g., Conway & Engle, 1996).

The *Five Point Test* measures figural fluency in each participant (Regard et al., 1982). Participants are given three minutes to draw as many different figures as possible on a sheet of paper with fifty identical rectangles that contain five dots. This measure was used based on the suggestion of previous studies to use a non-verbal fluency to task to measure cognitive flexibility (Heeren et al., 2009).

To assess characteristics of retrieved autobiographical memories, the study utilized a modified version of the *Autobiographical Memory Test* (AMT: Williams & Broadbent, 1986), formatted for administration on a laptop. Participants were instructed to retrieve specific memories of events that had happened in their life, excluding memories of events that had happened in the last week. In our study nine cue words, divided into equal groups of positive, negative, and neutral words, were presented in alternation to each participant on a computer screen above an empty text box, with the instructions: “For each word we want you to think of an event that happened to you that the word reminds you of.” Participants were given 30 seconds to retrieve a memory and type it into the text box provided on the screen. A practice trial was given before the nine cue words were administered. Different cue words were used for each assessment period. After recalling the nine cued autobiographical memories, each memory reappeared on the screen in the same order, with instructions to answer a few questions

regarding the memory presented on the screen. Participants were asked to rate the vividness of their memory from 1 (No Image) to 5 (As if I were seeing it now). Participants were also asked how many times have you thought about this memory since it has occurred, with the possible answers: Never thought about it until now, 2-5 times, 6-10 times, 11-20 times, 20-100 times, or more than 100 times. Participants were given a blank text box to fill in how old they were when the event occurred. Participants were also asked to rate how important the memory was for them, from 1 (Not at all important) to 5 (Very important). To measure vantage perspective, participants were asked, “did you recall this memory from a first person perspective (i.e., seeing scene through your own eyes) or a third-person perspective (seeing the scene from an observer’s perspective)?” They were given the following choices as answers: completely through my own eyes and body, mostly through my own eyes and body, equally through my own eyes and body and as an observer, mostly as an observer, completely as an observer, and I’m not sure.

Memories not omitted were later coded as specific, categorical, or extended. A memory was considered omitted if the text field was blank, or the memory was of an event that had occurred within a week of the assessment. Two independent raters were used to rate 27 memories, to establish interrater reliability ( $k = .98$ ), after which only one rater was used. For the purposes of this study, we only analyzed memory specificity, vividness, and vantage perspective.

The *Five Facet Mindfulness Questionnaire* (FFMQ; Baer et al., 2006) was used to assess self-reported mindfulness. The FFMQ is a scale of 39 items that was developed to be representative of five distinct facets of mindfulness: observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience (Baer et al., 2006). Participants were given the following instructions: “Listed below are a number of

statements. Read each one as if it referred to you. Please rate each of the following statements using the scale provided. Please respond to every statement.” Participants were asked to rate their response on a scale ranging from 1 (Never) to 5 (Always).

The *Rumination-Reflection Questionnaire* (RRQ; Trapnell & Campell, 1999), was used to assess ruminative self-focus in participants. The RRQ was designed to distinguish reflective vs. ruminative self-focused behavior by asking participants to rate their agreement with 24 items (Trapnell & Campell, 1999). For this study, participants were given the following instructions: “Listed below are a number of statements. Read each one as if it referred to you. Beside each statement select the number that best matches your agreement or disagreement. Please respond to every statement,” and instructed to rate their agreement from 1 (Strongly Disagree) to 6 (Strongly Agree).

### **Analyses Plans**

We conducted three types of analyses. First, we used cross-tabulations to examine sex differences in groups. Second, we used repeated measures analyses of variance to assess time by group change in our dependent variables. Third, we examine correlations between our key mediating and outcome variables.

### **Results**

*Group differences.* A 2 by 2 (condition by gender) cross-tabulation was conducted to examine if the groups differed in their gender composition. No significant sex differences by group were found ( $\chi^2(1, 20) = .04, p = .85$ ).

A series of repeated measures analysis of variance models (ANOVAs) were run for each outcome variable in our Theory of Change Model (see Figure 2) with condition as the between-

subjects factor (treatment vs. matched control) and time (pre-test vs. post-test) as the within-subjects factor. The existence of a condition by time interaction effect is used as a criterion for program efficacy. Effect sizes in the form of partial eta-squares are reported. Further t-test comparisons were performed to establish any significant ( $p < .05$ ) differences in means between groups and across time.

*Mindfulness.* Results of the repeated measures ANOVA for students' self-reported mindfulness as the outcome revealed no significant effect for condition by time (Wilks'  $L = .87$ ,  $F(1,17) = 2.56$ ,  $p = .13$ , eta-squared = .13). Although there was a marginally significant effect by time (Wilks'  $L = .82$ ,  $F(1,17) = 3.81$ ,  $p = .07$ , eta-squared = .18), the graph below shows that despite all students showing improvement over time on mindfulness, such improvement was more in evidence among those in the treatment group as predicted. There was no main effect by condition ( $F(1,17) = 0.10$ ,  $p = .76$ , eta-squared = .01). Mindfulness showed no significant difference



between the experimental group ( $M=3.18$ ,  $SD=.43$ ) and control group ( $M=3.33$ ,  $SD=.62$ ) at pre-assessment ( $p>.54$ ). Post-assessment measurement indicated a significant increase in self-reported

mindfulness in the experimental group ( $M=3.41$ ,  $SD=.47$ ,  $p<.005$ ), but no significant increase in

the control group ( $M=3.36$ ,  $SD=.66$ ,  $p>.41$ ). There was no significant between group difference in self-reported mindfulness at post-assessment ( $p>.85$ ).

*Rumination.* Results of the repeated measures ANOVA for students' self-reported rumination as the outcome revealed no significant effect for condition by time (Wilks'  $L = .96$ ,  $F(1,17) = .66$ ,  $p = .43$ , eta-squared = .04). There was a significant effect by time (Wilks'  $L = .57$ ,  $F(1,17) = 12.78$ ,  $p = .002$ , eta-squared = .43). There was no main effect by condition ( $F(1,17) = 0.11$ ,  $p = .74$ , eta-squared = .01). Self-reported rumination, showed no significant difference between the experimental group ( $M=4.02$ ,  $SD=1.05$ ) and control group ( $M=3.84$ ,  $SD=.81$ ) at pre-assessment ( $p>.67$ ). Post-assessment measurement indicated a significant decrease in self-reported rumination in the experimental group ( $M=3.51$ ,  $SD=.75$ ,  $p<.005$ ), as well as in the control group ( $M=3.50$ ,  $SD=.88$ ,  $p<.05$ ). There was no significant between group difference in self-reported rumination at post-assessment ( $p>.97$ ).

*Cognitive Flexibility.* Results of the repeated measures ANOVA for students' cognitive flexibility as the outcome revealed no significant effect for condition by time (Wilks'  $L = .97$ ,  $F(1,17) = .59$ ,  $p = .46$ , eta-squared = .03). Time did show a significant effect (Wilks'  $L = .22$ ,  $F(1,17) = 59.53$ ,  $p < .001$ , eta-squared = .78). There was no main effect by condition ( $F(1,17) = 0.001$ ,  $p = .98$ , eta-squared < .001). Cognitive flexibility showed no significant difference between the experimental group ( $M=34.69$ ,  $SD=8.13$ ) and control group ( $M=35.13$ ,  $SD=8.77$ ) at pre-assessment ( $p>.91$ ). Post-assessment measurement indicated a significant increase in cognitive flexibility in the experimental group ( $M=42.15$ ,  $SD=8.06$ ,  $p<.001$ ), as well as in the control group ( $M=43.00$ ,  $SD=12.13$ ,  $p<.001$ ). There was no significant between group difference in cognitive flexibility at post-assessment ( $p>.86$ ).

*Working Memory Capacity.* Results of the repeated measures ANOVA for students' OSPAN total score as the outcome revealed no significant effect for condition by time (Wilks'  $L = 1.0$ ,  $F(1,18) = .08$ ,  $p = .79$ , eta-squared = .004). There was no significant effect by time (Wilks'  $L = .94$ ,  $F(1,18) = 1.14$ ,  $p = .30$ , eta-squared = .06). There was no main effect by condition ( $F(1,17) = 1.39$ ,  $p = .25$ , eta-squared = .07). Working memory capacity, as measured by the OSPAN total score, showed no significant difference between the experimental group ( $M=34.67$ ,  $SD=22.29$ ) and control group ( $M=43.13$ ,  $SD=19.80$ ) at pre-assessment ( $p>.38$ ). Post-assessment measurement did not show the hypothesized significant increase in working memory capacity in the experimental group ( $M=38.17$ ,  $SD=18.44$ ,  $p>.21$ ), nor was any difference found in the control group ( $M=45.25$ ,  $SD=19.67$ ,  $p>.37$ ). There was no significant between group difference in working memory capacity at post-assessment ( $p>.43$ ).

*Specific Autobiographical Memories.* Results of the repeated measures ANOVA for students' retrieved specific autobiographical memories as the outcome revealed no significant effect for condition by time (Wilks'  $L = .99$ ,  $F(1,19) = .16$ ,  $p = .69$ , eta-squared = .01). There was a marginally significant effect by time (Wilks'  $L = .82$ ,  $F(1,19) = 4.18$ ,  $p = .06$ , eta-squared = .18). There was no main effect by condition ( $F(1,19) = 0.74$ ,  $p = .40$ , eta-squared = .04). The number of specific memories retrieved across nine trials of the AMT showed no significant difference between the experimental group ( $M=4.69$ ,  $SD=2.72$ ) and control group ( $M=5.63$ ,  $SD=1.85$ ) at pre-assessment ( $p>.36$ ). Post-assessment measurement showed a significant increase in specific memory retrieval in the control group ( $M=7.00$ ,  $SD=2.07$ ,  $p<.05$ ), but no significant increase was found for the experimental group ( $M=5.46$ ,  $SD=2.47$ ,  $p<.15$ ). There was no significant between group difference in specific memory retrieval at post-assessment ( $p>.14$ ).

*Specific Autobiographical Memories recalled from the First Person Perspective.* Results of the repeated measures ANOVA for students' specific memories recalled from the first person perspective as the outcome revealed no significant effect for condition by time (Wilks'  $L = 1.0$ ,  $F(1,19) = .004$ ,  $p = .95$ , eta-squared  $< .001$ ). There was not a significant effect by time (Wilks'  $L = .98$ ,  $F(1,19) = .41$ ,  $p = .53$ , eta-squared  $= .02$ ). There was a main effect by condition ( $F(1,19) = 6.99$ ,  $p = .02$ , eta-squared  $= .27$ ). The number of specific memories recalled from the first person perspective across nine trials of the AMT showed a significant difference between the experimental group ( $M=5.08$ ,  $SD=1.85$ ) and control group ( $M=7.38$ ,  $SD=2.13$ ) at pre-assessment ( $p<.03$ ). Post-assessment measurement did not show the hypothesized increase in specific memories recalled from the first person perspective in the experimental group ( $M=4.54$ ,  $SD=2.13$ ,  $p>.10$ ), nor did the control group show any significant difference ( $M=7.13$ ,  $SD=2.23$ ,  $p>.30$ ). There was a significant between group difference in specific memories recalled from the first person perspective at post-assessment ( $p<.03$ ), not accounting for the difference observed at pre-assessment.

*Specific Autobiographical Memories recalled from the Third Person Perspective.* Results of the repeated measures ANOVA for students' specific memories recalled from the third person perspective as the outcome revealed no significant effect for condition by time (Wilks'  $L = .99$ ,  $F(1,19) = .26$ ,  $p = .62$ , eta-squared  $= .01$ ). Time did not show a significant effect (Wilks'  $L = 1.0$ ,  $F(1,19) = .003$ ,  $p = .96$ , eta-squared  $< .001$ ). There was a marginal main effect by condition ( $F(1,19) = 10.0$ ,  $p = .07$ , eta-squared  $= .16$ ). The number of specific memories recalled from the third person perspective across nine trials of the AMT showed a significant difference between the experimental group ( $M=1.62$ ,  $SD=1.19$ ) and control group ( $M=.63$ ,  $SD=.74$ ) at pre-assessment ( $p<.04$ ). Post-assessment measurement did not show the hypothesized significant

decrease in specific memories recalled from the third person perspective in the experimental group ( $M=1.54$ ,  $SD=1.27$ ,  $p>.40$ ), nor did the control group show any significant difference ( $M=.75$ ,  $SD=1.04$ ,  $p>.36$ ). There was no significant between group difference in specific memories recalled from the third person perspective at post-assessment ( $p>.13$ ).

*Vividness of Specific Memories.* Results of the repeated measures ANOVA for students' The mean vividness score for specific memories retrieved across nine trials of the AMT as the outcome revealed no significant effect for condition by time (Wilks'  $L = .95$ ,  $F(1,19) = 1.01$ ,  $p = .33$ , eta-squared = .05). Time showed no significant effect (Wilks'  $L = 1.0$ ,  $F(1,19) = .04$ ,  $p = .86$ , eta-squared = .18). There was no main effect by condition ( $F(1,19) = 1.27$ ,  $p = .27$ , eta-squared = .06). The mean vividness score for specific memories retrieved across nine trials of the AMT showed no significant difference between the experimental group ( $M=3.76$ ,  $SD=.95$ ) and control group ( $M=3.09$ ,  $SD=1.23$ ) at pre-assessment ( $p>.21$ ). Post-assessment measurement did not show the hypothesized significant increase in mean vividness score for specific memories recalled in the experimental group ( $M=3.34$ ,  $SD=.99$ ,  $p>.15$ ), nor did the control group show any significant difference ( $M=3.34$ ,  $SD=.95$ ,  $p>.27$ ). There was no significant between group difference in mean vividness score for specific memories at post-assessment ( $p>.99$ ).

### *Correlations*

Correlation analyses demonstrated that an increase in self-reported mindfulness was positively correlated with a reduction in self-reported rumination in the experimental group, though this result failed to pass significance ( $r=.40$ ,  $p<.09$ ). Further analyses showed no significant correlation between increased self-reported mindfulness and changes in recalled autobiographical memories in the experimental group, such as increased specific memory retrieval ( $r=.20$ ,  $p>.25$ ), increased vividness ( $r=.20$ ,  $p>.25$ ), increased specific memories recalled



from first person perspective ( $r=.11, p>.36$ ), and decreased specific memories recalled from third person perspective ( $r=-.08, p>.39$ ).

An increase in working memory capacity was positively correlated with an increase in specific memories recalled from the first person perspective in the experimental group ( $r=.56, p<.03$ ). Further analyses showed no significant correlation between increased working memory capacity and changes in recalled autobiographical memories in the experimental group, such as increased specific memory retrieval ( $r=.29, p>.18$ ), increased vividness ( $r=.10, p>.37$ ), and decreased specific memories recalled from third person perspective ( $r=.45, p>.07$ ).

An increase in cognitive flexibility was not significantly correlated to any changes in recalled autobiographical memories in the experimental group, such as increased specific memory retrieval ( $r=.10, p>.37$ ), increased vividness ( $r=.08, p>.39$ ), increased specific memories recalled from first person perspective ( $r=.40, p>.08$ ), and decreased specific memories recalled from third person perspective ( $r=.38, p>.10$ ).

## **Discussion**

This study examined the effects of mindfulness training on putative indicators of the experiential and narrative modes of self-referential processing. By measuring differences in self-referential processes through pre- and post-assessments of executive functions, self-report measures of mindfulness and rumination on self, and autobiographical memory retrieval in a group of students receiving mindfulness training, we hypothesized that we would see differences related to increased engagement of the experiential mode of self-referential processing. To test this hypotheses we compared mean scores within subjects across the two assessment periods. To control for possible practice effects, we also compared our experimental group with a control group that received no intervention.

The experimental group that received mindfulness training did show a significant increase in self-reported mindfulness between pre and post-assessment. The experimental group also significantly decreased in self-reported rumination at post-assessment. The experimental group showed a significant increase in cognitive flexibility, but not working memory capacity, at post-assessment. The experimental group did not recall more specific, first person perspective, or vivid autobiographical memories at post-assessment. Increased mindfulness showed a non-significant, but strong correlation with decreased rumination in the mindfulness group only. Self-reported mindfulness did not correlate with any changes in recalled autobiographical memories. The only change in autobiographical memories that significantly correlated with strengthened executive functions appeared in the relationship between working memory capacity and specific memories recalled from the first-person perspective. Significant changes were reported across the two assessment periods for the control group, and must be taken into account. These changes include a decrease in rumination, increase in cognitive flexibility, and increase in autobiographical memory specificity.

### **Limitations and Future Considerations**

The foremost limitation to this study was the strength of the mindfulness training used on cultivating mindfulness in the students enrolled in the study. Though a significant increase in self-reported mindfulness was observed in the group that received mindfulness training, further analyses did not support this increase as being attributable to the training. As the premise of this study relies on the efficacy of mindfulness training in increasing trainees' engagement in the experiential mode of self-referential processing, a more intense training would be preferable.

Though quantitative methodology was most fitting for our research question, it would be fitting to include some qualitative measures for a better understanding of the subjective

phenomenological experience of participants. Questions about participants experience in the mindfulness training program, and any reported differences in their subsequent daily habits would not only help us understand individual differences, but also stimulate future hypotheses to explore.

Using only one self-report questionnaire of rumination (the Rumination-Reflection Questionnaire) as a measure of engagement in narrative self-referential processing was another limitation of this study. In the future, multiple measures and self-reports should be used to assess modes of self-referential processing. This limitation does not apply to the use of one self-report questionnaire of mindfulness (the Five Facet Mindfulness Questionnaire) as a measure of engagement in experiential self-referential processing, as mindfulness is synonymous with the experiential mode of self-referential processing, and the questionnaire used is considered an amalgamation of many measures, and highly validated (Baer et al., 2006; Baer et al., 2008). The observed significant increase in cognitive flexibility in both the experimental and control groups may indicate that the Five Point Test is vulnerable to practice effects. It would be wise to include multiple behavioral measures of cognitive flexibility and working memory capacity in order to have better convergent validity on the executive function capacities of participants.

The present study relies on the efficacy of a mindfulness training to induce experiential self-referential processing in participants to such a degree that it may be noticeable during at any given two-hour period in which they were administered a behavioral assessment. This study specifically relies on trait mindfulness, or enduring qualities of mindfulness, rather than state mindfulness, which can be induced with instructions at the beginning of an assessment period. Future studies should explore how both trait and state mindfulness induction concurrently, or differentially, affect outcomes on behavioral measures like the ones used this study.

Finally, as this study was coordinated around a mindfulness training given during the course of a single college quarter, we cannot be sure how the fluctuating rhythm of school-related demands affected our participants during the pre- and post-assessment. In the future, it might be worth the effort to schedule the post-assessments to occur after finals week, rather than before or during, as was done in the present study.

## References:

- Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment, 13*, 27-45.
- Baer, R. A., Smith, G. T., Lykins, E., Button, D., Krietemeyer, J., Sauer, S., Walsh, E., Duggan, D., & Williams, J. M. (2008). Construct validity of the five facet mindfulness questionnaire in meditating and nonmeditating samples. *Assessment, 15*, 329-342.
- Conway, M. A., & Pleydell-Pearce, C. W. (2000). The construction of autobiographical memories in the self-memory system. *Psychological Review, 107*, 261-288.
- Conway, M. A. (2005). Memory and the self. *Journal of Memory and Language, 53*, 594-628.
- Farb, N. A. S., Segal, Z. V., Mayberg, H., Bean, J., McKeon, D., Fatima, Z., & Anderson, A. K. (2007). Attending to the present: mindfulness meditation reveals distinct neural modes of self-reference. *Social Cognitive and Affective Neuroscience, #*, pgs.
- Gallagher, S. (2000). Philosophical conceptions of the self: implications for cognitive science. *Trends in Cognitive Science, 4*, 14-21.
- Heeren, A., Van Broeck, N., Philippot P. (2009). The effects of mindfulness on executive processes and autobiographical memory specificity. *Behaviour Research and Therapy, 47*, 403-409.
- James, W. (1890). *The principles of psychology*. New York: Holt.
- Kuyken, W., & Moulds, M. L. (2009). Remembering as an observer: How is autobiographical memory retrieval vantage perspective linked to depression? *Memory, 17*(6), 624 – 634.
- Macrae, C. N., Moran, J. M., Heatherton, T. F., Banfield, J. F., & Kelley, W. M. (2004). Medial prefrontal activity predicts memory for self. *Cerebral Cortex, 14*, 647-654.
- McKiernan, K. A., D'Angelo, B. R., Kaufman, J. N., & Binder, J. R. (2006). Interrupting the “stream of consciousness”: an fMRI investigation. *Neuroimage, 29*, 1185-91.
- Nigro, G., & Neisser, U. (1983). Point of view in personal memories. *Cognitive Psychology, 15*, 467-482.
- Regard, M., Strauss, E., & Knapp, P. (1982). Children's production on verbal and non-verbal fluency tasks. *Perceptual and Motor Skills, 55*, 839-844.
- Rogers, T. B., Kuiper, N. A., & Kirker, W. S. (1977). Self-reference and the encoding of personal information. *Journal of Personality and Social Psychology, 35*, 677-688.
- Sutin, A. R., & Robins, R. W. (2008). When the “I” looks at the “Me”: Autobiographical memory, visual perspective, and the self. *Consciousness and Cognition, 17*, 1386-1397.

- Symons, C. S., & Johnson, B. T. (1997). The self-reference effect in memory: A meta-analysis. *Psychological Bulletin, 121*, 371-394.
- Tagini, A., & Raffone, A. (2010). The 'I' and the 'Me' in self-referential awareness: a neurocognitive hypothesis. *Cognitive Processing, 11*(1), 9-20.
- Trapnell, P. D., & Campbell, J. D. (1999). Private self-consciousness and the five-factor model of personality: Distinguishing rumination from reflection. *Journal of Personality and Social Psychology, 76*, 284-304.
- Turner, M. L. & Engle, R. W. (1989). Is working memory capacity task dependent? *Journal of Memory and Language, 28*, 127-154.
- Unsworth, N., Heitz, R. P., Schrock, J. C., & Engle, R. W. (2005). An automated version of the operation span task. *Behavior Research Methods, 37*(3), 498-505.
- Williams, M., Teasdale, J., Segal, Z., & Kabat-Zinn, J. (2007). *The mindful way through depression*. Guilford Press, New York.
- Williams, J. M. G., Bardhofer, T., Crane, C., Hermans, D., Raes, F., Watkins, E., & Dalgleish, T. (2007). Autobiographical memory specificity and emotional disorder. *Psychological Bulletin, 133*(1), 122-148.
- Williams, J. M. G., & Broadbent, K. (1986). Autobiographical memory in attempted suicide patients. *Journal of Abnormal Psychology, 95*, 144 –149.

# **The effects of experimentally induced psychological stress on memory-recall**

Mohamed A. Mohamed

Faculty Mentor: Gabriela A. Martorell, PhD

Ronald McNair Scholars Program

## **Abstract:**

Numerous studies have established the relationship between stress and memory, particularly stress and its effect on memory retrieval. When we experience stress, there is a cascade of hormonal responses which are critical to helping the body cope with the stressful event. When the stressful event persists, levels of the hormone cortisol--a type of glucocorticoid increases in response to the stress and have wide-ranging effects on the body. In particular, cortisol can have an effect on brain cells, particularly the hippocampus which is responsible for cognitive activities such as learning and memory. In this study, we utilized a public speaking task as a stress-inducing technique. We predicted that stress would negatively impact the ability of college students to retrieve a list of words. Preliminary analyses indicate no significant difference for word-recall as a function of condition,  $M=12.55$ ,  $SD=3.57$  and  $M=12.45$ ,  $SD=3.80$ . Future studies should refine the methodology and take into consideration the time-dependence of this phenomenon.

## **Introduction:**

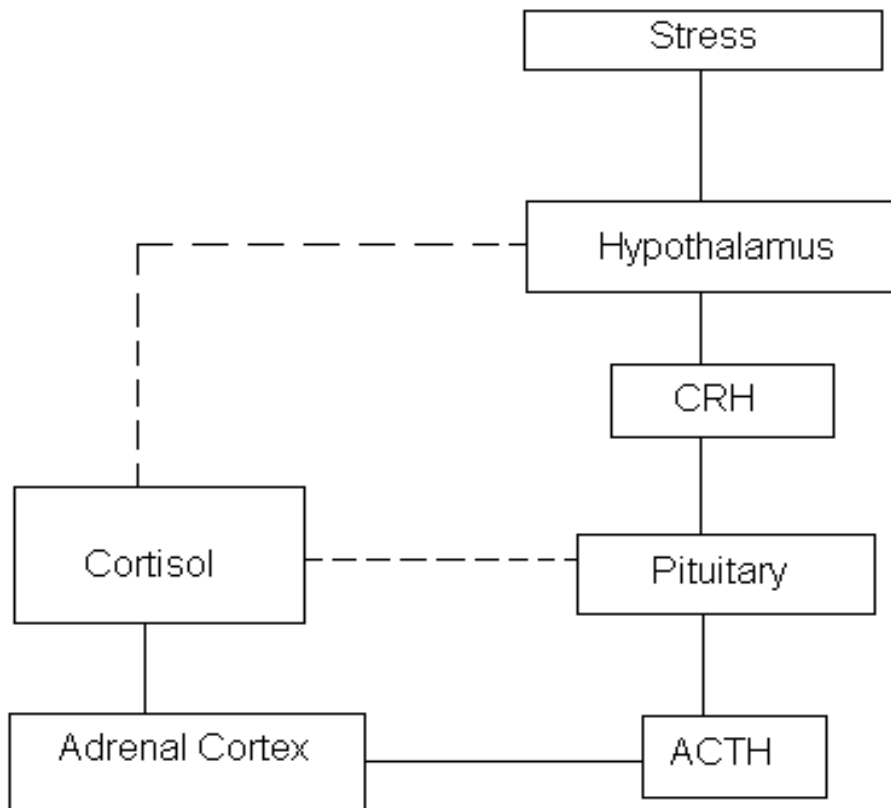
The interplay between stress and memory can have a profound effect on our daily lives. In the demanding society that we live in today we are overwhelmed by a flood of stress stimulating phenomena, including deadlines for projects and assignments in school and work, demands from family and friends, and other trials and tribulations of modern life which can

further exacerbate our stress level. The scientific literature can attest to the fact that these influences modulate the psychobiological response.

Our bodies have the uncanny ability to respond to stressful events and restore homeostasis. When we perceive stress, the adrenal glands, the first line of defense in the stress response system, are activated. The brain transmits the perceived stress and instructs the adrenal glands to release the hormone adrenalin. This hormone then initiates a biological chain reaction that triggers the uptake of glucose for energy, increased beat of the heart, and tension in the muscles. All these biological activities are designed to cope with the perceived stress; the glands release the chemicals into the bloodstream, and these chemicals in turn propel the body organs into action. When the perceived stress persists the adrenal gland is further instructed to release another glucocorticoid hormone—cortisol. Cortisol can remain in the brain much longer than adrenalin and can have a greater effect on brain cells, particularly that of the hippocampus which is responsible for learning and memory. This prolonged elevation in cortisol level can become toxic to hippocampal cells (Sapolsky, 1999).

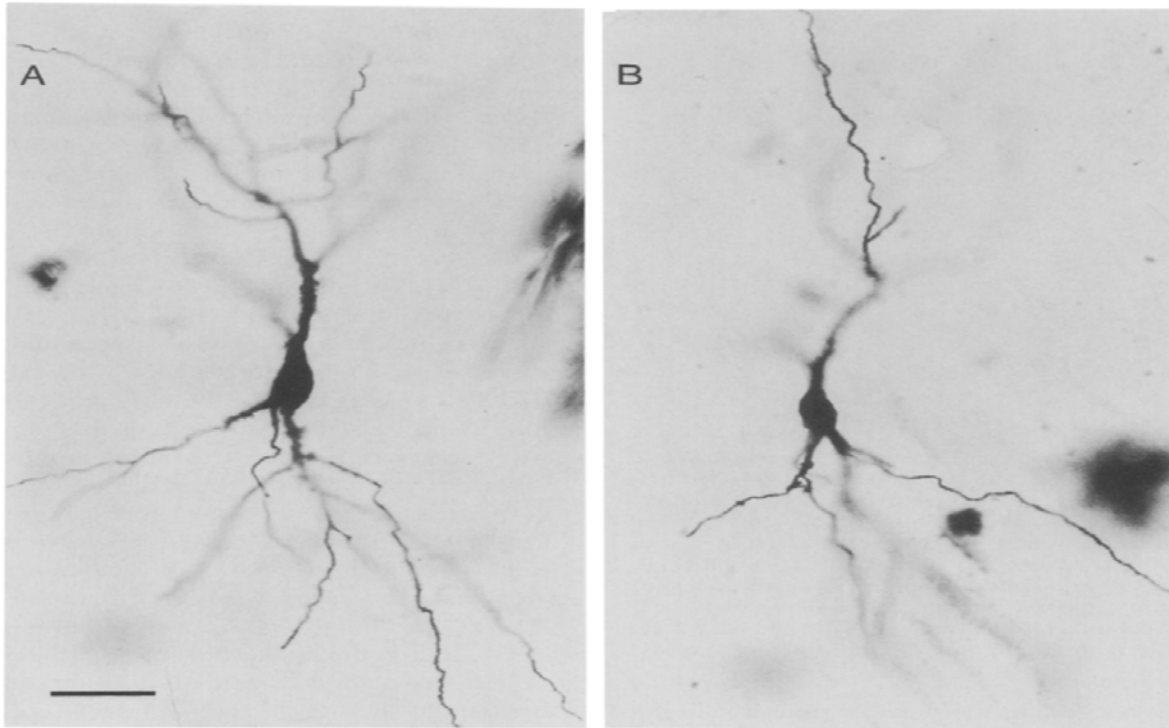
When the brain perceives stress it stimulates (**see figure 1**) the hypothalamus to synthesis and releases CRH (corticotrophin releasing hormone), in turn, the CRH stimulates pituitary glands which results in the secretions of another hormone: ACTH (Adrenocorticotropin). ACTH stimulates the production of cortisol via the adrenal glands. This pathway results in the elevation of blood cortisol level, however, the cortisol in an effort to down-regulate its secretion will inhibit the secretion of the corticotrophin releasing hormone (CRH). When this feedback system is altered, the excessive level of cortisol caused by the excess level of the corticotrophin releasing hormone impairs the hippocampus due to its high level of cortisol receptors (McEwen, 1998).





**Figure 1: Negative Feedback system of the HPA-**The feedback system depicts the secretion and down-regulation of cortisol as well as the regulation of secretion of CRH and ACTH. Cortisol can suppress the secretion of CRH from the hypothalamus and ACTH from the pituitary.

Experimental method utilizing Golgi-impregnated tissue (**see figure 2**) established that excess glucocorticoid can alter dendritic morphology in hippocampal neurons of adult rats (Woolley et al, 1990). Twenty-one days of daily injection of 10 mg of corticosterone resulted in decreased numbers of apical dendritic branch points and decreased total apical dendritic length relative to baseline. Elevation in corticosterone resulted in the structural alteration of the adult rat. Because the physiology of a rat is similar to our own, this suggests that humans might also suffer from the neurological effects of prolonged stress.

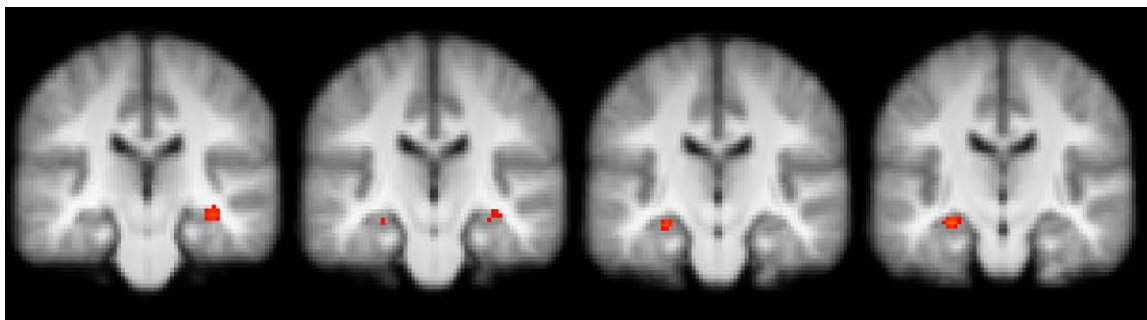


**Figure 2:** The images depict the two different brains of Golgi-impregnated cells. **Image A** depicts the brain of the control, whereas, **Image B** depicts the corticosterone injected. There is decrease in dendritic number of branch points and apical dendritic length in Image B compared to Image A. Source: (Woolley et al, 1990)

In support of the extension of the animal research towards humans, research on Cushing's syndrome exemplifies the disruptive nature in which prolonged elevation in cortisol (hypercortisolism) can play in the brain. In a study conducted by Starkman and colleagues, patients with hypercortisolemia as a result of their Cushing's syndrome—demonstrated cognitive dysfunction when tested in a comprehensive neuropsychological examination (Starkman et al, 1992).

The deleterious effect of this hormone in the hippocampus is by way of atrophy of the dendritic processes, disruption of the neural pathways, neural degeneration and death (Sapolsky 1999). Brain imaging such as positron emission tomography (PET) revealed that cortisol directly influenced the uptake of glucose in the hippocampus (De Leon et al, 1997). Another brain

imaging technique that was utilized with a far more superior resolution quality was—functional magnetic resonance imaging (fMRI). In collaboration with researchers from the Netherlands, researchers from Germany were interested in testing the effects of cortisol on memory retrieval while utilizing the fMRI (Oei et al, 2007). Twenty one male subjects participated in the study consisting of a double-blind placebo design. The subjects were given 20mg of either hydrocortisone or a placebo, in which they were instructed to ingest one hour before the scanning in order to elevate cortisol level. The subjects then had to learn a list of words outside the scanner and recognition was performed inside. This study found that during the memory retrieval, there was a significant reduction in hippocampal activation in the brain of the subjects in the cortisol treatment condition (see figure 3). The result of the study suggests that cortisol affects the hippocampus by disrupting memory retrieval (Wolf 2009).



**Figure 3:** This image depicts the influence of cortisol on hippocampal activity during memory retrieval. (Source: Oei et al, 2007)

In another study conducted by de Quervain and colleagues showed how stress impaired memory retrieval in rats when tested in a water maze. The rats were initially trained inside the water maze to locate a platform that was submerged at a particular area; the rats were tested on whether they could remember the location of the platform following foot-shocks. The study found that non-stressed rats were able to locate the platform in the water maze through memory better than their stressed counterparts. Stress induced high level of glucocorticoids circulation in

the stressed-rats thereby, disrupting memory retrieval and their ability to locate the platform (de Quervain et al, 1998). Collectively, these results indicate that glucocorticoids can impair memory retrieval relative to the basal levels which did not exert any adverse effects, as well as the HPA axis mediating the impairment in memory retrieval (Sapolsky 1999).

Extensive evidence can be found from the scientific literature on research conducted with animals and humans that indicate stress can have a profound adverse effect on cognitive process particularly that of memory retrieval, as a result of the over-secretion of glucocorticoids. Gerra (2001) and colleagues report elevated plasma concentrations of norepinephrine, epinephrine, adrenocorticotrophic hormone, and cortisol when healthy subjects performed public speaking in addition to other cognitive task in front of a small group of audience.

## **Methodology:**

### *Participants:*

Students at Portland State University were recruited to participate in the research study. There were a total of 42 students ranging in grade level from sophomore-seniors. Out of the 42 students, 15 were male and 27 were female students. They were drawn predominantly from psychology courses, and they were offered course credit in exchange for participation. Participation in the study was voluntary for the students, if they decided not to participate in the study; they were given the opportunity to receive course credit by completing an alternative assignment that required the same time commitment as the research study.

### *Procedure:*

The students were randomly divided into two groups, the control group and the experimental group. In the experimental condition, students were led to believe they would be giving a two-minute speech to a small audience who were going to evaluate the quality of their

presentation (stress-inducing task). They were led to a room with a one-way mirror and led to believe that the small audience who were going to evaluate their speech were stationed at the other end of the one-way mirror. The experimenter after explaining the purpose of the study and signing of the consent form from the student would immediately instruct the student to give a two minute presentation about a topic of their choice unrehearsed. The experimenter was present in the room with the student throughout the duration of the experiment. The experimenter timed the presentation and following its completion would instruct the student to stop and begin the next task. The control group did not perform the public speaking task, however, they were instructed to write a two-minute paragraph about a topic of their choice and that whatever they had written would not be read by anyone. Following the completion of the respective tasks, the students were instructed to complete a short questionnaire and the PSS (perceived stress scale). Following the completion of the questionnaire, the list of unrelated words from Mangels (1997) Strategic Processing and Memory for Temporal Order in patients with Frontal Lobe Lesions was utilized. The students were given 90 seconds to memorize the unrelated words. When 90 seconds elapsed the students were given a piece of paper with numbered lines in which the students had to write down as many of the words as they could recall within a three minute time limit. Finally, a debriefing session followed the completion of the memory task. The goal and purpose of the study was completely disclosed to the students and any questions they had about the study was answered.

## **Results:**

### *Preliminary Analysis:*

An analysis was conducted to ensure that the experimental manipulation did indeed result in participants believing they were being watched behind the one-way mirror. Results indicated

that significantly more students in the experimental condition relative to the control group (17 vs. 4) believed someone was watching them,  $\chi^2 (2, N=42) = 15.65$ .

Next, we tested to see whether there were significant differences in memory for words as a function of gender. Test of between-subject effects with regards to gender and word memory indicated that there were no significant differences in memory recall  $F (1, 42) = .702, p = .41$ , by gender. However, additional analyses (**see table 1**) indicated that there was a trend for female students to indicate higher levels of perceived stress than their male counterparts  $F (1, 42) = 6.43, p = .015$ .

Table 1:

*Perceived Stress in Relation to Gender*

Gender	Mean	Standard deviation	Sample Size
Male	14.87	5.81	15
Female	20.63	7.64	27
Total	18.57	7.51	42

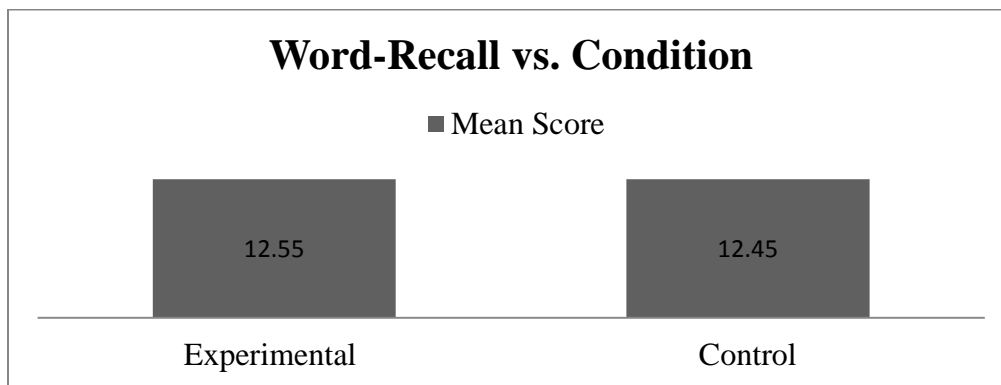
Class standing in relation to word memory indicated that there was not a difference in how many words were remembered according to class standing. Therefore, class level was excluded from all additional analyses. These preliminary analyses collectively indicate that the stress induction (in the form of public speaking task) worked, and that gender and class standing did not play significant role in word recall.

*Data Analysis:*

First, we checked to see if participants remembered fewer words in the experimental condition than the control condition. However in contrast to predictions, we found no significant

differences in memory for words as a function of condition.  $M=12.55$ ,  $SD=3.57$  and  $M=12.45$ ,  $SD=3.80$  (see figure 4).

Then, we examined the levels of perceived stress and by group condition (see table 2). Results showed that the experimental induction did not have a significant effect on levels of stress. Therefore, while the manipulation check suggested that students in the experimental condition did indeed believe there to be an audience behind the one-way mirror, this did not seem to affect their perceived levels of stress.



**Figure 4:** The graph represents the mean scores for word recall in both conditions.

Table 2:

*Perceived Stress in Relation to Condition*

Condition	Mean	Standard deviation	Sample Size
Experimental	19.1	6.85	22
Control	18.0	8.32	20
Total	18.57	7.51	42

**Discussion:**

We predicted that asking participants to engage in a public speaking task would result in an elevation in perceived stress, and that the rise in stress hormones would then lead to deficits in information processing, specifically a decreased number of words remembered in the experimental condition. However, our results indicate that our induction did not have any significant effects on number of words remembered. In other words, students in both condition (experimental and control) were able to recall about the same amount of words two minutes after being instructed to complete a task (either public speaking task or writing a paragraph). We suspect that the public speaking task was too mild to alter the short-term memory retrieval of students who were placed in the experimental condition, and that the timing of the memory task may have been too short to be affected by the induction.

The result of this study supports the findings from de Quervain et al (1998), and Gerra et al (2001), that the interplay between stress and memory is a time-dependent phenomenon. de Quervain and colleagues report that when the rats were given foot-shocks 2-minutes and 4-hours before navigating the platform--they did not show impairments in memory, however, when the foot-shocks were given 30-minutes before navigating the platform there was a significant impairment in memory. Gerra and colleagues also found elevated plasma concentrations 30-minutes after stress induction. They measured plasma concentrations of different hormones before and after the subjects performed the designated tasks (which included stress inducing tasks) and reported that there was a significant increase in the different hormones including cortisol 30-minutes after.

The duration of the stress induction we utilized was two-minutes and henceforth, did not impair the memory retrieval of the college students. Our preliminary analysis confirms that the actual induction worked; students did indeed believe our statements about an observer behind



the one-way mirror. However, the induction was not strong enough and lasting longer duration (2-minutes vs. 30-minutes) to adversely affect memory recall. The findings in this study relative to the aforementioned studies would therefore suggest that as the plasma concentration of the hormones for the students in the experimental condition was rising—it did not reach its peak soon enough (about 30-minutes) to negatively impact their short-term memory retrieval.

Another reason why our stress induction did not negatively impact memory could be due to the stress-induction we utilized. Our stress-induction (public speaking task) was possibly too mild to elevate the plasma concentrations of the hormones to affect memory. For instance, in the study conducted by Gerra and colleagues, the public speaking task they utilized that resulted in elevation of cortisol level in the subjects, was based on having the subject stand at a microphone and speak for 10 minutes in the presence of three people who had a video-camera and a tape recorder. In addition to the duration of the task, the presence of the three people with the objects at hand further exacerbated the subjects stress level.

Future research should include a larger sample size, as well as taking into consideration the time-dependence of this phenomenon and students should be drawn from other disciplines as well. Students in this study were drawn predominately from psychology courses that often times require their students to participate in class discussion; therefore, a task involving public speaking might not be as stressful to them as it might for other students in other disciplines. Another benefit of having students from multiple disciplines is that it would eliminate the possibility of the students sharing the study with their peers. For example, if a student participates in the study and debriefing session follows in which the full extent of the research study is disclosed to the student, they might possibly share that information with their peers who also decide to participate in the study. It is of paramount importance to understand the interplay

between stress and memory, and in particular how stress induction (in form of public speaking) can affect the memory of college students so that methods can be devised to mitigate this condition.

## References:

1. Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24, 385-396.
2. De Quervain, D., Roozendaal, B., & McGaugh, J. (1998). Stress glucocorticoids impair retrieval of long-term spatial memory. *Nature*, 394(6695), 787.
3. Gerra, G, Zaimovic, A, Mascetti, G.G, Gardini, S, & Zambelli, U. (2001). Neuroendocrine responses to experimentally-induced psychological stress in healthy humans. *Psychoneuroendocrinology*, 26, 91-107.
4. Luine, V., Beck, K., Bowman, R., Frankfurt, M., & MacLusky, N. (2007). Chronic Stress and Neural Function: Accounting for Sex and Age. *Journal of Neuroendocrinology*, 19(10), 743-751
5. Mangels, J.A. (1997). Strategic processing and memory for temporal order in patients with frontal lobe lesions. *Neuropsychology*, 11(2), 207-221.
6. McEwen, B. (1998). Protective and Damaging Effects of Stress Mediators. *New England Journal of Medicine*, 338(3), 171-179.
7. Oei, N.Y., Elzinga, B.M., Wolf, O.T., de Ruiter, M.B., Damoiseaux, J.S., Kuijter, J.P., Veltman, D.J., Scheltens, P., Rombouts, S.A., 2007. Glucocorticoids decrease hippocampal and prefrontal activation during declarative memory retrieval in young men. *Brain Imaging Behavior*. 1, 31-41.
8. Packard, M. (2009). Anxiety, cognition, and habit: A multiple memory systems perspective. *Brain Research*.
9. Sapolsky, R. (1999). Glucocorticoids, stress, and their adverse neurological effects: relevance to aging. *Experimental Gerontology*, 34, 721-732.

10. Stamatakis, A., Pondiki, S., Kitraki, E., Diamantopoulou, A., Panagiotaropoulos, T., Raftogianni, A., et al. (2008). Effect of neonatal handling on adult rat spatial learning and memory following acute stress. *Stress: The International Journal on the Biology of Stress*, *11*(2), 148-159
11. Smith, A., Whitney, H., Thomas, M., Perry, K., & Brockman, P. (1997). Effects of Caffeine and Noise on Mood, Performance and Cardiovascular Functioning. *Human Psychopharmacology: Clinical & Experimental*, *12*(1), 27-33.
12. Starman, M.N, Gebarski, S.S, Berent, S, & Schteingart, D.E. (1992). Hippocampal formation volume, memory dysfunction, and cortisol levels in patients with Cushing's syndrome. *Biological Psychiatry*, *32*, 756-765.
13. Tollenaar, M., Elzinga, B., Spinhoven, P., & Everaerd, W. (2008). Long-Term Outcomes of Memory Retrieval under Stress. *Behavioral Neuroscience*, *122*(3), 697-703.
14. Weiss, E., Krupka, N., Böhner, F., Both, M., & Draguhn, A. (2008). Fast Effects of Glucocorticoids on Memory-Related Network Oscillations in the Mouse Hippocampus. *Journal of Neuroendocrinology*, *20*(5), 549-557.
15. Wolf, O. (2009). Stress and memory in humans: Twelve years of progress?. *Brain Research*, *1293*142-154.
16. Woolley, C.S, Gould, E, & McEwen, Bruce. (1990). Exposure to excess glucocorticoids alters dendritic morphology of adult hippocampal pyramidal neurons. *Brain Research*, *531*, 225-231.
17. Zoladz, P., & Diamond, D. (2009). Linear and Non-Linear Dose-Response Functions Reveal A Hormetic Relationship Between Stress and Learning. *Dose-Response*, *7*(2), 132-148.

# Collaborative Ethnographic Film

A Workshop Case Study

Richard A. Stern

Portland State University

McNair Scholars Program

Faculty Mentor: Jeremy Spoon, PhD

## **Introduction**

The development of ethnographic film is inexplicably interrelated with the history of cinematography itself, and holds a special relation to documentary film. Anthropologist and filmmaker-centric models have long dominated ethnography and have remained a focal point for most major theories within visual anthropology, while collaboration has often been relegated to the fringes of ethnographic work. Furthermore, within the limited collaborative approaches that have surfaced there has been scant discussion or critical analysis of the workshops and training sessions that are designed to prepare cultural constituents working with anthropologists in the practices of visual ethnography and film. In this article I examine the development and direction of ethnographic film within anthropology, with an emphasis on collaboration and workshops. By highlighting the Stonewall Mountain and Flat Ethnographic Film project led by Dr. Jeremy Spoon and Elder Richard Arnold as a case study, I present argument for the need to develop a rigorous collaborative methodology within visual anthropology.

## **A Selected History of Ethnographic Film**

Nearly as soon as movie cameras were invented early anthropologists began to make use of the technology as a documentary tool. Despite the early uptake, Gregory Bateson and Margaret Mead's Balinese studies in the 1940s are commonly cited as a major starting point in visual anthropology and ethnographic film (see Jacknis 1988); however, their work is by no means the first foray into ethnographic film. According to Emile De Brigard, president of the Anthropological Film Research Institute, the distinction of first ethnographic film belongs instead to Félix-Louis Regnault (2003:15). Regnault was a French physician by training and his interest in anthropology took form around 1888. By 1895 he had produced the first film based on anthropological inquiry, and was especially interested in

documenting cultural variations on body movement (MacDougall 2006:89). Regnault was perhaps also the first to propose the creation of an archive of anthropological film, and advocated for the systematic use of film in anthropological work (Rouch 2003b:30). While Regnault's work can certainly be considered the first anthropological film based on this mode of inquiry, the ethnographic qualities of his work are open to debate.

Throughout the late 19th and early 20th centuries many other anthropologists made starts into anthropological film. Notably anthropologist Alfred Cort Haddon shot film in the field, perhaps the first to do so, and like Regnault encouraged others to utilize photographic equipment in their research. Baldwin Spencer, a colleague of Haddon, produced a staggering 7,000 feet of footage (more than one hour of runtime) during two periods of filming in Northern Australia, during 1901 and 1912. For his time this was quite a feat considering the volatility of film and difficulties filming in the field. Even Franz Boas engaged in the use of film in 1930 for his lengthy work with the Kwakiutl of the Northwest Coast, though his work was conceived primarily as a form salvage ethnography instead of exploration into visual representation (El Guindi 2004:124).

Common among the varied histories of visual anthropology are references to Roberty Flaherty, a prospector-turned-filmmaker, who produced a number of well-known documentary films. Flaherty's most well known works include: *Nanook of the North* (1922), *Moana* (1926) and *Man of Aran* (1934). Despite his lack of anthropological background, film training, or even a basis in scientific inquiry, Flaherty is still considered by many to be a pioneer of documentary film, and is cited for his collaborative approach to filmmaking with the Inuit people for *Nanook of the North* (e.g. MacDougall 1998:193; Ruby 2000:87-91). Although Flaherty may have shown his raw footage to the Inuit during filming of *Nanook*, it is not documented if this approach was utilized in his later films as well. The actualities of Flaherty's approach notwithstanding, the critical element of his work, as Karl Heider points out, is the potential for

“making film more truly reflective of the natives’ insight into their own culture” through a collaborative approach to representation (2006:23), rivaled in anthropology at the time only by Franz Boas’ key informant collaborations (Collier and Collier 1986:157). Flaherty’s work helped to shape not only documentary film, but has also contributed to the observational style of ethnographic film in anthropology as noted by Heider above. Unfortunately, neither Flaherty’s collaboration nor Regnault and Haddon’s appeals for the systematic use of visual recording were to take immediate hold within anthropology.

Taking into account the development of ethnographic film thus far, the work of Bateson and Mead perhaps then deserves recognition not as the first foray into ethnographic film, but rather for its scope and primacy. Their work set an early standard for observational film theory, as seen in *Bathing Babies in Three Cultures* (1952); it also served as the catalyst for reflexive evaluation of the anthropologist-filmmaker sparked by a lively interview of the two anthropologists conducted by writer Stewart Brand in the 1970s. Bateson and Mead’s primary concern with visuals was systematic data gathering using photography, film and sound recordings (Banks and Morphy 1997:14-15). This approach ultimately allowed for the widening of critical analysis upon the filmmaker’s interactions in the creation of ethnographic film. Brand’s famous interview of Bateson and Mead (1976) explored not only the idea of the subjective artistic qualities Bateson favored in contrast to the purely objective reality Mead proposed, but also began to enrich critical analysis of the work anthropologists did through a reflexive look at the research method itself.

Following Bateson and Mead’s work in the 1940s, observational approaches to ethnographic film became the mainstay of visual anthropology. The collaborative experiments that preceded them remained obscure, and the foundation of the discipline, formalized in the 1970s, progressed in a fashion that seldom considered the value of collaborative approaches outside of the anthropologist-filmmaker

centered model. The first major revisiting of collaboration would not come until the late 1960s with Sol Worth and John Adair's *Through Navajo Eyes* (1972), and was perhaps the first to consider implicitly the interaction between film-subject and audience. Likewise, workshops aimed at teaching and engaging cultural constituents (i.e. the film subjects) in filmmaking have not been widely discussed or documented within visual anthropology, with the notable exception of Vincent Carelli and his *Video in the Villages* work in Brazil beginning in the late 1980s (Aufderheide 1995:83).

Despite more than a century of experiments and research into visual methodologies the primary work of anthropologists remains the written word. Work in visual anthropology continues to be at the edges of greater anthropological inquiry and theory. Yet, attempts to bridge the descriptive power of written language with the visually demonstrative characteristics of film and video have continued to be fostered in new ways as technology has changed. Notably the work of Timothy Asch and Napoleon Chagnon in *The Ax Fight* (1974), an ethnographic film concerning a fight in a Yanomamo village, blends film and written analysis. Their work presents first the unedited footage, followed by anthropological analysis and description, and a final edited version. In 1996 Gary Seaman and Peter Biella collaborated with Chagnon to produce an updated interactive CD-ROM called *Yanomamo Interactive: The Ax Fight* (1996) that builds upon the original concept even further. More recent anthropological work includes Kansas State University professor Michael Wesch's short film *The Machine is Us/ing Us* (2007); which pushes to make the ethnography the analysis itself. Wesch's work questions the very way in which we perceive and interact with media technology, and demonstrates the evocative power that visual anthropology can have on a broad audience. These are but two examples of the ways visual anthropologists have attempted to address the gap between written and visual ethnography, and ultimately bring visual anthropology into the greater anthropological discourse.



The status of visual anthropology along the fringes of anthropological inquiry has inspired a varied and wide scope to its practice. A full analysis of the development of visual anthropology is outside the scope of this essay. Anthropologists Jay Ruby (2000), Anna Grimshaw (Grimshaw and Ravetz 2005) and David MacDougall (2006), among others, have written extensively on this topic and their historical accounts offer greater breadth where this account cannot.

### **Theory in Visual Anthropology – Praxis and Collaborations**

Collaborative approaches to ethnographic film have long ignored inclusion of cultural constituents as integral to research design and execution. Much of the theory within visual anthropology has focused upon the objective versus the subjective perspective of the anthropologist-filmmaker as sole creator; characterized by the observational objective style of John Marshall's *The Hunters* (1958) contrasted perhaps with Jean Rouch's subjective ethnofiction *Jaguar* (1955). The anthropologist-as-filmmaker is essential to the dominant theories of observational film, more recently referred to as observational cinema, as these theories are predicated upon objectivity through the outside observer (see Grimshaw and Ravetz 2009a). Interestingly, David MacDougall stands out simultaneously as one of observational cinema's most versed practitioners and sharpest critics (Taylor 1998). His own examination of film-as-text notes an important departure from the strictly observational cinema theories and recognizes the interplay of primary elements involved in film. An advantage to treating a film as a text is that it then "lies in conceptual space somewhere within a triangle formed by the subject, filmmaker, and audience and represents an encounter of all three" (MacDougall 1998:193). This necessarily considers the perspective of the anthropologist along side, as opposed to above those of the film subject and audience. A disadvantage to this approach, though, is the implicit assumption that there must be a concrete meaning to be read from the film. This assumption of meaning potentially denies

impressionistic works, such as Robert Gardner's *Forest of Bliss* (1985), to be accepted as ethnographic film. However, when considering collaboration or lack thereof, we may forgo any intentional meaning within a film and still examine the relationship between these three elements (filmmaker, subject and audience) in regards to perception and representation.

The importance of recognizing the filmmaker-subject-audience interplay is demonstrated by Anna Grimshaw and Amanda Ravetz's examination of the film *Salseman* (1968), directed by Albert and David Maysles. In their book *Observational Cinema* (2009a), the authors focus upon the power of the Maysles' observations in contrast to editor Charlotte Zwerin's subjective assembly of the final 90 minute film. Interestingly, Grimshaw and Ravetz's analysis ignores the film subject's response while favoring instead the response of the audience (the authors) and the implied meaning held in the cinema vérité style used. This clearly demonstrates the intersection of filmmaker and audience, but ignores the subject completely. Furthermore, the meaning of the film as discussed by Grimshaw and Ravetz relies upon a lexicon rooted firmly in Western theories of film, thus precluding alternate interpretations to that meaning. While this interpretation may be acceptable to the audience and the filmmaker, it is unclear if it is agreeable to the film subject. The authors' analysis includes no mention of subject participation in the design, filming or editing of the film; from which we should inquire as to the appropriateness of the Maysles' representation. A collaborative approach on the other hand, must consider carefully not only the filmmaker-audience interactions, but also the film subject's interaction with both as well.

Despite the narrow focus upon anthropologists and filmmakers within visual anthropology, there has been previous headway on collaborative ethnographic film. One of the most well known collaborative ethnographic film projects, briefly mentioned earlier, is Sol Worth and John Adair's *Through Navajo Eyes* (1972). The ambition of Worth and Adair was to investigate a 'Navajo' way of seeing — by eschewing the predilection for the dominant Western cinema format of previous ethnographic films — what we

now refer to as a form of *cultural media* (Ginsburg 1991:92-93). The resulting short films however, were considered by some to be unwatchable to a general Western audience, likely due to the emphasis on sharp cuts and long walking sequences (see Callenbach 1973; Collier and Collier 1986); the experiment has not been reproduced in its original form to date.

At the heart of Worth and Adair's experiment was recognition of the influence that Western theories of film have upon representation. The issue of representation is especially pertinent for people sensitive to historical traumas such as colonialism (e.g. Adams 1995; Archuleta, et al. 2000; Child 2000; Turner 1992). Worth and Adair's consideration of Western influence has since been echoed, if not intentionally engaged, by Vincent Carelli and his Video in the Villages project. Started in the late 1980s the Video in the Villages project works primarily with Amazonian groups in Brazil. A key aspect of Carelli's approach is the positioning of the cultural constituent as the filmmaker, through workshop training and experimentation. One project outcome for the Amazonian groups has been a more effective means to engage government and private agencies that have historically marginalized them. The anthropologist works collaboratively with the filmmakers to produce short films that contain the cultural specificity that satisfies ethnographic inquiry, while also serving the distinct needs of the filmmakers and their communities.

While discussion concerning the subjective reality of filmmaking and editing has been constant in the dialogue of visual anthropology (see Grimshaw and Ravetz 2009b; Hockings 2003; MacDougall 1991; Mead 2003), the discipline has rested predominantly upon ideals such that "the ethnologist alone ... knows when, where, and how to film" (Rouch 2003a:87). This perspective has held the anthropologist in the hallowed position of filmmaker while tepidly exploring subject participation in *participatory cinema*, though still ignoring a truly collaborative approach (Collier and Collier 1986:157). As such, there are no strong models for collaborative ethnographic film within visual anthropology.

Although not among the mainstream, models of collaboration do exist within anthropology and are often found within the discipline of practicing anthropology. Two prominent authors on the subject of collaboration include Luke Lassiter and Marietta Baba. Lassiter's approach to collaboration emphasizes the role of the community studied, the cultural constituents, in the research method itself through *reciprocal ethnography* (2005:8-9). Reciprocal ethnography is an approach whereby the anthropologist continually adjusts their perspectives and interpretations through dialogue with cultural constituents during the research phase. Lassiter thus repositions the anthropologist-subject relationship into one of clear mutual understanding, as opposed to the more hierarchical interaction that has prevailed – as seen in Timothy Asch's model of post editing feedback that seeks *ex post facto* approval of the final product (Asch 1992). Asch's approach seeks only final approval of the anthropologist's work, which the subject may not even be able to read, let alone appreciate the full impact of. In contrast, Lassiter's approach requires a rethinking of the anthropologist-filmmaker's role in producing ethnographic film; in this manner it implicitly engages in MacDougall's triangle of interaction and considers prominently the issue of representation.

Marietta Baba, likewise, proposes a more direct interaction between anthropologist and subject, especially in regards to the Western conception of knowledge. Although her discussion is in context to the disconnect between practice and theory in applied anthropology, the core of her argument engages a holistic approach to reconciling multiple knowledge systems through acknowledgement of the subjective experiences informing knowledge (Baba 2000:26). This approach stands in opposition to purely observational theories of ethnography by embracing subjectivity. Similar to Lassiter, Baba seeks to gain better understanding through recognition of subjectivity as a part of knowledge.

While applied outcomes may not be at the fore of visual anthropological method, it is undeniable that such work has been interlaced within the discipline's history. It should be of little surprise then that past

experiments in collaborative ethnographic films served not only the academic purposes of the anthropologist, but often the political or practical needs of the film subjects as well. One example of this can be found in Elizabeth Wickett's work in rural communities of Egypt and Pakistan, and serves to demonstrate the convergence of praxis and theory ethnographic video may serve. Her work investigated deployment of development agendas, and utilized video as a mode of communication between rural housewives and development agencies (Wickett 2007). Employing Baba's model of praxis theory would further develop the work of anthropologists such as Wickett by fully accounting for the cultural knowledge systems of the film subjects.

### **Stonewall Mountain and Flat Ethnographic Film Workshop**

In the context of collaborative ethnographic film, the Stonewall Mountain and Flat Ethnographic Film project provides a notable case study into the potential of such approaches. The still in-progress project is led by Dr. Jeremy Spoon, an applied anthropologist and assistant professor of anthropology at Portland State University, working alongside Southern Paiute elder and Co-Primary Investigator Richard Arnold. I was fortunate enough to be invited by Dr. Spoon to observe a five-day filmmaker workshop for the project held last June. The Stonewall Mountain and Flat project is part of a larger research initiative that emphasizes collaboration, indigenous perspectives and government-to-government communication between Native American tribal governments and Nellis Air Force Base (NAFB) in cultural land management (see Spoon 2009). The ethnographic film project more specifically seeks to document the Stonewall Mountain and Flat landscape, which is an important cultural cross-road for many Native American groups in the region, though part of the landscape is restricted by state and federal agencies. The workshop was designed to engage five Native Americans of varying ages, tribal affiliations, and genders, in the creation of an ethnographic film concerning the importance of the landscape. Each

individual was selected as a representative by their respective nations as representatives to NAFB and expressed interest in participating in the project. Throughout the workshop they were referred to as 'native film technicians', and I have adopted this description herein as well. I have also refrained from using their personal names out of respect to the on-going nature of the Stonewall Mountain and Flat project. In addition to the native film technicians, attendees included project staff, government agency representatives, as well as a local filmmaker and his assistant hired to aid with filming and editing.

The workshop was planned to aggressively maximize the short time frame available. Methods for accelerated anthropological research stem from the field of practicing anthropology, in which Dr. Spoon has experience and has adapted them to this project (for an introduction to methods in practicing anthropology see Ervin 2005). The overall approach to the workshop was open, engaging and predominantly interactive throughout. A great emphasis was placed on creating a warm environment for all participants, and Mr. Arnold excelled at providing a friendly humor to keep everyone's attention sharp while easing transitions in the agenda. This was an important component in regards to the intense proximity of the group during the five-day workshop. Activities within the workshop itself could be broken down into three major components: lecture, discussion and practicum. These were not strictly delineated divisions or periods of time, but rather serve to conceptually convey specific strategies utilized during the workshop, while providing a functional guide to the following discussion.

### *Lecture*

Lecture components were kept to a minimum during the workshop, but nonetheless were necessary. As an invited guest I was asked to give a small presentation on the field of visual anthropology and ethnographic film theory. This was presented early on in the schedule and provided an informational backdrop from which further discussion developed. Although my presentation was primarily lecture format, it too engaged the filmmakers in a discussion about visual meaning, imagery and perspective,

which would resurface in later discussions and the practicum evaluations. The hired filmmaker, Wolfgang Muchow, also provided several lecture style presentations. These covered basic film techniques as practiced in Western cinema, a documentary film overview with extended discussion on direct cinema and cinema vérité styles, as well as instructions and demonstrations on use of sound and logging film for editing. Mr. Muchow's presentations also included viewing extended excerpts from films such as *Salesman* (1968) and *Slasher* (2004) to demonstrate documentary film styles. In addition, Dr. Spoon and Mr. Arnold both engaged in information sessions concerning schedules and other pertinent planning tasks as required for the project.

### *Discussion*

The primary component of the workshop was an interactive discussion and information gathering approach. Open discussion was highly appropriate to the diverse backgrounds of all participants. Reflexive exercises such as answering the question "what do mountains mean to you?" were utilized to elicit feedback from participants, promote constructive dialogue and help formulate parameters for the film. Often times Mr. Arnold would take the role of moderator while Dr. Spoon acted as scribe and facilitator. Both worked to keep participants engaged and on track for the particular segment of the workshop at hand.

It was within this discussion component to the workshop that the collaborative style was most evident. While Dr. Spoon and Mr. Arnold worked as collaborators in the familiar model of anthropologist and key informant that has been ritualized in the literature (e.g. Bernard 2006:196-200), their collaboration extends such methodologies toward more fully realizing the co-authorship proposed by Baba in regards to community engagement (2000). Mr. Arnold is simultaneously Co-PI and knowledgeable cultural constituent, actively engaged in the research design and execution. Adding to this is the inclusion of the five native film technicians and their contributions to the creation of the Stonewall Mountain and Flat

Ethnographic Film. Workshop discussion served not only to inform the participants, but also to establish the parameters of the film treatment. This was evident by frequent reiteration on establishing a vision or focal point for the film, which was to be determined by the film technicians themselves, and utilized as the foundation for the footage they would subsequently shoot. Furthermore, the film technicians were to assist in creating the scripts used for interview segments with American Indian elders to be included in the film. Most importantly, however, was the transparency of this design. Throughout the discussions emphasis was placed on the technician's presentation of cultural perspectives and respect to indigenous knowledge in an open forum. This notably goes beyond Asch's call for mere feedback as discussed earlier (1992), and engages the creation of ethnographic film in a deeper collaborative effort than seen in Wickett's development work (2007). Furthermore, the incorporation of Richard Arnold in the dual role of Co-PI and cultural constituent incorporates elements of native anthropology that anthropologist Takami Kuwayama has identified as lacking in Western scholarship (2004). Kuwayama's emphasis on incorporating native anthropological theory in ethnography recognizes the domination of Western knowledge in anthropology. This is parallel to the domination of Western film theories within documentary film, and also provides a well formulated discussion on collaboration outside of film.

### *Practicum*

Hands on practice executing film techniques discussed and demonstrated during the workshop constituted the remainder of the sessions. Each native film technician was supplied with a handheld digital movie camera that would be their personal camera for the duration of the project. Exercises for the practicum portion were organized in to two parts. First was an equipment familiarization and technique practice assignment. Each native film technician was tasked with performing the pan, zoom, framing and other basic techniques demonstrated previously by Mr. Muchow and his assistant. To help familiarize them with filming other people, each technician was also tasked with producing a short



interview with another technician. Following this practice period the short films were reviewed by the entire workshop group on a projection screen, with comments from Mr. Muchow on technical aspects, and group evaluations provided through open discussion.

The second part of the practicum was organized as a field visit with the workgroup traveling to two locations of cultural significance to the native film technicians, and importance to the project overall.

This half-day trip continued the rapport building and strengthened group solidarity while providing more hands-on experience. This practice built upon the previous exercises and discussions by setting a goal for the group: each technician was to conceptualize and record footage for a one minute long video.

Footage was logged and clips selected for editing during the ride back to the workshop location made possible through the use of the in-camera playback capabilities of the devices. Each technician then worked with Mr. Muchow and his assistant at an editing station to produce the final one minute video from their footage. The final films were screened for the entire workshop on a projector. This final viewing provided a palpable sense of accomplishment and encouraging motivation to the group. It was at this point that individuals expressed a great relief and astonishment at the potential that lay before them, expressing a sense of empowerment through completion of the short videos.

### **Rethinking Collaboration in Ethnography**

The Stonewall Mountain and Flat project is not the first to embrace the participation of the subject in the creation of an ethnographic film. Franz Boas certainly had the cooperation of the Kwakiutl in order to have them perform important ceremonies entirely out of context, due to the limitations of camera equipment in the 1930s (Pink 2006:7). The 1950s and 60s saw a limited number of attempts at more collaborative and more emic-centric ethnographic films as well. These included *Navajo Silversmith* (1966) and *A Navajo Weaver* (1966) from Worth and Adair's *Through Navajo Eyes* project, as well as

Jean Rouch's *Jaguar* (1955). More recently the Alaska Native Heritage Project has taken a notably more community-based approach to film by working closely with sympathetic filmmakers (Ginsburg 1991:96,109), and the Video in the Villages project formed by Vincent Carelli is at the fore of collective authorship (Flores 2009:101). Yet as John Malcolm Collier noted in the late 1980s (1986:157), experiments such as these are often isolated incidents not methodological standard, and this still holds true today. The Stonewall Mountain and Flat project, on the other hand, is yet another step toward immersive collaboration and concerned ethical representation. Within the project the collaboration is not exclusive to the production of ethnographic film alone; it is a core element of each stage of the research process. This places the project firmly in the model of collaboration called for by Luke Lassiter, to be inclusive at every point in the research process while maintaining transparency (2008).

The shift away from hierarchal interactions is a difficult road. Anthropology is no stranger to rapport and recognizes the value of consultants and key informants, yet co-authorship and representation are still among the debates that fuel the constant reevaluations of theories. This is evident by the proposal of a shift from observational cinema to participatory cinema as a reevaluation of the anthropologist's role in filmmaking, and critique on the limits of objectivity (Grimshaw 2002). This reevaluation examines specifically the filmmaker-subject interaction; but stops short of moving toward the repositioning of subject as filmmaker. Discussions still remain focused resolutely upon the anthropologist as filmmaker and reflect a resistance toward the fully transparent collaboration Lassiter proposes.

Looking at the treatment of collaboration within academic programs such as the Granada Institute in Manchester, UK reemphasizes the dominating role of the anthropologist. In her article *Teaching Visual Anthropology*, Anna Grimshaw gives a detailed account of her experience teaching at the Institute and the works found there (2001b). Her discussion of the film series *Disappearing World* is particularly relevant to the issue of collaboration and perspective from within anthropology; she states, "the films

were not ‘found’, that is, they did not originate in the subjects themselves, rather they grew out of the specialist research interests of anthropologists” (2001b:240). This could be interpreted to suggest a perspective that such works originating in the subjects lack anthropological rigor – such as indigenous conceived ethnographies like *The Scent of the Pequi Fruit* (2006) or *The Day the Moon Menstruated* (2007) – and also that anthropologist conceived ethnography is more complete in addressing the issues that arise in representation of other people. Grimshaw goes on to note the importance of experiential learning in the Granada program (2001b:242-243). This further confuses the issue as it does not consider the experiential knowledge of the cultural constituents with whom the anthropologist-filmmaker collaborates with. This perspective, favoring the anthropologist over the cultural constituent, stems from the strong observational cinema approach the discipline has been dominated by.

It bears emphasizing that collaborative ethnographic film created from a purely anthropologist-centric model threatens to subvert the contributions of the cultural constituents. It may also undermine ethical representation of a people through bias (Grimshaw 2001a:7). David MacDougall keenly describes the tendency of film to be “liable to distortion” (1991:2) to which many groups of people are extremely sensitive. This is especially true of indigenous populations, which are a favorite among ethnographies (for discussions on indigenous representation see Cobern and Loving 2001; Ginsburg 2004; Smith 1999). Distortion may begin with filming, even before editing. For instance, a cultural constituent not familiar with the conventions of Western cinema may not be attuned to the full impact of using one particular style over another, or the audience’s reception. For instance, we may look at Native American films in the United States. The Confederated Tribes of the Colville Reservation in Washington are at once familiar with Western film and their own cultural ways. Their films *Coyote Stories along the Columbia* (2005), *Building Grand Coulee Dam* (2007), and *The Kettle Falls Fishery* (2009) all demonstrate a blending of Western film style, a cross between ethnography and political documentary, with their cultural perspectives on storytelling. The films demonstrate an awareness of the interaction between the

audience and Native Americans as both filmmakers and film subjects. Although the shift to fully acknowledging the cultural constituent, such as in the Colville films, goes against a legacy of anthropologist-centric authorship; a movement toward fuller collaboration is consistent with an ethical anthropology.

## Conclusions

There is an unfortunate lack of transparency within visual anthropology concerning collaboration and ethnographic film. This is troubling concerning how representation is addressed for groups trained by anthropologists to film themselves. Especially groups not already prepared to engage a film audience, nor versed in film appropriate to their needs. Among those collaborative efforts that position the film subjects as reflexive filmmakers along side or in place of, instead of beneath, the anthropologist, we receive limited discussion on the methodologies used to mitigate such problems (e.g. Aufderheide 2008). The continued dominance of these Western film styles among ethnographic films is not without note though, and there has long been a call for more investigation into cultural media and representation (e.g. Ginsburg 1991; Heider 2006:48). This is not to say there is no place for Western film theory among ethnographic film, as that would grossly deny decades of discussion and critical theory. Rather, it is an acknowledgement of the limitations or complications that such theory and style may inadvertently impose, and a call for more rigorous treatment of collaboration in line with ethical imperatives.

The question of how anthropologists should model their treatment of collaboration, and ultimately co-authorship in regards to film should be at the forefront of current ethical discussions. The Stonewall Mountain and Flat Ethnographic project is a case study that may yet serve as a springboard to this end, but this requires the engagement of a discipline to recognize such a need. The realization of a fully collaborative ethnographic film project, one that embraces the film subject as co-creator not just in raw

footage or administrative 'okay', but throughout the design of the anthropology itself, is a profoundly humble approach to creating cross-cultural understanding. I am enlivened by the potential realization of such work within visual anthropology.

## Films Cited

Asch, Timothy, and Napoleon A. Chagnon dirs.

1974 The Ax Fight. Documentary Educational Resources.

Benally, Susie K., Sol Worth, and John Adair dirs.

1966 A Navajo Weaver. 20 min. Museum of Modern Art Film Library.

Flaherty, Robert J. dir.

1922 Nanook of the North. 70 min. Facets Multimedia. Paris: Revillon Freres.

— dir.

1926 Moana: A Romance of the Golden Age. 85 min. MOMA.

— dir.

1934 Man of Aran. 77 min. CRM/McGraw-Hill Films.

Gardner, Robert dir.

1985 Forest of Bliss. 91 min. Film Study Center, Harvard University.

Horsethief, Christopher, and SkyDog Records dirs.

2003 The Kettle Falls Fishery. 16 min. The Colville Confederated Tribes.

— dirs.

2005 Legend and Landscape: Coyote Stories Along the Columbia. 23 min. The Colville Confederated Tribes.

— dirs.

2007 Building the Grand Coulee Dam: A Tribal Perspective. 30 min. The Colville Confederated Tribes.

Kuikuro, Takumã, and Maricá Kuikuro dirs.

2006 Imbe Gikegu: The Scent of Pequi Fruit. 36 min. Documentary Educational Resources.

— dirs.

2007 Nguné Elü: The Day the Moon Menstruated. 28 min. Documentary Educational Resources.

Marshall, John dir.

1958 The Hunters. 72 min. Film Study Center, Harvard University.

Maysles, Albert, and David Maysles dirs.

1968 Salseman. 91 min. Maysles Films, Inc. United States.

Nelson, John, Sol Worth, and John Adair dirs.

1966 Navajo Silversmith. 20 min. Museum of Modern Art Film Library.

Rouch, Jean dir.

1955 Jaguar. 93 min. Les Films de la Pléiades. France.

Seaman, Gary, Peter Biella dir.

1996 Yanomamo Interactive: The Ax Fight. Harcourt Brace.

Wesch, Michael dir.

2007 The Machine is Us/ing Us. 4:34 min. Youtube.

## Works Cited

- Adams, David Wallace  
1995 Education for Extinction: American Indians and the Boarding School Experience, 1875-1928. Lawrence, Kan.: University Press of Kansas.
- Archuleta, Margaret, Brenda J. Child, and K. Tsianina Lomawaima, eds.  
2000 Away from Home: American Indian Boarding School Experiences. Phoenix, Ariz.: Heard Museum.
- Asch, Timothy  
1992 The Ethics of Ethnographic Film-making. *In* Film as Ethnography. P.I. Crawford and D. Turton, eds. New York, NY: Manchester University Press.
- Aufderheide, Pat  
2008 "You See the World of the Other and You Look at Your Own": The Evolution of the Video in the Villages Project. *Journal of Film & Video* 60(2):26-34.
- Aufderheide, Patricia  
1995 The Video in the Villages Project: Videomaking with and by Brazilian Indians. *Visual Anthropology Review* 11(2):83-93.
- Baba, Marietta L.  
2000 Theories of Practice in Anthropology: A Critical Appraisal. *NAPA Bulletin* 18(1):17-44.
- Banks, Marcus, and Howard Morphy  
1997 Introduction: Rethinking Visual Anthropology. *In* Rethinking Visual Anthropology. M. Banks and H. Morphy, eds. New Haven: Yale University Press.
- Bernard, H. Russell  
2006 Research Methods in Anthropology: Qualitative and Quantitative Approaches. Lanham, MD: AltaMira Press.
- Brand, Stewart  
1976 For God's Sake Margaret. *CoEvolutionary Quarterly* (10):32-44.
- Brigard, Emilie de  
2003 The History of Ethnographic Film. *In* Principles of Visual Anthropology. 3rd edition. P. Hockings, ed. Pp. 13-43. Berlin; New York: Mouton de Gruyter.
- Callenbach, Ernest  
1973 Review: Through Navajo Eyes. *Film Quarterly* 27(2):61-62.
- Child, Brenda J.  
2000 Boarding School Seasons: American Indian families, 1900-1940. Lincoln: University of Nebraska Press.
- Cobern, William W., and Cathleen C. Loving  
2001 Defining "Science" in a Multicultural World: Implications for Science Education. *Science Education* 85(1):50-67.
- Collier, John, and Malcolm Collier  
1986 Visual Anthropology: Photography as a Research Method. Albuquerque: University of New Mexico Press.
- El Guindi, Fadwa  
2004 Visual Anthropology: Essential Method and Theory. Walnut Creek, California: AltaMira Press.
- Ervin, Alexander M.  
2005 Applied Anthropology: Tools and Perspectives for Contemporary Practice. Boston: Pearson/Allyn and Bacon.
- Flores, Carlos Y.

- 2009 Reflections of an Ethnographic Filmmaker-Maker: An Interview with Paul Henley, Director of the Granada Centre for Visual Anthropology, University of Manchester. Pp. 93-99, Vol. 111: Blackwell Publishing Limited.
- Ginsburg, Faye
- 1991 Indigenous Media: Faustian Contract or Global Village? *Cultural Anthropology* 6(1):92-112.
- 
- 2004 Shooting Back: From Ethnographic Film to Indigenous Production/Ethnography of Media. *In A Companion to Film Theory*. T. Miller and R. Stam, eds. Pp. 295-322. Oxford: Blackwell.
- Grimshaw, Anna
- 2001a The Ethnographer's Eye: Ways of Seeing in Anthropology. Cambridge, UK; New York: Cambridge University Press.
- 
- 2001b Teaching Visual Anthropology: Notes from the Field. *Ethnos: Journal of Anthropology* 66(2):237-258.
- 
- 2002 From Observational Cinema to Participatory Cinema - and Back Again? David Macdougall and the Doon School Project. *Visual Anthropology Review* 18(1):80-93.
- Grimshaw, Anna, and Amanda Ravetz
- 2005 Visualizing Anthropology. Bristol, UK; Portland, OR: Intellect.
- 
- 2009a Observational Cinema: Anthropology, Film, and the Exploration of Social Life. Bloomington: Indiana University Press.
- 
- 2009b Rethinking Observational Cinema. *Journal of the Royal Anthropological Institute* 15(3):538-556.
- Heider, Karl G.
- 2006 Ethnographic Film. Austin: University of Texas Press.
- Hockings, Paul, ed.
- 2003 Principles of Visual Anthropology. New York: Mouton de Gruyter.
- Jacknis, Ira
- 1988 Margaret Mead and Gregory Bateson in Bali: Their Use of Photography and Film. *Cultural Anthropology* 3(2):160-177.
- Kuwayama, Takami
- 2004 Native Anthropology: The Japanese Challenge to Western Academic Hegemony. Melbourne, Vic.: Trans Pacific: Trans Pacific; Marston, distributor.
- Lassiter, Luke E.
- 2005 Part One: History and Theory. *In The Chicago Guide to Collaborative Ethnography*. Pp. 1-75. London: University of Chicago Press.
- 
- 2008 Moving Past Public Anthropology and doing Collaborative Research. *NAPA Bulletin* 29(1):70-86.
- MacDougall, David
- 1991 Whose Story Is It? *Visual Anthropology Review* 7(2):2-10.
- 
- 1998 Transcultural Cinema. Princeton, N.J.: Princeton University Press.
-



- 2006 The Corporeal Image: Film, Ethnography, and the Senses. Princeton, NJ: Princeton University Press.
- Mead, Margaret  
2003 Visual Anthropology in a Discipline of Words. *In* Principles of Visual Anthropology. 3rd edition. P. Hockings, ed. Pp. 3-10. Berlin; New York: Mouton de Gruyter.
- Pink, Sarah  
2006 The Future of Visual Anthropology: Engaging the Senses. London; New York: Routledge.
- Rouch, Jean  
2003a The Camera and Man. *In* Principles of Visual Anthropology. 3rd edition. P. Hockings, ed. Pp. 79-98. Berlin; New York: Mouton de Gruyter.
- 2003b Ciné-ethnography. S. Feld, transl. Minneapolis: University of Minnesota Press.
- Ruby, Jay  
2000 Picturing Culture: Explorations of Film & Anthropology. Chicago: University of Chicago Press.
- Smith, Linda Tuhiwai  
1999 Decolonizing Methodologies: Research and Indigenous Peoples. London; New York; Dunedin, N.Z.; New York: Zed Books ; University of Otago Press ; Distributed in the USA exclusively by St. Martin's Press.
- Spoon, Jeremy  
2009 Great Basin. <http://jeremyspoon.com/projects/nevada/>, accessed October 27, 2010.
- Taylor, Lucien  
1998 Introduction. *In* Transcultural Cinema. Princeton, N.J.: Princeton University Press.
- Turner, Terence  
1992 Defiant Images: The Kayapo Appropriation of Video. *Anthropology Today* 8(6):5-16.
- Wickett, Elizabeth  
2007 Visual Anthropology and Development: Video as Critique, Praxis and Process. *Visual Anthropology Review* 23(1):69-75.
- Worth, Sol, and John Adair  
1972 Through Navajo Eyes: An Exploration in Film Communication and Anthropology. Bloomington: Indiana University Press.

## **The Postmodern Persistence of the Brazilian Development State:**

### **A Comparative Study of Policies During the Cardoso and Lula Administrations**

**Adam Talkington**

**Faculty Mentor: Leopoldo Rodríguez, PhD**

***Abstract:*** This paper seeks to define and compare Brazilian national development strategies during the Cardoso and Lula administrations. Assuming a political economy perspective, we first provide a context for understanding contemporary Brazilian development by defining the developmental state characterizing Brazilian governance from 1930 to 1985, followed by an overview of the theoretical arguments underlying the reform process. Using an historical deductive methodology, we explore the national development strategies of the two administrations through a narrative of their divergent agendas and the economic and social policies they engendered. Finally, we consider the similarities and distinctions between development policies occurring in the periods under analysis, drawing attention to the evolving character and role of a reformed, but still intact, developmental state in Brazil.

#### ***Introduction***

The beginning of the 21<sup>st</sup> century marked an apparent change in Latin American politics. Brazil, like many of its neighbors, elected a leader that seemed to represent a decisive turn away from the “neoliberal” agenda that characterized policy-making in the 1990s. Upon taking office, however, this new, leftist president—Luiz Inacio Lula da Silva (Lula)—maintained the economic model of his predecessor, Fernando Henrique Cardoso (FHC). In spite of president Lula’s apparent failure to install a new economic model, his presidency has produced marked advances in the area of social welfare policy, restoring much of the progressive credit granted him by his history as union organizer and Worker Party(PT) leader. Much of this success, however, rests on the policies enacted during the FHC presidencies—a fact which suggests that, in Brazil, the famous “turn to the left” may not have occurred. Certainly, as Molyneux (2008) suggests, the paradoxical links between an administration focused on state reform (FHC), and one which

ostensibly serves as a bastion for progressive policy-making, warrants a more nuanced and historically grounded inquiry.

Understanding the relationship between policies made during the FHC and Lula administrations hinges on a comprehension of Brazil's distinct brand of developmentalism. While much analysis has been made of the political and ideological factors involved in contemporary policy-making, this has often lacked an appropriate consideration of the historical and institutional factors providing the context. Simply put, economic and social policies cannot be considered only in the context of the most influential ideas of the time; they must also be considered in the context of their overall intent; their function in the overall plan. In the case of Brazil, contemporary policy-making must be viewed in light of the government's longstanding and explicit role in guiding national development. Thus, in order to understand the comparative experiences of the FHC and Lula periods, one must focus less on the differ from each other, and more on how they work in connection with each other as part of a new stage in national development. While both internal and international factors have brought on profound change to economic, political, and social realities, these have only sparked the continual evolution of a development strategy with a strong role for government.

### ***The Old Developmentalism***

The Brazilian developmental state began in 1930, with the revolution that put Gétúlio Vargas in power. The 1930 revolution laid to rest the *Old Republic*, a period when a powerful landed aristocracy governed Brazil in oligarchic fashion, with governors of states like São Paulo and Minas Gerais wielding great national power<sup>1</sup>. Vargas assumed the presidency with an explicit agenda for modernizing Brazilian society. This modernizing vision sought to develop a

---

<sup>1</sup> For a detailed overview of Vargas' rise to power and enigmatic political style see Bak (1983).

national industrial base through alliances with the nascent Brazilian capitalist and commercial classes. The implementation of this vision initiated the beginning of a state-led development model, culminating in 1937 with the *Estado Novo* (New State), a dictatorial regime making use of every type of intervention, including political repression. Two dimensions of the modernizing government model established under the Vargas regime register as particularly relevant. First, the state became the primary agent of development. Its role in the economy went far beyond stimulating supply and demand; the new government provided a vision for the economy and pursued it aggressively. Second, this model of government sought to reorganize and control society through installing an authoritarian corporatist model of state-society relations. In other words, the state assumed a pivotal role in both economic and social development, a role that both coincided with, and provided rationale for a new centralized power structure.

Breaking from the decentralized, federalist structure of the *Old Republic*, the Vargas regime established a strong, interventionist central government. In contrast to the *Café com Leite*<sup>2</sup> order of the past, the Vargas regime operated with a clear bias toward industrial urban sectors, creating new modes of intervention, consolidated in a central government. This strong central government regulated and invested directly in productive sectors, in a mode of economic intervention that came to be known as import substitution industrialization (ISI). Utilizing subsidies, protective tariffs, and direct investment the government actively promoted an industrial revolution (Pereira, 2009). State agencies were erected in order to regulate vital sectors of the economy, such as water, power, steel, coffee, and sugar. The state even assumed a role as producer, financing a large state-owned steel company through the U.S. Eximbank. In order to operate the new interventionist state and reorganize society in a modern, controlled fashion,

---

<sup>2</sup> *Café com Leite* refers to the political dominance of the governors of São Paulo (representative of coffee producers) and Minas Gerais (representative of its dairy industry).

Vargas reorganized the channels of governance and representation, contributing to the other major legacy of the Vargas era: a corporate institutional framework.

The push to modernize Brazil's society and economy leaned heavily upon a revolution in the mode of political representation. In harmony with the bias toward urban, industrial classes, the Vargas regime imposed a corporate model of representation. With industrialist and military support of a state-led modernization, the Vargas regime initiated a restructuring of unions as the primary channel for working class representation. This process of societal reorganization utilized repressive and propagandist means, disciplining politicians, union leaders, and anyone else that posed a threat to the vision of the *Estado Novo*. Two major institutional characteristics emerged from this process. First, the development state emerged in the context of a coalition between the federal government, the nascent national industrial bourgeoisie, and the working class; this alliance would later come to clash with the centralized, modernist state's tendency toward coercive means. Given this structure, interest groups could only influence government policy through state regulated channels, providing the power elite with further insulation from the working class. Second, society's new order and economic revolution came at the hands of an authoritarian, quasi-fascist government. The more government institutions were used to impose order in economic and social arenas, the easier it became for the apparatuses of power to be exercised in more untenable ways.

With the Vargas dictatorship overthrown in 1945 by military coup, the intervening and corporate characteristics of the government carried over into a period of fragile democratic rule. The shift in politics brought with it a new constitution in 1946, which reflected the desire of many to move away from the centralized power structure of the preceding personal dictatorship. Yet the process of nation building resumed, creating an obstacle for decentralization. After a

conservative period of governing, characterized by repression of labor movements, unions, and leftist politics, Vargas was re-elected with a more populist agenda. During this period, the government assumed a more pro-labor and nationalist position, increasing the minimum wage and shunning foreign capital. Major institutions were erected: the National Economic Development Bank (BNDE), Electrobrás (the state electricity producer and provider), and Petrobrás (the state petroleum company), bringing with them an expansion of state investment in infrastructure and productive sectors.

After a dramatic end to the Vargas presidency, Juscelino Kubitschek took office, carrying on the tradition of a now populist, centralized development state. Kubitschek implemented the most coherent industrialization program to date, which greatly expanded the federal government's role in investment. Moreover, the Kubitschek government added a new, controversial dynamic to the nation's development process: the promotion of foreign capital. Though successful in terms of industrial development and growth, the Kubitschek government spent beyond its means, resulting in inflationary pressure and the beginnings of an institutional crisis. Growing disapproval from military factions soon ushered to an end the period of a democratically deliberated economic development policy. The tension between the developmental state's tendency to control society finally and its role as driver of the economy became too great.

The coup of 1964 resulted in a twenty-one year span of military rule. An alliance between the military elite and technocrats characterized the governing style of the dictatorship. Political dissenters experienced a violent purge. Economically, orthodox measures were taken to curb inflation and reduce the spending deficit. Real wages were depressed, protectionist policies were slightly relaxed, and subsidized credit was reduced. Prices of publicly produced goods and

services were raised, in order to reduce effective subsidies, and, without domestic credit, Brazilian businesses were purchased by foreign, especially American, firms. This initiated the trifecta of national, international, and state-owned enterprises that would dominate the Brazilian economy until the 1990s. Though monetarist approaches to economic stability were implemented, the basic nature of state intervention and ownership persisted. Eventually, the lack of political legitimacy for the military dictatorship gained momentum in the milieu of economic turmoil set on by an external debt crisis. In this context, governance in Brazil became open to institutional reform, with various theoretical paradigms calling for reforms based on principles.

The turmoil of the 80s brought Brazil under the pressure of an external debt crisis and an internal crisis of government legitimacy. Having been dominated by a military dictatorship for two decades, the call for democracy emerged even stronger in the face of the authoritarian regime's inability to manage the crisis. On a fundamental level, the break from authoritarianism to democratic rule altered a cornerstone of the model of governance set up during the Vargas regime: statism. While the establishment of an effective democracy is an arduous and multifarious process, the return of civil rule to Brazil also brought a return to decentralization and a period of institutional instability ripe for state reform. While this brought change to an increasingly illegitimate political framework, it also exposed the separate, but related, role of the State as an economic and social agent.

### ***Underlying Theories of Development and Governance***

Development economics provided theoretical support for the modernizing, interventionist state. In basic terms, this paradigm of economic analysis focused on the need for government intervention to correct undesirable market outcomes (Fishlow, 1990). A major premise of development economics insisted that less-developed countries operate under distinct conditions

than those in advanced countries. Countering the Ricardian theory of comparative advantage, Raul Prebisch argued that the relative backwardness and lack of economic development characterizing countries of the “periphery”, should be attributed to the disequilibria inherent in the international market system, a structure confined to the power relations produced by the course of history. Prebisch identified a relationship of dependency in trade between periphery and core countries, with countries of the periphery, those producing primary commodities, at constantly declining terms of trade with core countries—or, those countries exporting industrial goods<sup>3</sup>. This insight spawned new approaches to economic analysis<sup>4</sup> and, more importantly, implied that government intervention was needed to correct the asymmetrical relationships resultant from historical processes, in internal markets as in external.

The structuralist paradigm postulates that structural rigidities in society prevent the market mechanism from functioning in the manner theorized by classical economists. Inconsistent growth, undesirable income distribution, disequilibria and an insufficient savings rate are all attributed to market failure. Consequently, government policy should aim to correct market failure, provide public goods, and ensure the proper rate of savings. Given the relative underdevelopment of peripheral countries<sup>5</sup>, government-led industrialization seemed an appropriate solution to overcoming historically derived obstacles. This approach proposed import substitution through state-led industrialization (ISI). The ISI approach advocated trade protectionism to protect infant industries, direct government involvement in developing

---

<sup>3</sup> This seminal contribution is generally referred to as the Prebisch-Singer Hypothesis, due to the coincidence of the two authors arriving independently at very similar conclusions, at more or less the same time. See Prebisch (1950) and Singer (1949).

<sup>4</sup> Both the dependency theorists and structuralist schools can be traced back to this important assertion within the field of development economics.

<sup>5</sup> The historical reasons for Brazil’s underdevelopment can be found in the classic work by Celso Furtado, *Formação Econômica do Brasil* (1959).



industrial sectors, social welfare through societal modernization, and price controls through regulation and government planning.

In the 1930s, classical economic analysis lost sway in Latin America, as it did in the advanced countries. With the Keynesian revolution and development economics on the upswing, heterodox economics dominated policy making, bringing forth the Welfare State in the industrialized countries and the Development State in many of the non-industrialized countries. With the crisis of the 1970s came a renewal of the classical economic paradigm: an ideological shift known broadly as neoliberalism. In the developing world, the lack of price stability and the pressing constraints of a growing debt crisis led analysts to begin critiquing theories that supported the role of the state in development. As a counterpoint to the heterodox assertion that market failure necessitates government intervention, neoliberal theorists responded that government too can produce failures, with possibly higher costs than those of the untouched market.

In essence, neoliberal economists object to the policy response of developmental economics. Deepak Lal (1983) provides four areas of debate between orthodoxy and, what he terms, the *Dirigiste Dogma*. He asserts that, in reviewing the history of interventionist policies, (i) supplanting the market mechanism often creates more distortions and disequilibria greater than those that would otherwise occur, (ii) the focus on macroeconomic policy design overlooks microeconomic exchanges, to the neglect of social welfare, (iii) free trade is the “hand-maiden of growth”, making protectionist trade policies unnecessary and often debilitating growth because of their escalating costs, (iv) government intervention for the purpose of equitable income distribution largely rests upon controversial ethical argument. Fundamentally, the argument against developmental economics claims that in every case—trade, income distribution,

industrial development, etc.—a comparison of the resource and distortion costs of intervention to non-intervention results in the assertion that "imperfect markets *are* superior to imperfect planning" (Lal, 1983, p 106).<sup>6</sup>

The failure of the ISI development model, and the gaining influence of neoliberal policy-making left structuralism in a period of transition. Analysts identified areas of failure: 1) exchange-rate overvaluation discriminated against exports, contributing to the growing imbalance of the external account, 2) government expenditures grew faster than revenues, and 3) the focus on industrialization led to distorted development, with sectoral imbalances between agriculture and industry and an insufficient rate of labor absorption in industry (Leiva, 2008). Furthermore, the paradigmatic shift toward the neoclassical school of economics on the international level presented Latin America's development economists, primarily represented in Economic Commission on Latin America and the Caribbean (ECLAC), to address theoretical deficiencies in addressing short-term issues. As this view on policy-making came under evaluation, institutional reforms seemed a necessary step in the journey to re-encounter a path toward development.

The neostructuralist model of development takes into account the changing context for policy-making, but maintains that the government should pursue an active strategy of development. The ECLAC offers a summary of the neostructuralist approach to addressing the problems presented to the development process in Latin America<sup>7</sup>. Recognizing the lopsided development of industry, resultant from the heavy bias toward internal markets, the authors envisaged a modernization of the productive structure. In this view, the already existent

---

<sup>6</sup> For an additional argument advocating for the retraction of state intervention based on total cost comparison see Krueger (1991).

<sup>7</sup> See Sunkel, O. and Zuleta, G. (1990)

industrial base, a manifest success of ISI, should compete in the export market and develop a dynamic comparative advantage, supported by government subsidies rather than protective trade barriers. Governments should also encourage an atmosphere conducive to technological learning and innovation. A major deficiency of past development strategies lay in the dependence on foreign technology; hence, a major element of the new development strategy should be to create and strengthen a system of innovation and technology sharing within countries. In addition, the ECLAC admonishes governments to create a macroeconomic environment stable enough for long-term capital accumulation, which should be invested in innovation and productive capability. Finally, in assessing the crisis facing Latin American governments, neostructuralist theorists recommend a renovation of the state. The state should use economic incentives and relative prices to engender a strategic vision for development, backed by a coalition of key social and political groups.

### ***FHC-A Reformist's Agenda***

Riding the wave of support from the success of the *real* plan, Fernando Henrique Cardoso began his first term with an ambitious reform agenda, primarily targeting financial stability. Though Cardoso's party, the PSDB, had opposed the drastic reforms of the Collor government, the growing influence of financial technicians within the party, the state's chronic fiscal crises—now exposed without the masking effect of inflation—and the dynamics of the party's political coalition with the PFL, a center-right party, led to the embrace of structural reforms (Power, 2001). Many of the reforms aimed at remedying some of the more questionable components of the 1988 constitution; but, on a more fundamental level, the reforms constituted an attempt to redefine the role of the state, especially in its functions as an agent of development.

Shortly after assuming the presidency, the executive office released a document describing the crises facing the country as one of the state, resultant from past government policies and institutions. The structural issues facing Brazil, it was argued, required a new development strategy with a new—less dominant—role for government. This document, the *Plano Diretor da Reforma do Aparelho do Estado* (1995), called for administrative reforms, reductions in state protections, the break up of state monopolies, restructuring the social security system, and a more balanced budget. At the center of all of these reform agendas lay a focus on fiscal and monetary policies—corruption and mismanagement in these areas having contributed to the unsustainability of the old development model. With the containment of inflation having provided the administration with a majority of its political capital, it may be noted that nearly all the reforms pursued during the period seemed to hinge on the stability plan that helped bring FHC to power: the *real* plan.

The impetus for these reforms stemmed from arguments for a more efficient and effective state, yet reforms of this nature also found support in the principles underlying the Washington Consensus—a call for the virtual removal of the state from market activity in order to let flourish the market’s superior efficiency. As a result, the fundamentally reformist agenda of the Cardoso administration is difficult to characterize, with an internationally influential ideology recommending a reduction of state intervention in a market society (Williamson, 1990) and a nationalist-originated call for a redefinition of the state’s role in guiding development (Bresser Pereira, 1996), which also called for a redefinition of the government-state relationship. At the time, these perspectives clearly coalesced to influence politicians to push for the same reforms, but sorting out the degree to which each perspective defined the actual reforms carried out may

be necessary to understand the emergent development model and the government's long term role within it.

### ***Macroeconomic Policy- FHC***

Having been elected with a mandate to establish economic stability, FHC pursued a macroeconomic model with this objective as a clear priority. The *real* plan served as the fundamental component of the government's promise of stability. This created a strong incentive to protect the success of the plan over and against other policy objectives. While the administration's agenda clearly expanded beyond the scope of macroeconomic stability, the characteristics and dynamics of the *real* plan demanded major concessions in other policy sectors. The primacy of inflationary management through a quasi-fixed currency regime reduced the flexibility of other macroeconomic policies—especially fiscal policy—and created the conditions for a self-perpetuating system of indebtedness and systemic un-competitiveness, catering to short-term investment flows. During the second FHC administration, the shortcomings of the plan were exposed by international financial fluctuations, leading the government to allow a floating currency regime and dedicate itself further to programmatic fiscal balance.

Designed by economists within the PSDB and articulated by Cardoso, the *real* plan was the last of a series of programmatic attempts to bring inflation under control (Power, 2001-2002). In contrast to its predecessors, the *real* plan recognized that price freezes alone would not slow inflation to acceptable levels because fiscal profligacy on the part of government contributed to inflationary pressure. The plan thus began with a series of measures aimed at bringing a greater degree of fiscal management to the central government, reducing revenue transfers to sub-national governments and freeing portions of the revenue pool to budgetary discretion.

Establishing some centralized control of government spending was no easy task. The 1988 constitution reorganized Brazil's federalist arrangement, redividing the national tax base to increase revenue transfers to subnational governments, but failing to transfer a commensurate portion of federal programs to the state and local levels (Affonso and Silva, 1995). Consequently, the central government was left with more mandated spending than revenue, leading to a chronic deficit, further exacerbated by the clientelistic practices of sub-national actors<sup>8</sup> (Fleischer, 1998). During the first stage of the *real* plan, with Itamar Franco in office, in order to reign in profligate spending, a constitutional amendment was passed creating the *Fundo Social de Emergência* (FSE). This fund de-linked 20% of a large portion of federal revenues<sup>9</sup> from constitutionally-mandated spending, granting the government the leeway to establish a budgetary surplus. Although the FHC reform agenda identified the need for a permanent discretionary powers, gathering political support for such an act proved difficult, since sub-national interests were at stake. Given the complicated nature of support for the measure, the FSE emerged as a temporary act, needing re-approval, a characteristic that would provide opponents of re-centralization with bargaining power in the reform process (Samuels, 2003). With this new control over spending, the central government produced a balanced primary budget for 1994, establishing the first component of its stability plan: fiscal austerity.

The next step in the *real* plan began in March 1994, with the introduction of an indexed currency—the real unit of value (URV). The URV sought to synchronize price readjustment by taking into account the average of three price indexes. The conversion of salaries, rents, and public tariffs into the URV required adherence to some rules and obligations, while other prices

---

<sup>8</sup> In the transition to democracy, demands for patronage by state and municipal politicians amplified, contributing to a pervasive culture of clientelistic relations (Weyland, 1997-1998).

<sup>9</sup> The FSE applied only to shared tax revenues, of which the two largest sources are the Income Tax (IR) and the Industrial Products Tax (IPI). For more see, Afonso, J.R. and Serra, J. (2007).

were free to use the old currency or the new. In sum, this stage sought to link prices all over the economy, equilibrating prices relative to one another while inflation still occurred in the old currency.

Eventually, after four months of this price adjustment process, the URV was transformed into the *real*, which converted at a one-to-one basis to the U.S. dollar. In this way, the plan successfully coordinated the synchronization of prices throughout the Brazilian economy and tied the stability of those prices to the U.S. dollar<sup>10</sup>. In other words, domestic price stability in Brazil became dependant on external markets, especially in the U.S. The strategy embodied in the *real* plan thus attributes two important characteristics to monetary policy and, as we shall see, to development policies in general. First, price stability became tied to the government's ability to maintain the value of the *real* relative to the dollar, which resulted in the overvaluation of the currency and created a greater need by the monetary authorities for foreign currency. Second, as a result of the focus on maintaining the value of the currency, the government needed to attract vast amounts of foreign investment, putting pressure on domestic interest rates.

The maintenance of the quasi-fixed currency regime—the foundation of ongoing price stability—required the government to maintain an open financial system and led to a dependency on foreign capital (Ferrari-Filho and Paula, 2003). In order to maintain the targeted minimum exchange value against the dollar, the government needed a large pool of foreign reserves to counteract market forces. The opening of trade and privatization<sup>11</sup>—meant to increase international competitiveness—had short-term degenerative effects on the countries export

---

<sup>10</sup> Conversion to the Real began in July of 1994, with the new currency exchanging at a 1to1 basis with the U.S. Dollar. It should be noted that, though one of parity, this conversion rate was less rigid than the convertibility program adopted in neighboring Argentina. By the end of 1994, the Real exchanged at a rate of R\$ .85 to US\$1. See Macedo (2003).

<sup>11</sup> See section on government role in industrial development

capacity, leading to a trade deficit. The legacy of the external debt crisis having made its mark on foreign reserves<sup>12</sup>, the government had no option but to depend on international investors for their liquidity needs. Thus the central bank maintained high domestic interest rates to increase the attractiveness of investing in Brazil. This resulted in a current account deficit and an overvalued currency.

The near immediate success of the *real* plan in reducing and controlling inflation is undeniable. Ferrari and Paula (2003) show a sharp division in inflation rates during 1994. The first half of the year experienced an accumulated inflation rate of 763%, while the second six months exhibited a huge drop in inflation down to 38%, clearly the result of the stabilization plan. Yet, in spite of this significant reduction in inflation, Brazilian price levels still rose faster than those in the U.S., the new anchor of Brazilian price stability. Given a residual inflation of 17% (Macedo, 2003), the *real* experienced further overvaluation in comparison to the dollar. The success of reigning in inflation also brought other, more tangible, benefits. Barros (2000), for example, shows that absolute poverty levels between the years 1993 and 1995 dropped from 41.7% to 33.9%, an effect attributed to rise in real incomes that occurs with a decline in inflation (Amann and Baer, 2002). Furthermore, the containment of inflation, alongside the central government's increased control of total government revenues, also had the bonus of exposing unsustainable government spending<sup>13</sup>, especially on the sub-national level (Samuels, 2003).

With price stability a clear priority, establishing fiscal austerity at all levels of government presided as a fundamental objective. Key efforts to putting the brakes on fiscal

---

<sup>12</sup> With dismal growth and a lack of willing foreign investors, Brazil's foreign reserves collapsed in the 80s, resulting in a unilateral moratorium on debt in 1987.

<sup>13</sup> This is referred to as the "reverse Olivera-Tanzi effect", which argues that because government spending is set in nominal prices and taxes indexed to inflation, a hidden public deficit is revealed in the absence of excessive inflation. See Bacha (1994).



profligacy occurred through legislative channels. As already mentioned, the FSE played a key part in reducing government deficit spending to prevent the budgetary disaster looming behind the veil of hyper-inflation. However, the FSE required legislative renewal<sup>14</sup> and only provided the central government with limited discretionary power, rather than erecting strict budgetary constraints. In 1995, congress passed the “Camata Law”, which required states to limit their payrolls to 60% of net receipts by January of 1999<sup>15</sup>. In addition to this, the refinancing of state debts required them to cease issuing bonds and, in 1998, the National Monetary Council prohibited sub-national actors from contracting foreign debt (Samuels, 2003). Finally, in 2000, the government passed the “Fiscal Responsibility Law”, which set debt limits for all levels of government, stopped the central government refinancing of sub-national debts, and sought to increase fiscal transparency by requiring governments to publish revenue and expenditures. Moreover, it made misuse of public funds a felony crime with severe consequences: a direct effort to confront the culture of corruption.

A restructuring of the national financial system accompanied the drive to establish rules for government spending. Bank consolidation, both public and private, played a central part in this process. The Brazilian Central Bank (2006) reports that, especially in the initial stage of the Cardoso presidency, the number of state-owned banks decreased dramatically: from 32, in 1995, to 15, in 2002. Private banks also decreased in numbers, while also becoming increasingly foreign owned.<sup>16</sup> The reduction and consolidation of bank ownership came as an effect of the

---

<sup>14</sup> The FSE is not a permanent institutional reform, but a “sunset provision”, requiring re-approval by congress. Samuels (2003) notes that drumming up political support for this reapproval necessitated trade-offs with sub-national actors, mostly in regards to restructuring their debt.

<sup>15</sup> Samuels (2003) reports that, previous to this, many sub-national governments maintained payrolls amounting to 80-90 percent of total revenue.

<sup>16</sup> Foreign private ownership rose by 20%

*real* plan, at the loss of inflation-generated profits and the exposure of untenable state debts in the absence of inflation (Almeida and Jayme Jr., 2008).

The consolidation of the financial system received direct support from the central government through the Incentive Program for the Restructuring of and Strengthening of the National Financial System (PROER) and the Program of Incentives to Reduce the Presence of the State Public Sector in Banking Activity (PROES). Consolidation, elimination, and privatization of state-owned banks occurred in conjunction with the process of reconciling the government budgets at the sub-national level. With state and municipal debts exposed, sub-national governments had little choice but to negotiate with the central government to refinance their debts. In exchange for control over state-banks, the central government absorbed sub-national debts, contributing to the ironic expansion of debt during an administration with the primary objective of combating the instability caused by a debt crisis.

Even with the efforts to reign in spending and consolidate the state banking system, a budgetary deficit plagued much of the Cardoso period. While a primary surplus of 5.2% was reached in 1994, the next four years failed to see even a primary balance.<sup>17</sup> Though the struggle to institutionalize fiscal austerity played a central role in the political process, a balanced budget reappeared only when government revenues increased, and this a result of a rise in the tax rate. Given the maintenance of high real interest rates<sup>18</sup> to attract foreign investment, interest payments on public debt exacerbated government accounting, driving the country into further

---

<sup>17</sup> According to the Central Bank of Brazil primary government expenditures for all levels of government resulted in a surplus of 0.3% of GDP in 1995; -.01% in 1996; -1.0% in 1997; and 0.0% in 1998,.

<sup>18</sup> From 1994-2002, the average annual cost of interest payments on public debt as a portion of GDP was 9.99%.

debt. Samuels(2003) notes that R\$109.4 billion of the debt accrued during the Cardoso presidency came as the direct result of the high-interest rates characterizing the period.

The process of bank re-structuring and sub-national debt refinancing contributed greatly to the accumulation of internal public debt. According to the Ministerio da Fazenda (2003), Brazil's 1994 internal debt of R\$60.7 billion, or 28.1 per cent of GDP, grew by an order of magnitude to R\$623.2 billion, or 55 per cent of GDP, by the end of 2002. R\$297.7 billion of this indebtedness came through the restructuring of sub-national accounts. Samuels (2003) finds the structure of the internal debt potentially problematic due to the short terms of bond maturity, the debt's ties to the US dollar, and the sizeable portion of debt linked to Brazil's high interest rate. These factors forced Brazil to continuously to rollover debts that further increased public exposure to liquidity crises and would amplify the volume of debt in the case of a currency depreciation.

The negative effects of an overvalued *real* eventually forced the government to abandon its quasi-fixed currency regime. With foreign reserves in high demand—in order to finance an expanding debt, maintain the value of the currency, and pay for the trade deficit—Brazil's chronic and growing current account deficit left the country exposed to an international crisis. The Asian crisis of 1997, followed by the Russian crisis of 1998, brought speculative attacks against Brazil. In the midst of a run for re-election, the Cardoso administration responded to the attacks with conservative measures, raising interests and cutting spending. However, the deterioration of the external capital account<sup>19</sup> proved too much. After re-election, the government finally acknowledge the overvalued *real*, allowing the currency to float. The devaluation, which many found to be long overdue, further contributed to the expansion of debt,

---

<sup>19</sup> Between September and December 1998 alone, foreign reserves plummeted by 38% (Ferrai-Filho and Paula, 2003)

but also alleviated the stagnation of growth and poor performance of the Brazilian export sector, both results of currency overvaluation. However, despite the many issues with macroeconomic model, the fixed exchange regime constituted the only element of monetary policy to change. While this did provide the possibility for lower interest rates, maintaining high real interest rates remained a key strategy to preventing price inflation, reaffirming Brazil's dependency on foreign capital and tying the government in what Samuels (2003) calls a "fiscal straitjacket".

### ***Economic Growth and Development***

Following the course set by the Collor de Mello administration, FHC pursued a reform of state-economy relations with a less active role for government. In contrast to the traditional ISI model, the government endorsed a liberalized trading scheme, privatized state-owned companies, and sought to decrease its role as economic entrepreneur. In principle, these efforts can be understood as a modernization of the Brazilian economy—the same objective as the old development state. Yet the path to modernization has clearly changed, with increased global exposure acting as the catalyst for Brazilian economic development. Seemingly in contrast with the short-termed priorities of monetary and fiscal policy, the FHC government adopted a long-term development strategy with major immediate repercussions.

In general, trade policy during the Cardoso years followed the principle of liberalization initiated by the Collor administration. Most major trade barriers, both tariff and non-tariff, were removed during the first half of the 90s. By 1994, average tariff levels rested at 14.2%, less than half of the nominal average at the start of 1990 (Baumann, 2001). Though the FHC government generally maintained a liberal trade policy, the over-valued real and a reduction in domestic producer protections led to a greater demand for imports and a decrease in exports, creating an increasingly worrisome trade deficit. In response to this, the government intervened in key

sectors, such as the automobile industry, protecting favored industries from competition. This raised the overall tariff rate by 3% (Baumann and Franco, 2006). The willingness of the government to intervene in this way suggests that, rather than a commitment to “free trade”, the FHC administration demonstrated its priority for export competitiveness. The threshold for negative short-term results highlights the relative pragmatism of the government’s long-term strategy.

State ownership and monopolies, a cornerstone of the old developmental state, also underwent continued dismantling during the Cardoso period. Again, continuing with the process started under the Collor government, the retraction of state controlled production continued under the auspices of reducing government debt and increasing productive efficiency. Because national control of industries was protected by the 1988 constitution, privatizing national industries and public utilities and breaking up monopolies required a constitutional amendment. Embedded in the broader efforts to reinstitute economic order, these legislative measures broke up state monopolies on telecommunications, subsoil resources, electricity, coastal shipping, and gas distribution. Petrobrás, the enormous and iconic national oil company, lost its monopoly on petroleum exploration and production.<sup>20</sup> Reflecting the greater value placed on productivity, the removal of barriers to previously state-controlled industries served to create a more inviting atmosphere for foreign capital and ownership.

In addition to dismantling state monopolies, the FHC government also furthered the retraction of state ownership. Although the restructuring of ownership was extensive and affected major sectors of the Brazilian economy, the state often maintained partial, or even a majority stake in companies. Anuatti-Neto et al. (2003) divide the privatization process into three

---

<sup>20</sup> For an account of the general reform agenda, see Fleischer (1998).

parts: first, the federal National Program of ‘Destatization’ (NPD), begun in 1991, focused on major national industries, such as Embraer and Companhia Vale do Rio Doce; the second, which primarily included state level privatizations, focused on utility providers; and the third, occurring during the Cardoso years, concentrated on the telecommunications sector. From 1990 to 2000, the number of State Owned Enterprises (SOE) dropped from 186 to 102. The proceedings from this privatization process provided the federal government with an extra \$87 billion in revenue, plus an additional \$18 billion in debt transfers. Between 1997 and 1998, the peak years of the so named “telecom program”, receipts from the sale of SOEs accounted for 67 percent of the total value of the privatization process up to 2001. Yet, although the structure of ownership changed, the state most certainly did not abandon its activity in the economy entirely.

Rather than a wholesale retreat from its entrepreneurial role, the program of privatization and the removal of state monopolies can be seen as an increase in the partnership between government and the private sector. Many companies were not sold outright; rather, portions of the firms were made public, with the state maintaining a minority or even controlling stake. Rabelo and Vasconcelos (2002) describe the differing characteristics of the privatization process as it occurred in various sectors. While the petrochemical industry generally came under the increased influence of national groups, privatization in the steel sector, and especially the telecom sector, brought an increasing amount of foreign investment into the structure of ownership. In a study on leading companies in Brazil, Rocha and Kupfer (2002) note that, during the period 1991-1999, the market share of SOEs fell from 44.6 per cent to 24.3 per cent, that of multinational enterprises rose from 14.8 per cent to 36.4 percent, with private national enterprises maintaining their share of market sales. Thus, the structure of ownership in Brazil, while not fully privatized, became much more internationalized, especially in the telecom and

energy sectors (Rabelo and Vasconcelos, 2002). However, it should also be noted that public utility companies were transferred to the private sector in the form of temporary concessions, with a reevaluation at the end of the designated period (Amann and Baer, 2009). This further suggests that, rather than assuming a hands-off approach, the state abandoned direct productive control embracing instead a more regulatory and managerial role in economic affairs.

The process of economic restructuring also entailed a smaller role for government in investment. With efforts toward fiscal austerity pivotal to the government's primary objective, it comes as no surprise that state investment in infrastructure and economic development continued to decline through the 90s. According to the World Bank (2007), public investment in infrastructure fell from an average of 5.22 per cent of GDP during 1981 to 1985, to 2.35 per cent of GDP in 1996 to 2000. At the same time, Foreign Direct Investment (FDI) increased substantially. Data from the Brazilian Central Bank reveals that gross FDI increased from \$2 billion in 1994 to \$16.7 billion in 2002, with the year 2000 showing the most highest level at \$32.8 billion. Despite the fact that a great portion of this influx in FDI can be attributed to the privatization program, the trend of increased private investment, both portfolio<sup>21</sup> and FDI, and the decreases in government investment suggest a new reliance on private capital, and especially foreign capital, to drive Brazilian investments.

The focus on price stability brought little growth, accompanied by a negative trend in employment. Following IBGE data, the Brazilian economy during Cardoso period was characterized by an average growth rate of 2.3%, with zero growth in 1998. A comparison of growth during the 90s with that of the preceding "lost decade" reveals an even more startling

---

<sup>21</sup> While FDI increased steadily, portfolio investment fluctuated through the 1990s, albeit at high levels relative to the past. While 1994 registered a massive \$54 billion in net foreign portfolio investment, the same figure fell to \$872 million in 2001.

statistic: while the 80s produced an average of 3.03% growth per annum, the reform dominated 90s delivered a mere 1.82% growth average. Coinciding with the dismal growth record, open unemployment rose from 5.1 per cent in 1994 to 7.6 per cent in 1999. Yet, citing a study by the DIEESE, Amann and Baer (2002) signal to the inaccuracy of official figures, due to “disguised unemployment”, and assert that total unemployment in 2000 was 16.2% of the labor force. In general, these same authors attribute increased unemployment to the shedding of “excess labor” brought on by the privatization process, as well as increases realized in productive technology resultant from increased trade openness. Along with this came a rise in the informal sector, parts of which later became reintegrated into the formal work sector through a change in tax laws (Macedo, 2003)<sup>22</sup>. Given the dismal growth of the economy, and especially of employment—due in great part to the preference for capital-intensive productivity gains—an even greater need to strengthen the social welfare system arose.

### ***Social Policies-FHC***

In the past, efforts to raise and protect the social well-being concentrated in the formal channels of representation, especially social security and medical benefits. The 1988 constitution endorsed social inclusion as a basic right of citizens and furthermore lent its decentralized bias to the social service provisions it engendered. Given the longstanding inequality in Brazil, the increase in informal employment, the culture of clientelistic practices, and the influence of arguments for more efficient governance, new strategies to alleviate poverty and raise the standard of living became necessary. Traditional systems of social protection were becoming too costly, as with social security, and some of the newly expanded and constitutionally mandated services, such as those addressing education and health, received too little funding. In response

---

<sup>22</sup> The author notes that a 1999 simplification of taxes for small and micro firms encouraged formalization of labor contracts.



to the growing need of society and the inefficacy of the old system, reforms and new welfare institutions emerged during the FHC government, contributing to the further evolution of the Brazilian government's role in societal development and well-being.

Income transfers proved fundamental to the FHC social development strategy. Central to the government's reformist efforts, reconstructing the national pension system constituted a major objective in the broader context of redistribution. Brazil's national pension system began to show signs of trouble in the late 80s, with the slowdown of job creation and the inclusion of rural workers in the social security system. Add to this increases in life expectancy, the demographic shift to an aging society, and the effects of the *real* plan on the real value of benefits and what emerges is a fiscal imbalance. Furthermore, the government passed a new minimum wage in 1996 and, given that a large portion of benefits are tied to the minimum wage, this contributed to the rising costs of the pension system. By 1998, social security expenditures reached 10 per cent of GDP, being disbursed to nearly 19 million real beneficiaries and producing a deficit equal to 3 percent of GDP (Baumann, 2001). Between the three components of the national pension system<sup>23</sup>, public sector employees received 75 percent of the benefits paid out, though they represented a significantly smaller number of actual beneficiaries.

A partial reform of the pension system was carried out in 1998. As the deficit of the system coincided with the government's larger agenda, this reform focused primarily on reducing expenditures (Fleischer, 1998). This it accomplished through installing a cap on monthly benefits (with special treatment for the public sector), supplanting qualification by minimum time of contribution for one according to minimum time of service, eliminating early

---

<sup>23</sup> These are: 1) a general, mandatory, publicly managed, pay-as-you-go scheme for private sector workers, 2) special schemes civil servants, and 3) optional, privately managed supplementary schemes for private sector workers (Bonturi, 2002).

retirement benefits and incentives, and making room for the introduction of a new benefit calculus that removed incentives for income under-reporting (Giambiagi and Ronci, 2005). However, many of the most egregious elements of the civil servant social security system remained unchallenged, likely due to the fact that the legislators themselves were beneficiaries of systemic biases.

Alongside the efforts to balance pension expenditures and contributions, the FHC government created new social welfare institutions, with the object of raising the basic standard of living. As the efforts at fiscal restraints provided an obstacle for large increases in social investment and welfare spending, the FHC government sought to improve public social services through increased institutional efficiency (Faria, 2002). To this end, the administration adopted some fifty programs. Amongst these, income transfer programs, such as *Bolsa Escola*, *Bolsa Alimentação*, The Rural Worker's Pension, and the Disabilities Benefit program proved enormously successful. By 2002, income transfers reached a total of R\$ 27 billion, or about 2.5 per cent of GDP. Macedo (2003) notes the coincidence of these programs with the IFI supported objective of targeted social programs, drawing further attention to the fact that the most "successful" programs address the needs of extremely vulnerable populations.

The increasing role of income transfer programs exhibited two main trends: inclusion of exposed and vulnerable populations, and the use of income transfers as incentives. The Rural Worker's pension and the Disabilities Benefit exemplify the further realization of the inclusion model enshrined in the 1988 constitution and the gradual evolution of Brazil's social welfare system toward universality. Reaching 6,370, 547 workers and costing R\$ 15.5 billion, the Rural Worker's pension, which accounted for 33.2 per cent of total income transfers in 2001, reflects the steady expansion of social protection throughout the 90s, despite efforts at austerity (Bonturi,

2002). The social security system also expanded to include benefits for disabled and elderly people, irregardless of past contributions. Initiated in 1996, this program came to benefit 2.2 million people in 2002.

Within the evolving social protection system, the increased use of Conditional Cash Transfer (CCT) registers as particularly noteworthy. Coinciding with the advice of international agencies, such the World Bank, the IMF, and UNICEF, many of the Cardoso administrations most widely praised social programs reflected the targeting, empowering, and co-responsibility priorities of the “New Social Policy”<sup>24</sup>. *Bolsa Escola*, *Auxílio Gás*, and *Cartão Alimentação* are all programs operating off the same basic principle: in exchange for immediate aid, beneficiaries must participate in longer term strategies for poverty relief, such as ensuring school attendance, receiving vaccinations, or attending informational workshops on nutrition. Draibe (2005) notes that this expanding and CCT-led strategy for poverty relief became further supported with the creation of the Poverty Fund, in 2000, a law pushed through by the PT.

Educational spending received a notable level attention during the FHC years. Aside from the attendance increasing effects of the *Bolsa Escola* scholarship program, the FHC government also attempted to ameliorate school funding issues through the creation of FUNDEF. The 1988 constitution mandated minimum portions of budgets at all levels of government to be set aside for financing education. However, the budget crises plaguing many sub-national governments produced spending shortfalls in this crucial area, especially in poorer regions of the country (Afonso and Mello, 2000). In 1998, the federal government responded by creating FUNDEF, a fund to ensure the minimum amount of spending per child in school. The fund was created as a temporary constitutional amendment, needing re-approval in 2006. In addition to

---

<sup>24</sup> For a full discussion on the emergence and character of the new approach to welfare policy in the context of the neoliberal policymaking environment, see Molyneux (2008).

earmarking 15 percent of total revenue transfers and ICMS collection for financing basic education, this program also set aside resources to enhance the qualifications of teachers.

As with other social provisions, the 1988 constitution expanded health services by establishing access as a universal entitlement, coordinated by a single public entity: the Integrated Health System (SUS). Efforts to finance health services encountered similar challenges as other social programs in the 90s. The government took measures to reinforce the financial base of health services in 1996, with the creation of a new, specific tax, and again in 2000, through a constitutional amendment that mandated a 17 percent of income minimum expenditure level for sub-national governments (Draibe, 2005). In addition to this, the *Family Health Program* (PSF) was created in 1998. This program sought to improve distribution of health services by decentralizing services. In lieu of urban-centered medical facilities, teams of health service professionals were created to engage on the community level, bringing greater access to rural areas<sup>25</sup>. Efforts to decrease the price of pharmaceuticals also benefited national healthcare services. Citing Almeida (2002), Macedo (2003) notes the dramatic increase in generic, less expensive drugs, from an estimated 4.6 million boxes in 2000, to approximately 71.5 million in 2002.

In general, governance during the Cardoso presidency resulted in gains for most social indicators. The number of people living in impoverished circumstances dropped considerably, from 41.7 percent in 1993, to 34 percent in 2002<sup>26</sup>. However, as no significant changes occurred between 1995 and 2002, the majority of this reduction in poverty can be seen as a positive effect of the price stability realized by the *real* plan. Inequality, as measured by the Gini index, stayed relatively the same—a surprising outcome given the increase in unemployment from 6.1 percent

---

<sup>25</sup> For a detailed discussion about the PSF, see Rocha and Soares (2009).

<sup>26</sup> According to IPEA data.

in 1995, to 9.4 percent in 2001. At the same time, enrollment in primary school continued to increase, infant mortality and illiteracy rates continued to decline, health services expanded to cover more people, and access to basic utilities increased<sup>27</sup>. All of this information indicates that, while state reforms do appear to have produced negative effects in areas such as labor and income, the gradually increasing role of government in providing social services seems to have had positive effects in increases in the overall standard of living.

### ***Lula-A Radical's Agenda***

Brazil, like many of its South American neighbors, responded to the failure of the Washington Consensus by voting the left into power. As the 1990s came to a close, it became clear to many that the privatizations, austerity measures, and retraction of state influence taking place as part of a neoliberal reform agenda had, at best, limited success. Lula, the Worker Party's (PT) perennial candidate, represented a shift in policy-making toward more socially oriented governance. Even though the PT had opposed neoliberal reforms in the 90s, party leaders recognized the necessity of support from the Brazilian business community and from investors abroad, leading it to adopt a pragmatic perspective on economic policy.

In 2003, when Lula's electoral victory became imminent, the potential threat of Brazil's socialist party gaining power led international investors to bet against Brazil, negatively affecting the country's foreign reserves, inflation rate, currency value, and interest rates. Falling in line with the recommendations of the IMF, President Lula promised to respect the principles of market stability and openness embodied in the reforms of the preceding decade and ameliorated this tension. Thus the priority for short-term stability established a place of primacy in the government's agenda due to the pressure of the international financial community. Lula's

---

<sup>27</sup> For a rundown on social indicators during the Cardoso period, see Macedo (2005).

mandate then was two-fold: maintain conditions favorable for foreign investment and improve the social well being of the nation.

The Lula administration's policy agenda clearly reflected the double mandate that brought it to power. While the new government acknowledged its dependency on global investment and competitiveness to drive national development and economic growth, this appeared to coincide with a return to the federal government taking a more decisive role to make economic growth produce more socially tenable results. In the Plano Plurianual de Ação (PPA) 2004-2007, the administration clearly articulated its development goals and strategies. The government declared its meta objectives as: 1) social inclusion and the reduction of social inequality, 2) economic growth generating job creation, income growth, environmental sustainability, and the reduction of inequality, and 3) the promotion and expansion of citizenry and the strengthening of democracy (PPA, 2004). In essence, the government proclaimed that it would cure the poor growth, unemployment, and socially polarizing effects of the previous two decades, ushering in a new model of development for Brazil.

With macroeconomic policy locked into place at the behest of international financiers, the administration moved to distinguish its development strategy from those of former governments by consolidating and expanding social welfare programs. While these effort had the clear intention of alleviating the widespread immiseration of poverty, and in particular, hunger, the government also noted the eradication of poverty as fundamental block in its economic development strategy. To this end, the PPA predicts that increases in mass consumption would bolster its efforts to spur economic growth. In summation, the Lula administration identified social development as the core dimension of its development strategy.

### ***Macroeconomic Management-Lula***

As previously mentioned, Lula's ascendancy to the executive office initially troubled foreign investors. Worries that the PT government would alter or abandon the investment-friendly macroeconomic model of the Cardoso administration led to a speculative attack, which necessitated an IMF intervention. From the negotiations surrounding this event emerged an agreement that Brazil's forthcoming president, whomever that should be, would continue to follow the economic management scheme of the departing administration. Hence, at least in the area of monetary policymaking, the Lula administration's options were clearly limited.

With stability preordained as a requisite concern for the new government, monetary policy continued its conservative path. 1999's monumental currency devaluation marked a change in exchange rate policy, but the central bank continued to target inflation levels through the manipulation of domestic interest rates, thus bringing about a revaluation of the *real*. Barbosa-Filho (2008) notes that authorities remained committed to this tactic, continuing to adjust interest rates up or down, depending on the circumstances. With domestic inflation and uncertainty in the international capital markets contextualizing the political transition, Lula's first year in office was marked by an increase in base interest rates, from 18 % in September 2002, to 26.5% in February 2003. Over the course of Lula's first term in office, this strategy produced an average real base interest rate of 11.3%, even higher than that of the preceding administration. In addition to this, the *real* experienced an increase in its exchange value relative to the dollar, though this did not bring negative effects to Brazil's trade account.<sup>28</sup> The central bank's strategy

---

<sup>28</sup> International markets for Brazilian exports, especially primary and agricultural goods, contributed to a strong performance of Brazilian exports during a majority of the Lula presidency.

experienced great success with respect to controlling inflation<sup>29</sup>, accompanied by a staggered, yet steady, reduction in real interest rates.

Fiscal policy during the first Lula administration followed a mostly conservative path. An increase to the primary budget surplus target, from 3.5% of GDP to 4.25%, marked Lula's first year in office. This conservative move brought the predictable result of putting pressure on government expenditures, especially in the area of social services and public investment. While this fiscal crunch can be seen as a direct result of the higher cost of servicing debt, a bi-product of monetary policy, it did not last long. Increased revenues made possible both the higher budgetary surplus and increased spending in favor of the poverty relief agenda of the PT.

Increases in the primary budget surplus served to lower the debt to GDP ratio to a level favorable to international creditors, namely, under 50%. This controversial strategy ostensibly places priority on the long term objective of a reduced debt burden, while creating an immediate impact on the government's short term budgeting options. In practice, over the course of Lula's two presidencies, total debt has indeed dropped, from 60.5% of GDP at the beginning of 2003 to 41.7% by July of 2010 (IPEA, 2010).<sup>30</sup> The reduction in debt levels eventually made more fiscal space for some of the government's spending priorities, as well as slight reduction in the budget surplus target. Some analysts have further critiqued the priority placed on debt servicing as a move to conform to the desires of investors, which eventually brought the desired result of an improved credit rating (Pereira, 2009). This higher investment grade brought a further increase in the role of international capital in Brazil, to such an extent that the government reinstated a tax on capital entering and leaving the country, hoping to deter those seeking only a quick return.

---

<sup>29</sup> IPEA data reports that inflation levels after 2003 show that inflation did not exceed 6%.

<sup>30</sup> Among debts repaid in this period, Brazil's 1996 \$15.5 billion payback to the IMF deserves special note, given its political connotations.



Tax reform constituted a major objective of the first Lula presidency and further aided the effort to increase spending while remaining within the increased budgetary constrictions. Occurring within the context of the historical struggle between the central government and sub-national governments over revenue sharing, the Lula administration met with governors and other sub-national politicians to form a proposal for tax reform that would reflect the interests of all levels of government. After rounds of negotiations and political concessions, government officials emerged with a bill containing far less of the bold tax system consolidation measures than originally proposed. It was, however, recognized as containing one major innovation: the PIS-Cofins, two taxes contributing to fund Social Security and social inclusion programs, became non-cumulative<sup>31</sup>. Though the change was thought to have a negligible effect on revenue, Barbosa-Filho (2008) notes that, along with increased revenues due to higher growth rates, the new, non-cumulative character of these important taxes realized a 0.5 % of GDP increase in the total contributions. Thus, while the monetary climate placed constraints on fiscal policy, the Lula government managed to increase social spending through an increase in taxes. Later, in Lula's second term, a new focus on economic growth led the government to initiate tax cuts, mostly through investment incentives.

The second Lula administration brought a clear shift to fiscal policy making. Loureiro, Gomide, and Santos (2009) argue that the administrative and staff changes brought on by the 2005 corruption scandal marked a turn in priorities toward growth<sup>32</sup>. With Brazil continuing to show relatively disappointing growth figures, it became clear that fiscal austerity as a long-term debt reduction strategy posed an obstacle to economic development. With this realization came a

---

<sup>31</sup> For a full discussion on the 2004 tax reform effort, see Wernick (2006).

<sup>32</sup> This included, most notably, the replacement of Finance Minister Antonio Palocci with Guido Mantega.

revitalization of the government's role as an investor in the economy. Although the conservative policy making of the Central Bank continued, albeit increasingly more favorable to investment given international conditions<sup>33</sup>, the central government actively engaged itself in increasing investment, in order to "unthaw" the economy. The National Economic and Social Development Bank (BNDES) and *Caixa Econômica Federal* both received increased funding as part of the government's Growth Acceleration Program (PAC), launched in 2007. Realizing that economic growth would not alleviate budgeting issues, aid the administration's social welfare priority, and furthermore abate much of the criticism laid against it, the Lula government made fomenting growth a new pillar of the macroeconomic strategy.

### ***Economic Growth and Development-Lula***

Rhetorically, promoting economic growth constitutes a key element of the Lula administration's priorities from the very beginning. Though this objective received some attention in the PPA, the priority placed on monetary stability and the reduction of the debt to GDP ratio precluded any increase in government investment. In this respect, the second Lula administration represents a truer manifestation of the vision offered by the PT in the documents defining its objectives<sup>34</sup>. With the announcement of the PAC, the Brazilian government began to behave in a manner more reminiscent of the developmental policies of the past.

The increased level of fiscal austerity occurring during Lula's first presidency prevented the government from counter-balancing the dearth of investment characterizing Brazil since the beginning of State reforms. However, that is not to say that the government did not take measures to reinvigorate its role as a promoter in the economic system. The Lula administration

---

<sup>33</sup> That is, both low international interest rates, largely because of actions taken by the U.S. central Bank, and a strong demand for Brazilian exports, which created a trade account surplus.

<sup>34</sup> Such as, "Another Brazil is Possible", Lula's "Letter to the Brazilian People", and the PPA. For a discussion on these, see Gomide, Loureiro, and Santos (2009).

defined its approach to economic development through the unveiling of its Industrial, Technological, and Foreign Trade Policy (PITCE), a multi-agency policy agenda. As the title suggests, this agenda focuses on improving Brazil's productive and technological capacity to gain an improved and more competitive position in the international marketplace. More precisely, this agenda embodies an attempt to assert the state's role in increasing the systemic competitiveness of the Brazilian economy through promoting a National System of Innovation (NSI)<sup>35</sup>. In describing the nature and specific actions taken toward this new objective, Doctor (2009) identifies three main policy areas: (i) improving the competitiveness of existing industries through modernization; (ii) creating incentives and institutional support in four key sectors: software, semi-conductors, capital goods, and pharmaceuticals; and (iii) promoting future-oriented technologies, such as biotechnology, renewable energy, and nano-technology.

In contrast to traditional efforts to expand fiscal support of national industries, Brazil's 21<sup>st</sup> century industrial policy first sought to adjust government structure and behavior. New agencies emerged to change the process of development policy formation, as well as increase its success in implementation. The Council for Economic and Social Development (CDES), which provides business leaders and civil society a forum with government officials—including the president of the republic—formed in 2003, in hopes to define the Lula administration's distinct approach to policy<sup>36</sup>. In 2005, the creation of two new institutions, the Brazilian Industrial Development Agency (ABDI) and the National Industrial Development Council (CNDI), served to directly support the policy objectives set out in the PITCE, and later its successor: the

---

<sup>35</sup> In reality, the NSI strategy is not new to Brazil, as it closely resembles the National Scientific Technological Development System, initiated in the early 50's, but abandoned during the military dictatorship. See Furtado and Suzigan (2006) for a full discussion.

<sup>36</sup> Doctor (2006) notes that the CDES embodies Lula's "contract" with Brazilian people, reflecting the promises made in the "Letter to the Brazilian People".

Production Development Plan (PDP), announced in 2008. While ABDI came to be in order to provide better coordination and institutional efficiency, ensuring the provision of means for policy ends, the CNDI supplied a direct forum for the private sector to offer its perspective on government action in promoting economic development.

Government efforts to revitalize industrial policy also included numerous legislative pieces. The *Lei de Inovação*, passed in 2004, essentially encouraged greater information and technology innovation and sharing by creating R&D partnerships, establishing regulatory standards for technology transfers, and supplying common resources and equipment to ensure the means of innovation. In addition to this, the *Lei do Bem*, in 2005, created a variety of fiscal and tax incentives to encourage investment in technology; the Informatics Law extended fiscal incentives for the use of informatics in R&D; and the Bio-Security Law created regulations for research with stem cells and genetically modified organisms. Finally, the government's commitment to promote cooperation as a pivotal element of development resulted in the Public-Private Partnership (PPP) law, passed in 2004, which served to reassert the government's dedication to working with the private sector on public projects.

Among other efforts to reactivate the state's role as promoter of economic development, a notable increase in development funding aided the PITCE and PDP objectives. In 2004, a new model of industrial fund management brought an increased level of efficiency to the use of financial resources located in the National Science and Technology Development Fund (FNDCT)<sup>37</sup>, a subprogram of the *Financiadora de Estudos e Projetos* (FINEP). The increase in resources distributed through FNDCT coincided with the more active role taken by FINEP as a whole. Likewise, BNDES showed a consistent and significant rise in lending. Disbursement of

---

<sup>37</sup> Total resources increased from R\$343 million in 2002, to \$800 million in 2005, for example (ABDI, 2008).

funds expanded from R\$ 35.1 billion in 2003, to R\$ 137.4 billion in 2009. Reflecting the targeting strategy set forth in policy, these loans were made to companies in strategic sectors, such as pharmaceuticals, computer technology, and especially the energy sector.

The PAC, initiated in 2007, provided further rationale for state intervention. The fiscal austerity measures dominating policy making constrained levels of state investment. The launch of the PAC was a direct response to the lack of investment in Brazil, both private and public, especially in infrastructure. Over a period of four years, the PAC provided R\$ 503.9 billion for investment in energy, sanitation, transportation, housing, and water resources. Increasing investment in infrastructure had clear implications on improving the overall capacity of the Brazilian economy, but was further seen as a means of “unthawing” the economy, breaking Brazil out of its mediocre growth. In this respect, PAC seems to have realized some success. The Brazilian economy grew by 6.1% in 2007 and 5.1% in 2008, with 2009 exhibiting slightly negative growth<sup>38</sup>; however, with estimations for growth in 2010 at around 7%<sup>39</sup>, it seems clear that the impact was minimal. Moreover, GDP per capita has continued on an impressive and steady rise since 2003, jumping from \$6,970 a person in 2003, to \$8,220 in 2009.

International factors continued to influence the evolution of Brazilian political economy. As in previous years, the role of international investment continued to expand. The Brazilian Central Bank (2010) reports that net foreign portfolio investment (FPI) in Brazilian companies reached massive levels. While FPI measured \$5.1 billion in 2003, this figure reached \$48.1 billion in 2007 and \$46 billion in 2009. More importantly, FDI also increased, reaching its peak, at \$45 billion, in 2008. In sum, the value of FDI during the two Lula administrations up to 2009,

---

<sup>38</sup> The drop in growth in 2009 is generally recognized as the result of a global financial crisis, originating in the US. Data from the IBGE.

<sup>39</sup> Following reports from *O Estado de São Paulo*, 9/15/2010.

registers as \$167.7 billion, \$2 billion more than the aggregate value of FDI during the Cardoso presidencies.

Brazil's performance in the global market place was of pivotal concern. The Lula administration's industrial policy focused intently on the economy's ability to compete on the global level. In point of contrast to the former administration's strategy, this government sought to actively promote export industries, through programs such as the PITCE and the PDP. Moreover, Brazil's past financial instability, resulting from a dependence on foreign capital, created a need for ensuring a surplus in the trade account. In Lula's first year in office, exports grew by 21.3%, up from 3.7% growth in 2002. After six years of consistent and significant growth, the value of Brazil's exports reached \$197.9 billion. More importantly, this growth outpaced the value of imports in every year, bring the total trade surplus over the period 2003-2009 to \$240.4 billion.<sup>40</sup> However, the stellar performance of the export sector was largely pushed by the world demand for primary goods. While the returned focus on competitiveness does coincide with a major turn around in the trade account, the sectors targeted by the new industrial policy did not lead this accomplishment.

### ***Social Policy- Lula***

Much has been made by the Lula administration's focus on social policy, and with good warrant. Building off of the efforts of the preceding administration, government programs designed to fight poverty expanded not only in their reach, but more also in their effect, lifting masses of impoverished people to a higher standard of living. At the same time, innovations in the economic development model envisioned by the government called for a strengthening of mass consumption and recognized the dual impact of public infrastructural projects, tying

---

<sup>40</sup> My calculations according to SECEX/MDIC data.

together arguments for social and economic intervention. Yet, as critics are quick to point out, key services, such as education and healthcare, continue to suffer a lack of funding. While it is clear that the government's role in promoting social welfare now takes an explicit route, this seems to be more the maturation of previous visions, rather than a breakthrough in establishing social safety nets.

The Lula administration pursued its vision of empowerment and inclusion by consolidating and expanding CCT programs. In 2003, *Bolsa Escola*, *Bolsa Alimentação*, and *Auxílio Gás*, were joined by *Cartão Alimentação*, a new food entitlement scheme using a special electronic card, under the umbrella program *Fome Zero*. Though unified in name, CCT programs suffered from a lack of administrative efficiency and overall co-ordination (Hall, 2008). In order to alleviate these issues, the government incorporated the CCT sub-programs<sup>41</sup> into a single, unified scheme, labeled *Bolsa Família*. To further bolster the efficacy of the new, consolidated CCT, the Ministry of Food Security and Fight Against Hunger was merged with the Ministry of Social Welfare to form the Ministry of Social Development and Fight Against Hunger (MDS), which assumed management of the *Bolsa Família* program from the President's office. However, while the centralization of management on the federal level is seen as contributing to the program's achievements, Fenwick (2009) argues that the real source of success lies in the federal-municipal partnership, as distribution happens on the municipal level. Thus, while *Bolsa Família* receives much praise as a federal program, one must also note the growing role of municipalities and the benefits of decentralized distribution of services.

---

<sup>41</sup>The *Programa de Erradicação do Trabalho Infantil* (The Plan to Eradicate Child Labor, or PETI), a program initiated in 1996 and utilizing conditional cash transfers as an incentive to prevent child labor, was later folded into the *Bolsa Família* program, in 2006.

Promises to mitigate poverty during the Lula administration proved substantive. In terms of reach, CCT programs have greatly extended the number of beneficiaries, from 6 million families in 2002, to 12.7 million<sup>42</sup> by the end of 2009 (MDS, 2010), making *Bolsa Família* the largest CCT program in the world. Moreover, benefits per household have increased as well. Between 2003-2005, the average of benefits per household nearly tripled from R\$28 to R\$75 per month (Brazil, 2005). By 2010, this average reached R\$95 per month, with the total cost of *Bolsa Família* reaching 0.8% of GDP<sup>43</sup>. And the expansion of income transfer programs brought results. The percentage of people living in poverty, defined as an annual income of less than R\$121, dropped from 28% in 2003 to 19% by 2006. As well, the infamous inequality plaguing Brazil, as measured by the IPEA's calculation of the Gini coefficient, saw an appreciable reduction, from 0.589 in 2002 to 0.543 in 2009.

The Lula administration took other actions that altered the welfare system. Most prominently, this included the passing of pension reform bill, in 2003, which served to compliment the 1998 amendment. As with the preceding reform, this amendment found its impetus in the still deteriorating fiscal situation of the national pension system. In contrast to its predecessor, the 2003 reform targeted the public sector regime. This included establishing a minimum retirement age for civil servants, unifying contribution rates, and placing a cap on benefits. And while these measures sought to decrease the growing expenditures of the system, changes made to social contributions taxes, the "PIS-Cofins", led to increased revenues. According to Barbosa-Filho (2008), this increased PIS-Cofins contributions by 0.5% of GDP, a rise that went directly to increased income transfers.

---

<sup>42</sup> With the an average family size of 4 in Brazil, this means that approximately 50.8 million citizens benefit from *Bolsa Família*.

<sup>43</sup> This is up from 0.2% of GDP in 2003.



Intervention in the labor market further characterized the Lula government. Throughout Lula's two terms, the government utilized the ability granted it by the 1988 constitution to reassess the minimum wage in Brazil. Given Lula's personal history with the labor movement and his political constituency, it comes as no surprise that his presidency would be marked by consistent increases in Brazil's minimum wage, from R\$200 in 2002 to R\$ 510 by the start of 2010. These increases outpaced inflation, bringing real gains to the average worker's income. Baltar, et al (2010) note that annual increases in the minimum wage between 2003 and 2008 brought a total of 38.3% in real gains to base wages. Furthermore, the government's growing concern with economic growth, and its subsequent promise of increased revenues, may have aided in the growth of formal employment, which grew from 25 million in 1999 to 39.4 million in 2008 (Baltar, et al., 2010). While government efforts to create a more favorable environment for productive investment may or may not have been a factor in this growth, it is clear that the increase in public hiring has certainly contributed to increases in secure employment. According to the Annual Account of Social Information (RAIS), in the period 2003-2008, civil servants increased by 25%, or 1.4 million employees. Much of this coincided with the government's reengagement with promoting growth, through the PAC.

The means employed to rekindle growth, through the PAC, coincide with the government's social policy agenda. In the PAC, infrastructural investment is seen not only as a route to increase the logistical capacity of the productive sector, but also as an instrument to universalize economic benefits. Of the R\$503.9 billion set aside for the PAC, R\$274.8 billion were earmarked for social and urban infrastructure. Projects within this area of investment sought to increase access to sanitation networks, create housing and urban transportation, and universalize access to electricity. These investments carried clear implications on the

government's vision for social development, which placed inclusion and empowerment at the forefront, making access to the benefits of modernity an explicit public goal. With this, the government marks an apparent turn in its development strategy: economic growth and social welfare become interdependent factors, with the promotion of either producing benefits for the other..

One pressing critique of the Lula administration regards its lack of attention on the provision and quality of education and health services. With CCT programs assuming a central place in the government's agenda, many argue that badly needed funds were channeled from these pivotal services to poverty relief efforts. As a portion of federal spending, education decreased from 3.01% of the total budget in 2002, to 2.66% in 2009, with 2006 dedicating only 2.17% of the budget to education. Likewise, funds allocated to health services decreased from 5.79% to 4.55% of total federal expenditures. Over the same period of time, expenditure on social assistance increased from 1.48% to 3.01% of the budget<sup>44</sup>. Despite this relative fall in spending, some innovations were made in the area of education.

Amongst government efforts to advance the quality of public education, the extension of federal aid to under-funded school districts and the creation of a new teacher evaluation program emerge as noteworthy. Fundef, which established a minimum level of funding per student, nation-wide, expired in 2006. However, the program had garnered notable success, making it clear candidate for renewal. This occurred in 2007, with the program's name receiving a minor change to Fundeb<sup>45</sup>, and a new, 2020 expiration date. In addition to this, policy makers created incentives for increasing the technical capacity of schools, through the Professionalize Brazil

---

<sup>44</sup> These figures represent my calculations according to IPEA data.

<sup>45</sup> This stands for: O Fundo de Manutenção e Desenvolvimento da Educação Básica e de Valorização dos Profissionais da Educação, or the Fund for the Maintenance and Development of Basic Education and the Valorization of Educational Professionals.

program<sup>46</sup>, and increasing the partnership between educational professionals and the community, through the Formation of the School<sup>47</sup> program. While these efforts pale in comparison to the attention given to poverty alleviation, they do offer two interesting points of intersection with the government's central objectives in that they: (i) encourage a more technologically capable and innovative society and (ii) utilizing private-public partnerships.

### ***A New, Postmodern Developmental State***

The combined experience of these two administrations defies the paradigmatic labels used to describe their character. This study has shown that, while both administrations have espoused policies that reflect a neoliberal purview, they have also behaved in ways that disregard orthodox recommendations and embraced other, heterodox positions. This suggests that policies have not been employed merely on the merit of their ideological underpinnings, as many analysts imply, but pragmatically, in reference to a specific goal. In comparing the old developmental state with the defining actions of the contemporary, in and after the reform process, we readily conclude that, throughout, the government has maintained its traditional motive purpose: promoting development. This implies that, rather than relinquishing development to supposedly natural forces, the government has actively pursued new methods of intervention to promote development, including reforming the modes of intervention themselves. What distinguishes the new from the old is not the retraction of government from economic and social affairs, but the increased use of orthodox theory in justifying government action.

Emergent from the period of institutional reform, then, is not the minimalist, free market state of ideologues on either side, but one employing a bricolage-like strategy of development policies. While the old development state represented a paragon of modernism—demonstrating

---

<sup>46</sup> *Brasil Profissionalizado*

<sup>47</sup> *Formação pela Escola*

its preference for an industrial society; marked by order and a centralized, rationally based system of control—the new development state represents the postmodern. Rather than producing some very definite and cogent structure of governance, reforms reflected the changing nature of national politics and the increasing demands of globalized networks, making them responsive to changes in these factors. As policies continue to evolve and adapt to effectively promote the development of Brazil's productive structure relative to other societies, new political circumstances have greatly impacted the way in which government has pursued this goal.

Just as the 1930 political revolution gave birth to the monolithic development state, the 1985 return of democracy marked the beginning of a more decentralized structure of governance. The tension between the central government and subnational politicians has carried enormous weight in policy making during both administrations. The drive for fiscal balance, led during the FHC government, entailed negotiations and compromise between levels of government. This process had as much to do with fighting corruption and installing measures for transparency as it did with following orthodox economic prescriptions. It is precisely because these measures found multiple impetuses that they passed the test of an increasingly democratic political process and came to be. Likewise, the Lula administration acknowledged the necessity of negotiating with subnational politicians during the 2003 tax reform. While each administration engaged in this process for its own issues, the fact that power sharing between levels of government has become a vital factor in Brazil highlights an important point regarding the character of government in the postmodern period: in order to be effective, the state must reach consensus.

Other new, common political dynamics surge forth as important in defining the structure of government and determining its role in development. Throughout the time span under question, poverty alleviation emerges as a consistent and growing priority. The success of these

efforts has given rise to a major development in the structure of political support. Cardoso was first elected on the merits of the *real* plan, which raised real incomes for the poor, and Lula's political success rides on the back of the government's expanding income transfer programs. Raising the standard of living is not only a moral duty, it is a political obligation. Impoverished sectors of society constitute a mass of voters that cannot be ignored. Consequently, the vision for development must benefit them. International agents now also greatly affect the course of policymaking. No were is this more evident than in the havoc created by international investors in 2002, but both the Cardoso and Lula administrations consistently worked to attract international financiers. The greater the links from the outside world, the more international agents will hold the capacity to exert influence over the political process.

The formulation of macroeconomic policy reflects the perceived need of foreign capital in Brazil, not the pursuit of a free market. The debt crisis of the 1980s created an unavoidable obstacle to government. The crisis arose from a dependency on foreign capital and the only way to ameliorate the prevailing instability was to attract more foreign capital, in order to repay debts. Starting with the *real* plan, monetary policy exhibited a level of government intervention and control that rivals the pinnacle of protectionist trade policies under ISI. Manipulation of the currency exchange value and interest rates was maintained to attract international capital, toward the end of creating the conditions seen as necessary for resumed development and growth. While it is true that theories compete to explain how development best occurs, government intervention remains the means to correct failures. This tendency has remained in the case of both market *and* government failures. In the area of macroeconomic policy, the side effects of the emphasis on short term stability soon clashed with other objectives, bring to bear the fact that macroeconomic policy is not the only variable in development. Economic stability has proven to be an important

step, but the evolution of policy making over this period reveals that the produced by Brazil's monetary regime require effective and strategic forms of intervention in the productive and social structures.

Though the economic development strategies pursued under the FHC and Lula administrations differ in action, they share a fundamental objective: the insertion of the Brazilian economy in the global market. For better or for worse, trade with other countries has been embraced as a means to Brazil's economic development. In practice, this has taken diverse forms, first appearing in the drastic reduction of trade barriers and the increased role of foreign ownership, and later embodied in the active promotion of export competitiveness. In all cases, the government has acted to remedy failures in productivity, through international exposure; in competitiveness, through providing financial incentives to export; and in the lack of investment, through programs designed to expand the supply of credit and increase the country's productive capacity through infrastructural projects.

State ownership in the economy has given way to public-private partnerships, with the government's role being instrumental, but not independent. This makes it difficult to ascertain whether the opening of the economy and state privatizations were the result of ideological influence, or a necessary step in reforming the mode of state intervention to one based more on cooperation than imposition. While the prevalence of neoliberal ideology should be acknowledged as a factor, one must also note that authoritarianism accompanied Brazil's expansive and monolithic development state, so the democratization of Brazilian governance puts limits on state autonomy. The introduction of civil society into the political framework necessitated a complimentary cooperative relationship in economic development. Furthermore, in the context of Brazil's longstanding poverty and inequality, political pressure, along with the

rights enshrined in the 1988 constitution, demanded that part of the ensuing development strategy involve actions to increase the base standard of living.

Continuity also characterizes social policy objectives throughout the two administrations. Poverty alleviation and social security reform each played a major role in the agendas of both governments. While social security reform played into the austerity measures taken by both governments, it also sought to prevent abuses of the pension system, reflecting the calls by both for increased transparency and reduced corruption. Moreover, the most widely lauded aspect of the Lula government—establishing and strengthening a base level of income through government coordinated transfers and increases in the minimum wage—worked off of the many innovations made during the Cardoso administrations. In this respect, the actions of the two governments may be seen as working hand in hand. While targeting the poorest in society may be seen as a palliative for the detrimental effects of neoliberal policy-making, this assertion seems to ignore the chronic issue of poverty in Brazil, and the unequal share of wealth produced under the former development model. In this area, the policies of this period have produced unprecedented results. In contrast with the traditional role of government, social policy in the contemporary period has actively sought to include more citizens in formal society in the short term. This indicates that, rather than deserting its role in promoting societal development, the government has become more active in this respect.

Dual meaning of action and apparent contradictions appear throughout the new, emergent development model. This suggests that, rather than moving toward a single model of development, produced by a single vision, development strategies in Brazil form through a pluralistic process. The new development model is one without a singular truth; instead it makes use of a variety of theoretical paradigms to accomplish what is for now, a number of common

objectives: (i) a globally competitive productive structure, (ii) a macroeconomic environment that attracts foreign capital, and (iii) a more equitable distribution of wealth. In identifying the character of postmodern development, we assert that analyses of government policies during the period under question should resist over asserting the influence of ideology in policy making. In Brazil's case, the effects of radical changes in the national political structure explain many of the new approaches adopted, and the new role assumed by the government in its promotion of development.



## References

- Affonso, R., & Silva, P. (Eds.). (1995). *Federalismo no Brasil: desigualdades regionais e desenvolvimento*. Sao Paulo: Fundacao do Desenvolvimento Administrativo do Estado de Sao Paulo/Universidade do Estado de Sao Paulo.
- Affonso, R., & Serra, J. (2007). Fiscal Federalism in Brazil: an overview. *Cepal Review*, 91, 29-51.
- ABDI, (2008). *An Industrial Policy for Brazil*, at [www.abdi.com.br/](http://www.abdi.com.br/) .
- Amann, E. & Baer, W. (2002). Neoliberalism and Its Consequences in Brazil. *Journal of Latin American Studies*, 34(4), 945-959.
- Amann, E. and Baer, A. (2000) The illusion of stability: the Brazilian economy under Cardoso. *World Development*. 28(10) pp. 1805-1819.
- Arestis, P., Paula, L.F., & Ferrai-Filho, F. (2007). Assessing the Economic Policies of President Lula da Silva in Brazil: Has fear Defeated Hope?, in P. Arestis and M.C. Sawyer (eds.), *Political Economy of Latin America: Recent Economic Performance*, Palgrave Macmillan.
- Bacha, E.L. (1994). O fisco e a inflação: uma interpretação do caso brasileiro. *Revista de Economía Política*, 14(1), 5-17.
- Baltar, A.P.E., Krein, J.D., Leone, E., Maia, A.G., Moretto, A., Proni, M.W., et al., (2010). Moving towards Decent Work. Labour in the Lula government: reflections on recent Brazilian experience. *Global Labour University Working Papers*, Paper NO. 9, May 2010.
- Barbosa-Filho, N.H. (2008). An Unusual Economic Arrangement: The Brazilian Economy during the First Lula Administration, 2003-2006. *International Journal of Politics, Culture, and Society*, 19, 193-215.
- Baumann, R. (2001). Brazil in the 1990s: an economy in transition. *Cepal Review*, 73, 147-169.
- Beltrão, K.I., Pinheiro, S.S., Peyneau, F.P.L., & Mendonça, J.L.O. (2005). The 1988 Constitution and Access to Social Security in Rural Brazil: Towards Universalization. In Ana A. Camarano (ed.). *Sixty plus: the elderly Brazilians and their new social roles*. Rio de Janeiro, IPEA: Ch. 10.

- Bonturi, M. (2002). The Brazilian Pension System: Recent Reforms and Challenges Ahead. *OECD Economics Department Working Papers*, No. 340, OECD Publishing. doi: 10.1787/251552114651.
- Brazil, (2002) *Dívida Pública: Conceitos Básicos Fatores Determinantes*. Brasília: Ministério da Fazenda, Secretaria do Tesouro Nacional, From: [www.tesouro.fazenda.gov.br](http://www.tesouro.fazenda.gov.br).
- Brazil, (2005) *Orçamento Social do Governo Federal 2001'2004*. Brasília: Ministério da Fazenda, Secretaria de Política Econômica.
- Câmara da Reforma do Estado. (1995). *Plano Diretor da Reforma do Aparelho do Estado*. Brasília, DF.
- Central Bank of Brazil (2006): *Informações cadastrais e contábeis*, Sistema Financeiro Nacional, Brasília. From: <http://www.bancocentral.gov.br>.
- Costa, N.R. (2009). Social Protection in Brazil: universalism and targeting in the FHC and Lula Administrations. *Ciência & Saúde Coletiva*, 14(3), 693-706.
- Doctor, M. (2007). Lula's Development Council: Neo-Corporatism and Policy Reform in Brazil. *Latin American Perspectives*, 34 (6), 131-148.
- \_\_\_\_\_ (2009). Furthering Industrial Development in Brazil: Globalization and the National Innovation System. Paper prepared for *Latin American Studies Association*, Rio de Janeiro, June 2009.
- Faria, V.E. (2002). Institutional Reform and Government Coordination in Brazil's Social Protection Policy. *Cepal Review*, 77, 7-24.
- Fenwick, T.B. (2009). Avoiding Governors The Success of Bolsa Família. *Latin American Research Review*, 44(1), 102-131.
- Ferrari-Filho, F. & Paula, L.F. (2003). The Legacy of the Real Plan and an Alternative Agenda for the Brazilian Economy. *Investigación Económica*, 244, 57-92.
- Ferraz, J.C., Kufler, D., & Iooty, M. (2004). Industrial Competitiveness in Brazil: ten years after economic liberalization. *Cepal Review*, 82, 91-117.
- Fleisher, D. (1998). The Cardoso Government's Reform Agenda: A View from the National Congress, 1995-1998. *Journal of Interamerican Studies and World Affairs*, 40(4), 119-136.
- Furtado, J. & Suzigan, W. (2006). Industrial Policy and Development. *Cepal Review*, 89, 69-84.

- Giambiagi, F. & Ronci, M. (2005) Brazilian Fiscal Institutions: the Cardoso Reforms, 1995-2002. *Cepal Review*, 85, 59-77.
- Gomide, A.A., Loureiro, M.R., & Santos, F.P. (2009). Democracy and Macroeconomic Policymaking in Brazil: the fiscal agenda of the Lula administration. From the XIV *Encontro Nacional de Economia Política*. Retrieved from: <http://www.sep.org.br/>
- Hall, A. (2008). Brazil's *Bolsa Familia*: A Double-Edged Sword?" *Development and Change*, 39 (5), 799-822.
- Instituto Brasileiro de Geografia e Estatística. [www.ibge.gov.br](http://www.ibge.gov.br). Accessed July, 2010.
- Instituto de Pesquisa Econômica Aplicada – IPEADATA. [www.ipeadata.gov.br](http://www.ipeadata.gov.br). Accessed July, 2010.
- Krueger, A. (1990). Government Failures in Development. *The Journal of Economic Perspectives*, 4(3), 9-23.
- Lal, D. (1983). *The Poverty of Development Economics*. Cambridge: Harvard University Press.
- Leiva, F.I. (2008). *Latin American Neostructuralism: The Contradictions of Post-Neoliberal Development*. Minneapolis: University of Minnesota Press.
- Lustig, N. (1991). From Structuralism to Neostructuralism: The Search for a Heterodox Paradigm. In P. Meller (Ed.), *The Latin American Development Debate* (27-42). Boulder: Westview Press.
- Macedo, R. (2003). Macroeconomic Volatility and Social Vulnerability in Brazil: The Cardoso Government (1995-2002) and perspectives. *CEPAL-SERIE financiamento del desarrollo*, 132, Santiago: United Nations.
- Molyneaux, M. (2008). The 'Neoliberal Turn' and the New Social Policy in Latin America: How Neoliberal, How New? *Development and Change*, 39 (5), 775-797.
- Nakahodo, S.N., & Savoia, J.R. (2008). A Reforma da Previdência no Brasil: Estudo comparativo dos governos Fernando Henrique Cardoso e Lula. *Revista Brasileira de Ciências Sociais*, 23(66), 45-58.
- Pereira, L. C. B. (2009). *Developing Brazil: Overcoming the failure of the Washington consensus*. Boulder, Colo: Lynne Rienner.
- Pinheiro, M.C. (2009). Bolsa Família ou Desempenho da Economia? Determinantes da Reeleição de Lula em 2006. *Texto para Discussão 2*, IBRE, Fundação Getulio Vargas.

- Power, T. (2001-2002). Blarisim Brazilian Style? Cardoso and the “Third Way” in Brazil. *Political Science Quarterly*, 116(4), 611-636.
- Prebisch, R. (1950). The Economic Development of Latin American and its Principal Problems. New York: United Nations.
- Rabelo, F. & Vasconcelos, F. (2002). Corporate Governance in Brazil. *Journal of Business Ethics*, 37, 321-335.
- Rocha, R. & Soares, R.R. (2009). Evaluating the Impact of Community-Based Health Interventions: Evidence from Brazil's Family Health Program. *IZA Discussion Paper*, No. 4199, April 2009.
- Samuels, D. (2003). Fiscal Straitjacket: The Politics of Macroeconomic Reform in Brazil, 1995-2002. *Journal of Latin American Studies*, 35(3), 545-569.
- Singer, H. (1949) Post-War Relations between Under-developed and Industrialized Countries. New York: United Nations.
- Skidmore, T.E. (1973). Politics and Economic Policy Making in Authoritarian Brazil, 1937-71. In A. Stepan (Ed.), *Authoritarian Brazil* (pp. 3-46). New Haven: Yale University Press.
- Sunkel, O. & Zuleta, A. (1990). Neo-structuralism vs. Neo-liberalism in the 1990s. *Cepal Review*, 42, 35-51.
- Vidal Luna, F. & Klein, H. S. (2006) *Brazil Since 1980*. New York: Cambridge University.
- Werneck, R.L.F. (2006). An Evaluation of the 2003 Tax Reform Effort in Brazil. *Brazilian Journal of Political Economy*, 26(1), 75-94.
- Weyland, K. (2004). Threats to Latin America’s Market Model? *Political Science Quarterly*. 119(2), 291-313.
- \_\_\_\_\_ (1997-1998). The Brazilian State in the New Democracy. *Journal of Interamerican Studies and World Affairs*, 39(4), 63-94.
- Williamson, J. (1990). What Washington Means by Policy Reform, in *Latin American adjustment: How much has happened?* Washington, D.C: Institute for International Economics.

Occupational Crowding by Race in the Pacific Northwest: A Comparative Study of Portland,  
Oregon and Seattle, Washington

September 30, 2010

Moriah Willow

McNair Fellow

Faculty Mentor: Karen J. Gibson, PhD

Portland State University

[moriah.willow@gmail.com](mailto:moriah.willow@gmail.com)

## **Abstract**

In a classic study of racial segregation within the US labor force entitled “The Effect on White Incomes of Discrimination in Employment.” economist Barbara Bergmann, found that Black men were more concentrated in laborer and low skill occupations than their white counterparts and virtually excluded from high status occupations (Bergmann. 1971). In a follow up study “Revisiting Occupational Crowding in the United States: A Preliminary Study “ Gibson, Darity and Myers found similarly high levels of occupational crowding in some blue-collar occupations, high levels of gender segregation in the occupational distribution and under-representation of Blacks in high status/wage occupations. Gibson, et al used regional data from the 1990 US Census to analyze occupational crowding among 59 occupations in Detroit, Michigan and Pittsburgh, Pennsylvania. The regional focus captures many of the localized aspects of each region’s labor market that are obscured with national level data. This study builds upon the previous two by utilizing the same crowding index and similar regional data to evaluate Black occupational patterns in Portland, Oregon and the Seattle, Washington in 2000. This study finds that occupational segregation persists in the new millennium, as there were similarly high levels of occupational in some blue collar occupations, high degrees of occupational sex segregation and underrepresentation of Blacks in high wage/status occupations in both Portland and Seattle. However, Black men and women in Seattle had significantly higher levels of representation in healthcare and clerical occupations. Black men in Portland were slightly better represented in skilled crafts occupations than Black men in Seattle.

## **Introduction**

Although African Americans have made considerable economic gains since the Civil Rights Movement of the 1960's, racial economic inequality has persisted and has in some ways worsened. In the 1970's, economist Barbara Bergmann, interested in the underlying dynamics which perpetuate racial inequality, focused on employment discrimination as a leading factor. In a well known study entitled "The Effect on White Incomes of Discrimination in Employment".(1971), Bergmann examined US Census data from 1960 to investigate the extent to which African American men were limited to restricted set of occupations. Bergman (p. 295) argued that racial discrimination in employment had led to a "crowding effect", whereby Black men were segregated into a small number of low status occupation which resulted in lower earnings than similarly skilled White men. Gibson, Darity and Myers (1998) examined occupational crowding in Wayne County (Detroit), and Allegheny County (Pittsburgh) using an index similar to Bergmann's (that controlled for the educational level of the worker). This study found similar levels of crowding in 1990, among some low wage blue collar occupations as well as Black underrepresentation in high paying managerial/specialty occupations. One of the study's more notable conclusions was the degree to which racial occupational patterns in blue collar jobs had persisted between 1960 and 1990. In the current study, like Gibson, et al, I will utilize 5% Public Use Micro-data Samples (PUMS) from the US Census Bureau to analyze the extent to which African Americans are crowded into certain occupations and out of others. This data set contains detailed information regarding household and personal characteristics for individuals based on geographic area. This study utilizes regional rather than county level data from the 2000 Census for Portland, Oregon and Seattle, Washington Metropolitan Statistical Areas (MSA's), which in this case, represent combinations of multiple counties. The occupations

analyzed in the current study are very similar\* to the set used by Gibson, Darity and Myers (1998) and the crowding index is identical. This study will attempt two primary tasks:

- 1.) To compare occupational patterns by race in Portland, Oregon and Seattle, Washington
- 2.) To compare and contrast the results of this analysis to those found in “The Effect on White Incomes of Discrimination in Employment.”(Bergman 1971.). And, “Revisiting Occupational Crowding in the United States: A Preliminary Study “(Gibson, Darity and Myer 1998).

This article is broken into five sections. In the next section I describe why Portland and Seattle provide an interesting theoretical case study and discuss the origins of the African American communities of the Pacific Northwest, highlighting economic and historical contrasts which affect the differential occupational opportunities available to African Americans in both cities. In section three I discuss the persistence of racial economic inequality in the US, review past scholarship on occupational segregation by race and gender and discuss African American access to desirable occupations. Section four consists of an overview of the study’s methodology and discussion of similar past studies. In section five I present a summary of my findings, compare my findings to past research and offer my conclusions.

### **Why Seattle and Portland?**

The primary reason the Seattle, Washington and Portland, Oregon MSA’s were selected is because both cities reside in the relatively racially homogenous Pacific Northwest and possess small Black populations, unlike Pittsburgh and Detroit, which possess much larger Black populations. Numerous studies have linked Black population size with Black to Black-White inequality in the United States across a broad spectrum of labor market outcomes (Seymore, Hoyt and Scott 1984; Beggs 1995, Cohen 2001, Huffman and Cohen 2004). The “competition”

\*Occupations no longer used in PUMS 1990 occupational classification scheme: Purchasing Managers, Administrators in Protective Services, Administrators and Officials in Public Administration. Also, Maids and Housemen were omitted from the study and Boilermakers, Taxi Drivers/Chauffeurs, Garage and Service Station Attendants and Bank Tellers were added.



or “visibility-discrimination” hypothesis attributes this positive association between racial concentration and inequality to a White response to the threat posed by larger minority group size (Burr, Galle and Fossett 1991, Beggs, Villemez and Arnold 1997. Huffman and Cohen 2004). The Black populations in Portland and Seattle MSA’s are small (2.6% and 4.3% respectively), which would suggest that racial employment discrimination would be less pronounced than in Pittsburgh and Detroit. However, as it relates to occupational crowding and segregation, this study corroborates Gibson et al, finding that city-city occupational patterns, in terms of gender and racial representation are unique and deeply rooted in history.

### **The African American Communities of Seattle, Washington and Portland, Oregon**

The African American communities of Seattle and Portland arose primarily during 1940’s as Southern Blacks migrated and were recruited from across the United States to work in wartime industries. Between 1940 and 1950 Portland's African American community expanded by close to 400 percent, from 1,931 to 9,529 (Taylor 1981). Similarly, Seattle's Black population grew by over 300 percent, from 3,789 to 15,666.

In Seattle, home of the Boeing Company, Black workers found employment both in aircraft and shipbuilding industries, while Blacks migrants to Portland found employment primarily in the Kaiser shipyards owned by the powerful California industrialist Henry J. Kaiser. Blacks in Seattle’s were openly welcomed into shipbuilding industries and to a lesser degree within aircraft industries so that by the end of WWII the outlook for African Americans in Seattle was promising, strengthened by the diversity in employment opportunities.

In Portland, Black and White wartime workers from the South were met with open hostility and a severe shortage of housing greatly exacerbated racial tensions. In addition, Black workers in

Portland also experienced severe discrimination from most local labor unions, particularly the Boilermakers Union. However, there were a few exceptions. For example, the Building Worker's Union (Local 299) had 2,000 Black members out of about 5,500 total members and the Electrical Workers Union had nearly 1,000 Black members out of a total of 8,000 (City Club of Portland 1945). Regardless, thousands of African American workers left the Portland area when ship production was curtailed at the end of the war. Some returned to the South, while others sought employment in Seattle or in California. By 1947 the number of Blacks in the Portland-Vancouver area had dwindled from a high of 21,000 in 1945 to approximately 12,000 persons (Taylor 1981). Of the 4,500 blacks in the Portland labor force in 1947, only about one-third were employed.

Five decades later, African Americans in Portland continued to face greater barriers to economic opportunity as compared with their counterparts in Seattle. While an accurate economic comparison between African Americans in Portland and Seattle is difficult because wages are higher in Seattle and unemployment is far lower, a comparison of educational attainment is strongly illustrative of the achievement gap between the two Black communities. Just 21% of Portland Blacks had completed two years of college or more, while 30.6% had in Seattle. 22.7% of Blacks had earned a four year college degree or professional/graduate degree in Seattle compared to 15.7% of Blacks in Portland (PUMS 2000). This disparity may come as a result of number of factors. Because Seattle is a larger city with more job opportunities there may be more incentive for African Americans to pursue secondary education. In addition, higher wages and lower levels of unemployment in Seattle may be a draw to ambitious Blacks in Portland and elsewhere.

## **The Persistence of Racial Economic Inequality**

In 1970, Black poverty levels in Seattle, Portland and the nation were twice White poverty levels, Black unemployment levels were close to double White unemployment and Black per-capita income was half White per capita income. Thirty years later in 2000, Black unemployment had worsened considerably, Black poverty levels were nearly triple White poverty levels and Black per capita income was less than 60% of White per capita income. These trends fly in the face of the American meta-narrative of continuous progress towards racial equality in the post-Civil Rights Era. However, a large body of empirical research reveals the continued economic marginalization of African Americans in the US labor force whether measured in terms of labor market discrimination in hiring (Darity and Mason 1998; Pager 2003), promotion (Muame Jr. 1999), wage inequality (Cohen and Huffman 2004. Dozier, 2007; Pettit and Ewert 2009) or labor force participation (Brown 1997; Holzer, Offner and Sorensen 2004).

## **Occupational Segregation and Crowding by Race and Gender**

Race and gender segregation in the US workforce is an extremely important issue because it adversely affects the economic status of both minorities and women. Job segregation negatively affects the relative wages of women (B. F. Reskin 1988. Cohen and Huffman 2002 and 2003), and African Americans (Cohen and Huffman 2004). Black women, who carry the burden of both gender and racial discrimination, experience a 3% wage tax as compared to similarly skilled White women in the same occupational category (Kim 2002). An additional consequence of occupational segregation is that it can play a strong role in perpetuating and reinforcing race and gender stereotypes that can limit future educational and economic opportunities and, in turn, limit future occupational opportunities.

Scholarship on the racial desegregation of the US workforce indicates that most sustained and rapid progress was made in the initial period following the Civil Rights Act, when many employers experimented with new human resource practices and Equal Opportunity Compliance Standards were unclear (Tomoskovic-Devey and Zimmer 2007). However, when political pressure declined markedly in 1980 during the Reagan Administration, progress towards racial desegregation in the private sector all but stopped (Tomoskovic-Devey and Zimmer 2006; King 1992). In addition, research shows that occupational race segregation varies regionally and inter-regionally, with the American South being historically more racially segregated than the rest of the nation (King 1992; Fosset, Galle and Kelly 1986; Burr, Galle and Fossett 1991; Fosset and Swicegood 1982). Unfortunately, the researcher was not able to find any regionally focused studies which dealt specifically with occupational segregation in the Pacific Northwest and hope that this study may help fill that research gap.

### **African American Access to Desirable Occupations**

In an often cited article entitled "Discrimination and Desegregation: Equal Opportunity Progress in U.S. Private Sector Workplaces Since the Civil Rights Act" published in 2007, noted sociologists Kevin Steinback and Donald Tomaskovic-Devey examined patterns of racial representation over time in three desirable occupational categories: craft production, managerial and professional occupations. Within craft production occupations, which continue to be highly gender segregated, they found that African American men had made considerable progress in the initial post-Civil Rights Act period, followed by slower gains during the 1970's and a slight decline after 1985. Within managerial occupations, they found that Black men made no progress in the initial post-Civil Rights Act period, but did make slow progress during the 1970's. In the 1980's desegregation stalled, but progress began anew across the 1990's. Black women's

progression into managerial positions followed a similar pattern, but Black men continue to be more advantaged (Muame 1999; Steinback and Tomaskovic-Devey 2007 ). However, African American men and women were found to be considerably underrepresented in private sector managerial positions, with some regional and inter-regional variation (Huffman and Cohen 2007). In the 1960's, Black men and women, with some exceptions, were all but absent from professional and specialty occupations but by 2002, Black men and women had gone from 90% underrepresentation to 63% underrepresentation and 52% respectively.

However, Black women hold a small advantage over Black men in professional occupations which can be partially attributable to the gender differences in occupational opportunity. Men have access to relatively high paying jobs in skilled crafts, security oriented occupations and construction related jobs, which require far less formal education than similarly rewarded female gender-typed jobs. Many of these female gender typed occupational niches are found within the public sector, where Black women are thought to face lower levels of discrimination. Thus, the impetus to strive for advanced levels of education may be stronger for Black women than Black men.

### **Bergmann in 1960 and Gibson, Darity and Myers in 1990**

In “The Effect on White Incomes of Discrimination in Employment” (Bergmann 1971), Barbara Bergmann used US Census Data from 1960 to identify which occupations were characterized by underrepresentation of Blacks. Controlling for education, Bergmann developed a representation scheme that deduced the appropriate number of Blacks in any occupation based upon the portion of the Black male population who would be eligible for any given occupation based upon educational credentials. However, Bergmann was only concerned with occupations which required low levels of education. In “Revisiting Occupational Crowding in the United States: A

Preliminary Study “(1998), 59 occupations “representing a broad cross section of jobs” in terms of skill and educational requirements were analyzed using 1990 5% PUMS data for two counties: Wayne County in (Detroit, Michigan) and Allegheny County in (Pittsburgh, Pennsylvania).

The study found that within blue-collar and service employment, Black women were underrepresented in both craft and operative occupations and concentrated in low-skill service occupations. Black men were underrepresented in the craft occupations and concentrated in low-skill operative, laborer, and service occupations. Within white-collar employment, both Black men and women were largely excluded from high-skill private sector managerial occupations. However, Black representation in public sector managerial and private sector professional occupations was found to be better in Detroit than Pittsburgh because of the in-roads Detroit Blacks had been able to make in the city’s institutions (schools, police, city government, etc) in the wake of white flight following deindustrialization. This case study provides a clear example the localization of occupational segregation on a city-to-city basis and the centrality of geographically specific historical context.

### **The Bergmann Crowding Index**

The Bergmann crowding index is a useful measure of occupational inequality because it can signal the degree to which African Americans are numerically represented in occupations primarily because of an inadequate number of Blacks with appropriate level of educational attainment for the occupation or because of an artificial or discriminatory barrier to entry.

The crowding index is computed by calculating the ratio of the share of Black men or women in each occupation to the share of Black men or women in the population with the appropriate educational level (educational levels between the 25th and 90th percentiles for each occupation).

According to the index, blacks are considered to be overrepresented in those occupations with crowding ratios more than 10% above unity, underrepresented in those occupations with crowding ratios more than 10% below unity, and evenly represented in those occupations with crowding ratios within 10% of unity.

For example, the educational attainment level for Administrators in education and related fields in the Portland MSA ranges from a graduate degree or 5+ years of college education (90<sup>th</sup> Percentile) to an Associate's degree or two years of college education (25<sup>th</sup> Percentile). Since the Black male share of the occupation is 1.3% and the proportion of the Black male population with the appropriate level of education attainment for the occupation, out of the entire population, is 1.43%, the crowding ratio is 90.91%. This means that Black men are very close to proportionately represented in this occupation. This case of proportionate representation is very rare. In fact, of the eleven managerial occupations analyzed, Black men in Portland were significantly underrepresented in seven.

### **Comparing Seattle and Portland**

The following is a summary overview of the findings on Seattle and Portland. The crowding indices for all occupations can be found in Appendix 2. This study finds Black men to be extremely underrepresented in the heavily unionized skilled craft occupations in both cities. Black men and women were also found to be underrepresented in private sector managerial, specialty and professional occupations but better represented in public sector managerial occupations in both Seattle and Portland. In addition, Black women in both Seattle and Portland are concentrated in healthcare and low skill service occupations and some clerical occupations. Black men were found to be concentrated in low skill laborer and some operative occupations.

However, Black women in Seattle were far more concentrated in clerical occupations in comparison to their counterparts to the south. In Portland, Black men were slightly better represented in the skilled crafts. Also, Black women in Seattle were a little better represented in professional, specialty and managerial occupations. Generally, these findings are very similar to those found by Gibson et al in Pittsburgh and Detroit.

### **Black men in Skilled Crafts, Laborer and Operative Occupations (Table 1)**

Table 1 reveals that the six skilled craft occupations selected for analysis were male gender typed. In Seattle, Black men were underrepresented in all six and in Portland Black men were underrepresented as carpenters, plumbers, machinists and boilermakers (see Table 1). The exceptions were electricians and auto mechanics, where Black men were evenly represented. Amongst the ten operative and laborer occupations analyzed, Black men in Seattle were overrepresented in seven with exception of printing press operators (even representation), assemblers (underrepresented) and machine operators (underrepresented). A similar pattern was found amongst Black men in Portland who were also overrepresented in seven of ten laborer and operative occupations. The exceptions were printing press operators, machine operators and truck drivers, where Black men in Portland were underrepresented.

### **Black Men in Service and Healthcare Occupations (Table 2)**

Occupational patterns were far more varied between the two cities in regard to Black men in service and healthcare professions. With the exception of waiters (even representation) and clinical laboratory technicians (underrepresented) Black men in Seattle were overrepresented in the other ten healthcare and service occupations selected for analysis (see table 2). Like Black men in Seattle, Black men in Portland were found to be overrepresented in four of the five healthcare occupations selected, with the exception of health technologists (underrepresented).



However, amongst service occupations the pattern changes. Unlike in Seattle, Black men in Portland, with the exception of cooks (even representation), meat cutters (overrepresentation) and janitors (overrepresentation) were found to be underrepresented in three of the six service occupations examined. This result is somewhat surprising because Black men in Seattle are found to be significantly overrepresented as cooks and food preparers and evenly represented as waiters while in Portland Black men were underrepresented as waiters and food prepares and evenly represented as cooks.

### **Black Men in Professional, Specialty and Managerial Occupations (Table 3)**

Similar patterns of occupational representation were found between the two cities in regards to Black men in top tier white collar professions (see table 3). In both Portland and Seattle, Black men were underrepresented in eleven of the sixteen professional, specialty and managerial occupations analyzed. In Seattle Black men were found to be evenly represented as accountants + auditors and overrepresented as human resource managers, administrators in education, managers of service organizations and financial managers. Similar to Seattle, Black men in Portland were evenly represented as administrators in education, managers of service organization and overrepresented as human resource managers. Also, Black men in Portland were overrepresented as managers in lodging and food serving establishments and lawyers.

**Table 1**  
**Black Men in Skilled Crafts,**  
**Operative and Laborer Occupations**

**Seattle MSA**

**Black Men in Skilled Crafts, Operative  
and Laborer Occupations**

**Underrepresented**

**Automobile mechanics**  
**Carpenters**  
**Electricians**  
**Plumbers, pipefitters, and steamfitters**  
**Machinists**  
**Boilermakers**  
Machine operators  
Assemblers

**Even Representation**

Printing press operators

**Overrepresented**

**Construction laborers**  
**Laborers, except construction**  
**Punching press machine operators**  
**Pressing machine operators**  
**Truck drivers**  
Bus drivers  
**Taxicab drivers and chauffeurs**

**Portland MSA**

**Black Men in Skilled Crafts, Operative  
and Laborer Occupations**

**Underrepresented**

**Carpenters**  
**Plumbers, pipefitters, and steamfitters**  
**Machinists**  
**Boilermakers**  
Printing press operators  
Pressing machine operators  
Truck drivers

**Even Representation**

Automobile mechanics  
Electricians

**Overrepresented**

**Punching and stamping press machine  
operators**  
Machine operators  
Assemblers  
Bus drivers  
**Taxicab drivers and chauffeurs**  
**Construction laborers**  
**Laborers, except construction**

**Table 2**  
**Black Men in Service and**  
**Healthcare Occupations**

*Seattle MSA*

**Black Men in Service and  
Healthcare Occupations**

<b>Underrepresented</b>	<b>Even Representation</b>	<b>Overrepresented</b>
Clinical laboratory technologists	Waiters	<b>Nursing aides and orderlies</b> <b>Registered nurses</b> <b>Licensed practical nurses</b> Health technologists Cooks Miscellaneous food preparation occupations Janitors and cleaners <b>Child care workers</b> Butchers and meat cutters Garage and service station attendants

**Portland MSA**

**Black Men in Service and  
Healthcare Occupations**

<b>Underrepresented</b>	<b>Even Representation</b>	<b>Overrepresented</b>
<b>Health technologists</b>  Waiters Miscellaneous food preparation Child care workers Garage and service station attendants	Cooks	<b>Registered nurses</b> <b>Clinical laboratory technologists</b> <b>Licensed practical nurses</b> <b>Nursing aides and orderlies</b>  Butchers and meat cutters Janitors

**Note: Occupations in bold are gender typed**

Source: 5% PUMS data - 2000 US Census

See Appendix 2 for index values

**Table 3**

**Black Men in Professional, Specialty  
And Managerial Occupations**

**Seattle MSA**

**Black Men in Professional, Specialty  
and Managerial Occupations**

**Underrepresented**

**Chief executives public administration**

Managers, marketing, advertising,  
and public relations

Managers, medicine and health

Managers, food serving and  
lodging establishments

Managers, properties and real estate

Managers and administrators

Funeral directors

Architects

Lawyers

Physicians

Computer programmer

**Even Representation**

Accountants and auditors

**Overrepresented**

Financial managers

Managers, human resources +labor

Administrators in education

Managers, service organizations

**Portland MSA**

**Black Men in Professional, Specialty  
and Managerial Occupations**

**Underrepresented**

Chief executives and general  
administrators, public administration

Financial managers

Managers, marketing, advertising,  
and public relations

Managers and administrators

Accountants and auditors

Architects

Physicians

Real estate managers

Managers and administrators

Managers in medicine and health

Computer programmer

**Even Representation**

Administrators in education

Managers, service organizations.

**Overrepresented**

Managers, human resources + labor

Managers, food serving and  
lodging establishments

Lawyers

**Note: Occupations in bold are gender typed**

**Source: 5% PUMS data - 2000 US Census**

**See Appendix 2 for index values**

**Table 4**  
**Black Women in Clerical Occupations**

**Seattle MSA**

**Black Women in Clerical Occupations**

**Underrepresented**

**Secretaries**

**Even Representation**

**Overrepresented**

Computer operators  
**Typists**  
**Receptionists**  
**File clerks**  
**General office clerks**  
**Bank tellers**  
**Data-entry keyers**

**Portland MSA**

**Black Women in Clerical Occupations**

**Underrepresented**

**Secretaries**  
**Typists**  
**Receptionists**  
**File clerks**  
**Bank tellers**

**Even Representation**

**Overrepresented**

Computer operators  
**General office clerks**  
Data-entry keyers

**Note: Occupations in bold are gender typed**

**Source: 5% PUMS data - 2000 US Census**

**See Appendix 2 for index values**

**Black Women in Clerical Occupations (Table 4)**

Amongst the clerical occupations, which are for the most part are female gender-typed, a significant contrast was found between Black women in Seattle and Portland. In Seattle, Black

women were extremely overrepresented in the clerical occupations with exception of secretaries, where Black women in both cities were underrepresented (see table 4). However, in Portland a very different pattern emerges. Black women in Portland were found to be underrepresented in five of the eight clerical occupational examined and overrepresented in three. In addition, Black women in Portland seem to be completely absent from clerical occupations which require direct interaction with public such as secretaries, receptionists and bank tellers (similar to Black waiters in Portland). And, while clerical workers are generally paid relatively modest wages, clerical work does not often require a four year college degree and provides women with limited education attainment the opportunity to be a part of the lower middle-class or working poor. Without even this limited economic foothold, Black women in Portland face an extremely limited opportunity structure.

### **Black Women in Sales, Service and Healthcare Occupations**

Amongst the five healthcare occupations examined, Black women in Seattle were found to be overrepresented in four, with exception of registered nurses. In both Portland and Seattle, Black women were found to be extremely overrepresented (more than 200% of the crowding index value) as nurses' aides and licensed nurses. In Portland, Black women were evenly represented as registered nurses and health technologists and underrepresented as clinical laboratory technicians. Amongst the sales occupations analyzed, Black women in Seattle were evenly represented as sales persons but were significantly underrepresented as supervisors and proprietors in sales. In Portland, Black women were underrepresented as both sales persons and supervisors and proprietors in sales. Amongst service occupation, Black women in both cities were overrepresented as janitors, childcare workers and cashiers and underrepresented as food preparers and service station attendants. In Portland, Black women were evenly represented as

waitresses but underrepresented in Seattle. In Seattle, Black women were evenly represented as cooks but overrepresented as in Portland.

**Table 5**  
**Black Women in Sales**  
**Service and Healthcare Occupations**

**Seattle MSA**

**Black Women in Service, Sales  
and Healthcare Occupations**

**Underrepresented**

**Registered nurses**  
 Waiters and waitresses  
 Miscellaneous food preparation  
 Garage and service station attendants  
 Supervisors and proprietors, sales

**Even Representation**

Cooks  
 Sales Person

**Overrepresented**

Clinical laboratory technologists  
**Licensed practical nurses**  
 Health technologists  
**Nursing aides and orderlies**  
**Child care workers**  
 Janitors and cleaners  
 Cashiers

**Portland MSA**

**Black Women in Service, Sales  
and Healthcare Occupations**

**Underrepresented**

**Clinical laboratory technologists  
and technicians**  
 Supervisors and proprietors, sales  
 Sales Person  
 Miscellaneous food preparation  
 Garage and service station attendants

**Even Representation**

**Registered nurses**  
 Health technologists and technicians  
 Waiters and waitresses

**Overrepresented**

**Licensed practical nurses**  
 Cashiers  
**Nursing aides and orderlies**  
 Cooks  
 Janitors and cleaners  
**Child care workers**  
**Butchers and meat cutters**

**Note: Occupations in bold are gender typed**

**Source: 5% PUMS data - 2000 US Census**

**See Appendix 2 for index values**

## **Black Women in Professional, Specialty and Managerial Occupations**

Amongst the top tier white collar occupations analyzed Black women in both cities were significantly underrepresented. In Seattle, Black women were underrepresented in ten out of sixteen occupations and in Portland black women were underrepresented in thirteen of sixteen. In both Seattle and Portland, Black women were found to be overrepresented as administrators in education and managers in medicine. In Portland, Black women were overrepresented as managers in marketing and computer programmers. In Seattle, Black women were evenly represented as managers in marketing, physicians and managers in service organizations. Also, Black women in Seattle were overrepresented as managers in real estate.

**Table 6**  
**Black Females in Professional**  
**Managerial and Specialty Occupations**

### **Seattle MSA**

#### **Black Women in Professional, Specialty and Managerial Occupations**

##### **Underrepresented**

Chief executives in public administration  
Financial managers  
Managers, human resources and labor  
Managers, food and lodging  
Funeral directors  
Managers and administrators  
Accountants and auditors  
Architects  
Lawyers  
Computer programmers

##### **Even Representation**

Managers, marketing  
Managers, service org.  
Physician

##### **Overrepresented**

Administrators in education  
Managers, medicine  
Managers, real estate

Continued on next page



## **Portland MSA**

### **Black Women in Professional, Specialty and Managerial Occupations**

#### **Underrepresented**

##### **Chief executives in public administration**

Financial managers

Human resources and labor

relations managers

Managers, food serving

and lodging establishments

Managers, properties and real estate

Funeral directors

Managers, service organizations

Managers and administrators

Accountants and auditors

Architects

Lawyers

Physicians

#### **Even Representation**

#### **Overrepresented**

Managers, marketing,

Administrators in education

Managers, medicine

Computer programmers

**Source: 5% PUMS data - 2000 US Census**

**See Appendix 2 for index values**

### **Comparing Studies: Bergmann's 1960 analysis of Black Males in Blue-Collar Occupations\***

A direct comparison of Bergmann's findings to those found in this report is problematic because the occupational classification systems used are different and because Bergmann limited her study to Black men in blue-collar occupations, while the current study is limited to a subset of 25 blue collar occupations. However, a striking similarity can be found between the types of blue-collar occupations African Americans were crowded into and out of in 1960 and the racial occupational patterns found in this report. In Bergmann's study, African American males were found to be crowded into laborer and service occupations and excluded from most skilled trade and some operative occupations. This study also finds that Black men continue to face barriers to entry into skilled craft occupations. However, unlike in Bergmann's analysis, in which African American men were for the most part underrepresented in operative professions, in this study, a

significant degree of occupational crowding was found within operative professions, particular vehicle drivers. In addition, Black men in Portland were slightly better represented in the skilled trades and crafts than their counterparts in Seattle. Black men in Seattle were underrepresented in all six of the skilled trades occupations analyzed, while in Portland, Black men have been able to find employment both as electricians and auto mechanics.

### **Comparing Studies: Pittsburgh and Detroit in 1990 vs. Portland and Seattle in 2000**

Comparing Gibson, Darity and Myers's findings in 1990 to the current study is relatively straight forward because the set of occupations analyzed in this study is very similar. They found in 1990, within blue-collar and service employment, black women were underrepresented in both craft and operative occupations and concentrated in low-skill service occupations. Black men were underrepresented in the craft occupations and concentrated in low-skill operative, laborer, and service occupations. Amongst white-collar occupations, both Black men and women in Pittsburgh and Detroit were largely excluded from high-skill private sector managerial occupations. While in Detroit, both Black men and women had made significant in-roads in public sector managerial and administrative positions. This study's results mirror many of the findings from the 1990 study. Black men continue to be crowded out of the highly unionized and well compensated skilled craft occupations and crowded into low-skill operative and laborer occupations, professions that offer limited career mobility and job security. And, like Pittsburgh and Detroit in 1990, Black men and women continue to find themselves crowded out of private sector managerial, professional and specialty occupations in Seattle and Portland. Overall, the level of continuity between the two studies is disturbing. African Americans in Seattle and Portland in 2000 face a similar up-hill climb out of undesirable jobs and into more desirable and better compensated occupations as there 1990 counterparts in Detroit and Pittsburgh.

## **Conclusion**

It is clear from the empirical analysis presented that Black men and women in the Pacific Northwest, with a few exceptions, are largely excluded from the most desirable and best compensated professions and crowded into those jobs at the bottom of the occupation ladder. In addition, and despite the limitations of this report, the troubling continuities observed between the results of this analysis and those conducted by Bergmann and Gibson et al, give an indication of the long road ahead for racial equality in the America workforce. In her analysis of occupational crowding in blue collar jobs in 1960, Barbara Bergmann concluded that racial desegregation in occupations would come at a significant economic cost for White men with low-levels of educational attainment. However, the findings of this report make it very clear that the type of workforce redistribution required to achieve balanced occupational representation by race would come at a considerable price to Whites with both high and low levels of educational attainment.

## Technical Notes

### Data Set:

5% Public Use Micro-data Samples (PUMS) from the US Census Bureau contains detailed information regarding household and personal characteristics for individuals based on geographic area. The 2000 PUMS data used in this study will come from the [Integrated Public Use Micro-data Series](#) (IPUMS-USA), which consists of more than fifty high-precision samples of the American population drawn from fifteen federal censuses and from the American Community Surveys of 2000-2008. The IPUMS-USA online data base will allow the researcher to extract and analyze a customized data set from 5%PUMS.

### Occupational Variable: OCC1990

Because the Census Bureau has reorganized its occupational classification system in almost every census administered since 1850, the researcher has chosen to use the [OCC1990](#) which provides a consistent long-term classification of occupations. The OCC1990 classification scheme contains [389 categories](#). The researcher has chosen to analyze 59 occupations representing a broad cross section of jobs in terms of educational requirements, pay and status (see appendix A). 55 of the 59 occupations selected for analysis matched the 59 occupations used for “Revisiting Occupational Crowding in the United States: A Preliminary Study “(Gibson, Darity and Myers. 1998).The researcher believes that the considerable overlap should allow for a substantive comparison between the two studies.

### Race Variable: Race

[RACE](#) has both a general version (1 digit) and a detailed version (3 digits). For this study the general version of the variable will be used ([codebook](#)).

### Variable Recoding:

In order to isolate the African American population for study, the researcher will aggregate the other eight RACE responses into one.

### Education Variable: EDUC

[EDUC](#) represents a respondents educational attainment, as measured by the highest year of school or degree completed (Note that completion differs from the highest year of school attendance). EDUC has both a general version (2 digits) and a detailed version (3 digits). This study will make use of the general version ([codebook](#)).

### Variable Recoding:

In order to obtain more accurate results for educational attainment in the sample, the researcher will omit cases in which a respondent failed to answer the question (code 00).

### Income Variable: INCWAGE

[INCWAGE](#) reports each respondent's total pre-tax wage and salary income for the previous year ([Codebook](#)). Sources of income in INCWAGE include wages, salaries, commissions, cash bonuses, tips, and other money income received from an employer. Payments-in-kind or reimbursements for business expenses are not included.

Variable Recoding:

In order to obtain more accurate INCWAGE results, the researcher will either omit cases in which a respondent failed to answer the question (code 999999).

Geographic Variable: [METAREA](#)

Metropolitan areas are counties or combinations of counties centering on a substantial urban area. METAREA has both a general version (3 digits) and a detailed version (4 digits). For this study, the general version will be used ([codebook](#)).

Portland-Vancouver-Hillsboro, OR-WA

The Portland-Vancouver-Hillsboro, OR-WA Metropolitan Statistical Area (MSA), also known as the Portland metropolitan area or Greater Portland, is an urban area in the [U.S. states](#) of [Oregon](#) and [Washington](#) centered around the city of [Portland, Oregon](#). The U.S. Census Bureau's definition for the MSA is currently all of the following counties: [Clackamas County, Oregon](#); [Columbia County, Oregon](#); [Multnomah County, Oregon](#); [Washington County, Oregon](#); [Yamhill County, Oregon](#); [Clark County, Washington](#); and [Skamania County, Washington](#).<sup>11</sup> The Washington counties are separated from Oregon by the [Columbia River](#).

Seattle–Tacoma–Bellevue, WA

The Seattle–Tacoma–Bellevue, WA MSA includes the city of [Seattle](#), [King County](#), [Snohomish County](#), and [Pierce County](#) within the [Puget Sound region](#).

AGE:

AGE reports the person's age in years (3 digits) as of the last birthday.

Variable Recoding:

In order to isolate the working-age population for study, the researcher will omit individuals in the sample below the age of 25 and over the age of 65.

Gender Variable: SEX

SEX reports whether the person was male (1) or female (2).

PERWT (Person Weight):

[PERWT](#) indicates how many persons in the U.S. population are represented by a given person in the IPUMS sample.

## References:

- Beggs, John J.. 1995. The institutional environment: "Implications for race and gender inequality in the U.S.labor market". *American Sociological Review*. 60 (1). 612-33.
- Beggs, John J. Villemez, Wayne J. and Arnold, Ruth. 1997. "Black Population Concentration and Black-White Inequality: Expanding the Consideration of Place and Space Effects". *Social Forces*. 76(1): 65-91.
- Bergmann, Barbara R. 1971. "The Effect on White Incomes of Discrimination in Employment." *Journal of Political Economy* 79(2): 294–313.
- Browne, Irene. 1997. "Explaining the Black-White Gap in Labor Force Participation among Women Heading Households". *American Sociological Review* 62(2): 236-52
- Burr, Jefferey A. Galle, Omer R. and Fosset, Mark A.. "Racial Occupation Inequality in Southern Metropolitan Areas, 1940-1980: Revisiting the Visibility-Discrimination Hypothesis". *Social Forces*. 69(1). 831-50
- Cohen, Phillip N.. 1998. "Black Concentration Effects on Black White Gender Inequality: Multi Level Analysis for U.S. Metropolitan Areas". *Social Forces*. 77(1). 207-29.
- Cohen, Phillip N. 2001. *Race, Class and Labor Markets: the White Working Class and Racial Composition of U.S. Metropolitan Areas*. *Social Science Research*. 30(1). 146-69.
- Petit, Becky and Ewert, Stephanie. 2009. *Employment Gains and Wage Declines: The Erosion of Black Women's Relative Wages Since 1980*". *Demography*. 46 (3) 469-92.
- Tomaskovic-Devey, Donald. Zimmer, Catherine. Stainback, Kevin. Robinson, Corre. Taylor, Tiffany and McTagu, Tricia. 2006. "Documenting Desegregation: Segregation in American Workplaces by Race, Ethnicity, and Sex, 1966–2003". *American Sociological Review*. 71 (4) 565-88.
- Fairlie, Robert W. and Sundstrom, William A.. 1997. "The Racial Unemployment Gap in Long-Run Perspective." *American Economics Association Papers and Proceedings*. 87(2): 306–10.
- Dozier, Raine. "Accumulating Disadvantage: The Growth in the Black-White Wage Gap Among Women" Unpublished Dissertation. Western Washington University.
- Digest of City Club Report, The Negro in Portland - July, 1945," Portion of Portland City Club Report, 1945. Folder 3, Box 3, Gov. Snell Records, OSA.
- Fossett, Mark A., , Galle R. Omer , and Kelly R.William. 1986. "Racial Occupational Inequality, 1940-1980: National and Regional Trends." *American Sociological Review* 51 (3). 421-29.
- Fosset, Mark and Swicegood, Gray. 1982. "Rediscovering City Differences in Occupational Inequality". *American Sociological Review*. 47(5). 661-89.

Gibson, Karen, Darity, William Jr. and Myers, Samuel Jr. "Revisiting Occupational Crowding in the United States: A Preliminary Study". *Feminist Economics*. 4 (3) 73-95.

Huffman, Matt L. and Cohen, Philip N.. 2002. "Occupational Segregation and the Devaluation of Women's Work Across US Labor Markets". *Social Forces*. 81(3). 881-907

Huffman, Matt L. and Cohen, Philip N.. 2003. "Individuals, Jobs, and Labor Markets: The Devaluation of Women's Work". *American Sociological Review*. 68(3). 443-63.

Huffman, Matt L. and Cohen, Philip N. 2004. "Racial Wage Inequality: Job Segregation and Devaluation across U.S. Labor Markets" *American Journal of Sociology*. 109 (4). 902-36.

Huffman, Matt L. and Cohen, Philip N.. 2007. "Black Under-representation in Management across U.S. Labor Markets". *The Annals of the American Academy of Political and Social Science*. 609 (1). 181-199.

Holzer, Harry J. Offner, Paul and Sorensen, Elaine. 2004. "Declining Employment among Young Black Less-Educated Men: The Role of Incarceration and Child Support". *Journal of Policy Analysis and Management*. 24 (2), 329-71.

Kim, Marlene. 2002. "Has the Race Penalty for Black Women Disappeared in the United States". *Feminist Economics*. 8(2). 115-24.

King, Mary. (1992). "Occupational segregation by race and sex, 1940-88." *The Monthly Labor Review*. 115(4) 30-8.

Muame, David J. Jr. 1999. "Glass Ceilings and Glass Escalators". *Occupational Segregation and Race and Sex Differences in Managerial Promotion*. *Work and Occupations*. 26(1). 483-509.

McTague, Tricia. Stainback, Kevin, and Tomaskovic-Devey. Donald. 2009. "An Organizational Approach to Understanding Sex and Race Segregation in U.S. Workplaces.". *Social Forces* 87(3). 1499-1527

Steinbeck, Kevin and Tomaskovic-Devey, Donald D. (2007). "Discrimination and Desegregation: Equal Opportunity Progress in U.S. Private Sector Workplaces since the Civil Rights Act". *The Annals of the American Academy of Political and Social Science*. 609 (1). 49-84.

Taylor, Quintard. "The Great Migration: The Afro-American Communities of Seattle and Portland during the 1940's". *Arizona and the West*. 23(2). 109-26

Appendix 1 – Courtesy of Prof. Karen Gibson, Portland State University

Per Capita Income and Black-White Ratios, 1960-2006 (in 2006 dollars)

	Portland			Seattle			United States		
	White	Black	B/W	White	Black	B/W	White	Black	B/W
<b>1960</b>	21,102	15,782	<b>0.75</b>	20,643	14,763	<b>0.72</b>	20,571	10,218	<b>0.50</b>
<b>1970</b>	18,661	17,266	<b>0.93</b>	27,255	20,793	<b>0.76</b>	32,615	24,510	<b>0.75</b>
<b>1980</b>	20,883	12,440	<b>0.60</b>	24,516	14,535	<b>0.59</b>	18,737	11,817	<b>0.63</b>
<b>1990</b>	23,961	12,461	<b>0.52</b>	31,860	16,208	<b>0.51</b>	24,208	13,671	<b>0.56</b>
<b>2000</b>	29,785	16,475	<b>0.55</b>	42,260	21,461	<b>0.51</b>	29,062	16,905	<b>0.58</b>
<b>2006</b>	31,647	13,126	<b>0.41</b>	46,066	18,349	<b>0.40</b>	29,406	16,559	<b>0.56</b>

Source: Decennial Census and 2006 ACS

\*2000 & 2006 for Non-Hispanic Whites

Unemployment Rates & Black-White Ratios: Portland, Seattle, and United States, 1970-2006

	Portland			Seattle			United States		
	White	Black	B/W	White	Black	B/W	White	Black	B/W
<b>Males</b>									
<b>1970</b>	7.4%	11.9%	<b>1.6</b>	8.5%	13.1%	<b>1.5</b>	3.6%	6.3%	<b>1.8</b>
<b>1980</b>	6.2%	15.2%	<b>2.5</b>	5.9%	11.9%	<b>2.0</b>	5.9%	12.3%	<b>2.1</b>
<b>1990</b>	5.9%	15.0%	<b>2.5</b>	4.3%	13.9%	<b>3.2</b>	5.3%	13.7%	<b>2.6</b>
<b>2000</b>	6.6%	15.6%	<b>2.4</b>	4.5%	11.1%	<b>2.5</b>	4.4%	12.3%	<b>2.8</b>
<b>2006</b>	6.2%	16.6%	<b>2.7</b>	4.1%	14.9%	<b>3.6</b>	5.0%	13.4%	<b>2.7</b>
<b>Females</b>									
<b>1970</b>	5.4%	8.1%	<b>1.5</b>	7.3%	10.4%	<b>1.4</b>	4.8%	7.7%	<b>1.6</b>
<b>1980</b>	5.1%	13.4%	<b>2.6</b>	4.6%	9.6%	<b>2.1</b>	5.7%	11.3%	<b>2.0</b>
<b>1990</b>	5.2%	10.6%	<b>2.1</b>	3.5%	10.7%	<b>3.1</b>	5.0%	12.2%	<b>2.4</b>
<b>2000</b>	4.9%	11.5%	<b>2.4</b>	3.7%	8.9%	<b>2.4</b>	4.3%	10.9%	<b>2.6</b>
<b>2006</b>	4.8%	10.4%	<b>2.2</b>	4.4%	12.1%	<b>2.8</b>	5.1%	11.9%	<b>2.3</b>

Source: U.S. Census & 2006 ACS

\*2000 & 2006 for Non-Hispanic Whites

Percent with Incomes below Poverty, 1970-2006

	Portland		Seattle		United States	
	White	Black	White	Black	White	Black
<b>1970</b>	17	30	14	24	14	28
<b>1980</b>	11	29	9	23	9	30
<b>1990</b>	12	31	9	25	10	29
<b>2000</b>	11	26	8	23	8	25
<b>2006</b>	13	41	9	35	9	25

Source: Decennial Census and 2006 ACS

\*2000 & 2006 for Non-Hispanic Whites



## Appendix 2

### Black Men Seattle

<b>Healthcare and Service Occupations</b>	Male	Female	%Black	index	Exp. Black%
Nursing aides, orderlies, and attendants	21.40%	<b>78.60%</b>	14.7	372.15%	3.95
Registered nurses	8.80%	<b>91.20%</b>	7.8	319.67%	2.44
Clinical laboratory technologists and technicians	30.40%	69.60%	0	<b>0.00%</b>	2.44
Licensed practical nurses	9.30%	<b>90.70%</b>	23.5	635.14%	3.70
Health technologists and technicians, n.e.c.	64.00%	36.00%	6.4	208.47%	3.07
Waiters and waitresses	32.30%	67.70%	4.2	106.33%	3.95
Cooks	54.90%	45.10%	4.7	118.99%	3.95
Miscellaneous food preparation occupations	44.70%	55.30%	7.8	194.51%	4.01
Janitors and cleaners	70.70%	29.30%	9.7	202.51%	4.79
Child care workers, n.e.c.	3.00%	<b>97.00%</b>	15.8	400.00%	3.95
Butchers and meat cutters	76.50%	23.50%	11	229.65%	4.79
<b>Skilled Crafts, Operative and Laborer Occupations</b>	Male	Female	%Black	index	Exp. Black%
Automobile mechanics	<b>97.60%</b>	2.40%	2.8	<b>58.46%</b>	4.79
Carpenters	<b>97.50%</b>	2.50%	2.2	<b>45.93%</b>	4.79
Electricians	<b>94.50%</b>	5.50%	3.5	<b>73.07%</b>	4.79
Plumbers, pipefitters, and steamfitters	<b>94.80%</b>	5.20%	3.5	<b>73.07%</b>	4.79
Machinists	<b>95.30%</b>	4.70%	3.9	<b>81.42%</b>	4.79
Boilermakers*	<b>100.00%</b>	0.00%	0	<b>0.00%</b>	3.95
Construction laborers	<b>91.00%</b>	9.00%	7.5	156.58%	4.79
Garage and service station related occupations*	51.30%	48.70%	10.3	260.76%	3.95
Laborers, except construction	<b>80.50%</b>	19.50%	9.7	202.51%	4.79
Punching and stamping press machine operators	<b>85.80%</b>	14.20%	13.4	283.30%	4.73
Printing press operators	<b>84.70%</b>	15.30%	5.2	108.56%	4.79

Pressing machine operators	37.60%	62.40%	11.5	240.08%	4.79
Machine operators, n.s.	67.60%	32.40%	3.4	<b>70.98%</b>	4.79
Assemblers	52.60%	47.40%	2.2	<b>45.93%</b>	4.79
Truck drivers	<b>90.00%</b>	10.00%	5.8	121.09%	4.79
Bus drivers	57.30%	42.70%	14.3	362.03%	3.95
Taxicab drivers and chauffeurs*	<b>84.50%</b>	15.50%	15.8	400.00%	3.95

### Professional, Managerial and Specialty Occupations

	Male	Female	%Black	index	Exp. Black%
Chief executives and general administrators, public administration	<b>80.40%</b>	19.60%	1.2	<b>39.09%</b>	3.07
Financial managers	44.20%	55.80%	3.7	120.52%	3.07
Human resources and labor relations managers	41.70%	58.30%	3.7	120.52%	3.07
Managers, marketing, advertising, and public relations	50.40%	49.60%	2	<b>83.33%</b>	2.40
Administrators, education and related fields	35.80%	64.20%	5.2	230.09%	2.26
Managers, medicine and health	31.10%	68.90%	1.6	<b>66.67%</b>	2.40
Managers, food serving and lodging establishments	48.00%	52.00%	0.5	<b>12.66%</b>	3.95
Managers, properties and real estate	51.70%	48.30%	2.9	<b>73.42%</b>	3.95
Funeral directors	<b>100.00%</b>	0.00%	0	<b>0.00%</b>	4.79
Managers, service organizations, n.e.c.	34.10%	65.90%	8.8	366.67%	2.40
Managers and administrators, n.e.c.	71.70%	28.30%	2.4	<b>72.95%</b>	3.29
Accountants and auditors	40.10%	59.90%	2.6	106.56%	2.44
Architects	71.00%	29.00%	0	<b>0.00%</b>	2.26
Lawyers	63.90%	36.10%	2	<b>86.58%</b>	2.31
Physicians	64.00%	36.00%	1.6	<b>69.26%</b>	2.31

### Black Men Portland

#### Healthcare and Service Occupations

	Male	Female	%Black	index	Exp. Black%
Registered nurses	9.60%	<b>90.40%</b>	2.1	141.89%	1.48
Clinical laboratory technologists and technicians	18.60%	<b>81.40%</b>	21.9	1479.73%	1.48

Licensed practical nurses	12.50%	<b>87.50%</b>	23.8	871.79%	2.73
Health technologists and technicians, n.e.c.	59.90%	40.10%	0	<b>0.00%</b>	2.01
Nursing aides, orderlies, and attendants	17.60%	<b>82.40%</b>	6.4	234.43%	2.73
Waiters and waitresses	28.20%	71.80%	1.6	<b>58.61%</b>	2.73
Cooks	51.50%	48.50%	4.7	172.16%	2.73
Miscellaneous food preparation occupations	42.40%	57.60%	2.6	77.38%	3.36
Janitors and cleaners	69.60%	30.40%	5.1	164.52%	3.1
Child care workers, n.e.c.	5.40%	<b>94.60%</b>	0	<b>0.00%</b>	2.73
Butchers and meat cutters	<b>83.60%</b>	16.40%	3.7	119.35%	3.1
<b>Skilled Crafts, Operative and Laborer Occupations</b>	Male	Female	%Black	index	Exp. Black%
Automobile mechanics	<b>95.70%</b>	4.30%	3.3	106.45%	3.1
Carpenters	<b>96.60%</b>	3.40%	1	<b>36.63%</b>	2.73
Electricians	<b>98.20%</b>	1.80%	2.8	90.32%	3.1
Plumbers, pipefitters, and steamfitters	<b>97.40%</b>	2.60%	0.5	<b>16.13%</b>	3.1
Machinists	<b>96.90%</b>	3.10%	1.3	<b>41.94%</b>	3.1
Boilermakers*	<b>100.00%</b>	0.00%	0	<b>0.00%</b>	3.28
Punching and stamping press machine operators	<b>85.10%</b>	14.90%	3.7	112.80%	3.28
Printing press operators	60.80%	39.20%	0	<b>0.00%</b>	3.28
Pressing machine operators	12.90%	<b>87.10%</b>	0	<b>0.00%</b>	3.28
Machine operators, n.s.	66.20%	33.80%	5.2	167.74%	3.1
Assemblers	49.70%	50.30%	3.6	116.13%	3.1
Truck drivers	<b>91.30%</b>	8.70%	1.8	<b>54.88%</b>	3.28
Bus drivers	49.10%	50.90%	7.5	241.94%	3.1
Taxicab drivers and chauffeurs*	<b>86.00%</b>	14.00%	9.4	344.32%	2.73
Construction laborers	<b>90.70%</b>	9.30%	3.8	122.58%	3.1
Garage and service station related occupations*	<b>84.30%</b>	15.70%	2.8	<b>88.33%</b>	3.17
Laborers, except construction	<b>79.90%</b>	20.10%	7.3	235.48%	3.1
<b>Professional, Specialty and Managerial Occupations</b>	Male	Female	%Black	index	Exp. Black%

Chief executives and general administrators, public administration	78.60%	21.40%	0.4	<b>19.90%</b>	2.01
Financial managers	45.60%	54.40%	0	<b>0.00%</b>	2.01
Human resources and labor relations managers	34.20%	65.80%	4.4	218.91%	2.01
Managers, marketing, advertising, and public relations	54.00%	46.00%	1.4	<b>69.65%</b>	2.01
Administrators, education and related fields	42.70%	57.30%	1.3	90.91%	1.43
Managers, medicine and health	29.60%	70.40%	0	<b>0.00%</b>	2.01
Managers, food serving and lodging establishments	56.80%	43.20%	4.2	153.85%	2.73
Managers, properties and real estate	51.40%	48.60%	2.3	<b>84.25%</b>	2.73
Funeral directors	60.10%	39.90%	0	<b>0.00%</b>	2.73
Managers, service organizations, n.e.c.	32.90%	67.10%	2.1	104.48%	2.01
Managers and administrators, n.e.c.	74.40%	25.60%	0.8	<b>31.75%</b>	2.52
Accountants and auditors	38.70%	61.30%	1.8	<b>89.55%</b>	2.01
Architects	68.80%	31.20%	0.7	<b>48.95%</b>	1.43
Physicians	65.30%	34.70%	0	<b>0.00%</b>	1
Lawyers	72.00%	28.00%	2.4	240.00%	1

### Black Women Seattle

<b>Healthcare, Sales and Service Occupations</b>	Male	Female	%Black	index	Exp. Black%
Registered nurses	8.80%	91.20%	2.5	<b>86.81%</b>	2.88
Clinical laboratory technologists and technicians	30.40%	69.60%	4.1	142.36%	2.88
Licensed practical nurses	9.30%	90.70%	11.2	269.88%	4.15
Health technologists and technicians, n.e.c.	64.00%	36.00%	5.6	153.01%	3.66
Nursing aides, orderlies, and attendants	21.40%	78.60%	12.2	281.11%	4.34
Waiters and waitresses	32.30%	67.70%	0.8	<b>18.43%</b>	4.34
Cooks	54.90%	45.10%	4.5	103.69%	4.34
Miscellaneous food preparation occupations	44.70%	55.30%	3.3	<b>75.17%</b>	4.39
Child care workers, n.e.c.	3.00%	97.00%	5.8	133.64%	4.34
Janitors and cleaners	70.70%	29.30%	7.9	152.51%	5.18

Garage and service station related occupations*	51.30%	48.70%	0	<b>0.00%</b>	4.34
Supervisors and proprietors, sales occupations	60.10%	39.90%	1.8	<b>41.47%</b>	4.34
Sales Person, n.e.c.	61.40%	38.60%	4.3	99.08%	4.34
Cashiers	23.10%	76.90%	7.4	170.51%	4.34

### **Clerical Occupations**

	Male	Female	%Black	index	Exp. Black%
Computer operators	49.40%	50.60%	6.1	140.55%	4.34
Secretaries	5.40%	<b>94.60%</b>	3.8	<b>87.56%</b>	4.34
Typists	18.00%	<b>82.00%</b>	5.5	126.73%	4.34
Receptionists	6.40%	<b>93.60%</b>	6.2	142.86%	4.34
File clerks	17.80%	<b>82.20%</b>	6.8	156.68%	4.34
Postal clerks except mail carriers	52.50%	47.50%	2.9	<b>66.82%</b>	4.34
General office clerks	13.20%	<b>86.80%</b>	5.5	126.73%	4.34
Bank tellers*	15.80%	<b>84.20%</b>	5	115.21%	4.34
Data-entry keyers	18.70%	<b>81.30%</b>	6.5	149.77%	4.34

### **Professional, Specialty and Managerial Occupations**

	Male	Female	%Black	index	Exp. Black%
Chief executives and general administrators, public administration	80.40%	19.60%	1.7	<b>46.45%</b>	3.66
Financial managers	44.20%	55.80%	2.6	<b>71.04%</b>	3.66
Human resources and labor relations managers	41.70%	58.30%	3.1	<b>84.70%</b>	3.66
Managers, marketing, advertising, and public relations	50.40%	49.60%	2.8	98.25%	2.85
Administrators, education and related fields	35.80%	64.20%	4.9	194.44%	2.52
Managers, medicine and health	31.10%	68.90%	4.8	168.42%	2.85
Managers, food serving and lodging establishments	48.00%	52.00%	3.3	<b>76.04%</b>	4.34
Managers, properties and real estate	51.70%	48.30%	6.2	142.86%	4.34
Funeral directors	100.00%	0.00%	0	<b>0.00%</b>	5.18
Managers, service organizations, n.e.c.	34.10%	65.90%	2.6	91.23%	2.85
Managers and administrators, n.e.c.	71.70%	28.30%	2.5	<b>65.10%</b>	3.84

Accountants and auditors	40.10%	59.90%	2	<b>69.44%</b>	2.88
Architects	71.00%	29.00%	0	<b>0.00%</b>	2.52
Physicians	64.00%	36.00%	2.8	102.94%	2.72
Lawyers	63.90%	36.10%	1.3	<b>47.79%</b>	2.72
Computer programmers	76.80%	23.20%	1.7	<b>69.67%</b>	2.44

### Black Women in Portland

#### Healthcare Sales and Service Occupations

	Male	Female	%Black	index	Exp. Black%
--	------	--------	--------	-------	-------------

Registered nurses	9.60%	<b>90.40%</b>	1.5	108.70%	1.38
Clinical laboratory technologists and technicians	18.60%	<b>81.40%</b>	0.7	<b>50.72%</b>	1.38
Licensed practical nurses	12.50%	<b>87.50%</b>	8.6	289.56%	2.97
Health technologists and technicians, n.e.c.	59.90%	40.10%	2.1	100.96%	2.08
Supervisors and proprietors, sales occupations	62.70%	37.30%	1.4	<b>50.91%</b>	2.75
Sales Person, n.e.c.	67.60%	32.40%	1.7	<b>61.82%</b>	2.75
Cashiers	21.90%	78.10%	4.2	152.73%	2.75
Nursing aides, orderlies, and attendants	17.60%	<b>82.40%</b>	7.5	272.73%	2.75
Waiters and waitresses	28.20%	71.80%	2.5	90.91%	2.75
Cooks	51.50%	48.50%	3.8	138.18%	2.75
Miscellaneous food preparation occupations	42.40%	57.60%	2.3	<b>64.25%</b>	3.58
Janitors and cleaners	69.60%	30.40%	4.8	146.79%	3.27
Child care workers, n.e.c.	5.40%	<b>94.60%</b>	4.1	149.09%	2.75
Butchers and meat cutters	83.60%	16.40%	33.6	1027.5%	3.27

#### Clerical Occupations

	Male	Female	%Black	index	Exp. Black%
--	------	--------	--------	-------	-------------

Computer operators	38.70%	61.30%	8.7	316.36%	2.75
Secretaries	2.20%	<b>97.80%</b>	2	<b>72.73%</b>	2.75
Typists	1.50%	<b>98.50%</b>	0	<b>0.00%</b>	2.75
Receptionists	8.00%	<b>92.00%</b>	1.7	<b>61.82%</b>	2.75

File clerks	23.30%	76.70%	1.4	<b>50.91%</b>	2.75
Postal clerks except mail carriers	53.50%	46.50%	0	<b>0.00%</b>	2.75
General office clerks	13.30%	<b>86.70%</b>	3.2	116.36%	2.75
Bank tellers*	8.90%	<b>91.10%</b>	0	<b>0.00%</b>	2.75
Data-entry keyers	22.30%	77.70%	3.5	127.27%	2.75
Professional, Specialty and Managerial Occupations	Male	Female	%Black	index	Exp. Black%
Chief executives and general administrators, public administration	78.60%	21.40%	1.6	<b>76.92%</b>	2.08
Financial managers	45.60%	54.40%	0.5	<b>24.04%</b>	2.08
Human resources and labor relations managers	34.20%	65.80%	0	<b>0.00%</b>	2.08
Managers, marketing, advertising, and public relations	54.00%	46.00%	2.7	129.81%	2.08
Administrators, education and related fields	42.70%	57.30%	1.8	148.76%	1.21
Managers, medicine and health	29.60%	70.40%	3.2	153.85%	2.08
Managers, food serving and lodging establishments	56.80%	43.20%	2	<b>72.73%</b>	2.75
Managers, properties and real estate	51.40%	48.60%	0.6	<b>21.82%</b>	2.75
Funeral directors	60.10%	39.90%	0	<b>0.00%</b>	2.97
Managers, service organizations, n.e.c.	32.90%	67.10%	1.5	<b>72.12%</b>	2.08
Managers and administrators, n.e.c.	74.40%	25.60%	1.3	<b>49.43%</b>	2.63
Accountants and auditors	38.70%	61.30%	1	<b>48.08%</b>	2.08
Architects	68.80%	31.20%	0	<b>0.00%</b>	1.21
Lawyers	72.00%	28.00%	0	<b>0.00%</b>	1.31
Physicians	65.30%	34.70%	1	<b>76.34%</b>	1.31
Computer programmers	75.50%	24.50%	2.9	210.14%	1.38

Note:: Between .90 and 1.10 is even representation; less than .90 is underrepresentation; greater than .90 is overrepresentation.

Source: Authors' calculations from 2000 Census of Population and Housing, Public Use Microdata

5% Sample