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The *Journal of the Professoriate* (JOP) is a peer-reviewed journal that promotes critical analysis among scholars and policymakers on issues affecting all college and university faculty in America and abroad. The mission of the *Journal of the Professoriate* is to provide an outlet for research and scholarship on issues pertaining to the pathways leading to the professoriate as well as issues relevant to college and university faculty within academe and the global society.

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Structuring for High Performance: A Case Study of Market-Based Faculty Work

The need for higher education to be more responsive in meeting the growing needs of a global marketplace, while simultaneously becoming more efficient, necessitates a reexamination of faculty roles and responsibilities.   Using data from a case study that examined faculty work through the conceptual framework of high performing organizations, the author considers how one for-profit university organizes faculty responsibilities and structures for "high performance." The author illustrates how the institution employs three interconnected strategies to develop and execute institutional goals and priorities that contribute to faculty performance within a market-based educational context.

Vicente M. Lechuga, *Texas A&M University*

Exploring Gender Disparities in Senior-Level Position Attainment in the Academic Workforce: Does Evidence Suggest a Glass Ceiling?

This study investigates the role of gender in senior-level position attainment for teaching faculty and academic leaders in the academic workforce. Guided in part by the glass ceiling concept, employment models were specified to examine gender disparities in position attainment with regard to productivity-related variables. More specifically, the study investigates to what extent

male and female employees differ on various indicators of career advancement. Results from the study highlight disparities by gender as well as its interaction with race/ethnicity regarding workplace experience and job satisfaction. Additionally, findings show that work-life balance issues (e.g., the presence of childcare benefits and leave policies) produced only minimal impact on the career prospects of either male or female employees.

Elizabeth M. O'Callaghan, *University of Wisconsin–Madison*
Jerlando F. L. Jackson, *University of Wisconsin–Madison*

Reframing the Two-Body Problem in U.S. STEM Departments: Asian Women Faculty Negotiation of Career and Family

This qualitative study examines the transition of 21 Asian women in the fields of science, technology, engineering, and mathematics (STEM) into faculty positions within a U.S. context. The participant's strategies for negotiating career, family, and childbirth included: 1) the woman functioning as a "tied migrant;" 2) her partner functioning as a "tied migrant" or trailing spouse; or 3) entering into a long distance relationship where both partners pursued their careers separately. This study stresses the need to understand international women faculty's simultaneous balancing of their professional and personal lives within gender and cultural contexts influenced by pregnancy and the role of seniority within marriage.

Tamara Yakaboski, *University of Northern Colorado*

Elitism or Pragmatism? Faculty Hiring at Top Graduate Programs in Higher Education Administration

This study is an examination of the hiring practices of top-ranked higher education administration graduate programs in the United States. A total of 39 program coordinators, department heads, and/or deans were asked using qualitative methods to address the phenomenon of faculty hiring, including why a majority of top-ranked programs preferred hiring faculty who have doctorates from other top programs. One of the findings indicates that top-programs indeed hire them for very practical reason as identified in the study. Findings from this study should inform the decision-making of higher education program coordinators, department heads, and deans as they conduct faculty searches.

Sydney Freeman, Jr., *University of Idaho*
David DiRamio, *Auburn University*

Structuring for High Performance: A Case Study of Market-Based Faculty Work

Vicente M. Lechuga
Texas A&M University

> **Abstract:** *The need for higher education to be more responsive in meeting the growing needs of a global marketplace, while simultaneously becoming more efficient, necessitates a reexamination of faculty roles and responsibilities. Using data from a case study that examined faculty work through the conceptual framework of high performing organizations, the author considers how one for-profit university organizes faculty responsibilities and structures for "high performance." The author illustrates how the institution employs three interconnected strategies to develop and execute institutional goals and priorities that contribute to faculty performance within a market-based educational context.*

Introduction

Throughout the past decade and continuing to the present day, the emergence of a knowledge economy has shaped our higher education system; likewise, a focus on meeting the market-based needs of a global society has contributed to its continued expansion. Postsecondary enrollments increased by 32% between 1997-2007 (National Center for Education Statistics, 2009). While most of the enrollment growth, in real numbers, has occurred in the "traditional" higher education sector (i.e., the four thousand private non-profit and public colleges and universities), a closer examination by organizational type reveals that enrollment rates

Vicente M. Lechuga is an Associate Professor of Higher Education Administration in the Department of Educational Administration and Human Resource Development, College of Education and Human Development at Texas A&M University.

in the for-profit higher education sector have outpaced those at traditional non-profit institutions by a significant margin. For instance, between 2005-2008, enrollments at degree-granting for-profit institutions increased by 50% while enrollments at traditional institutions increased by only 14%" (National Center for Education Statistics, 2009).

Without question, for-profit colleges and universities (FPCUs) have come under increased scrutiny by Congress and the public alike. One need look no further than the numerous articles appearing in The *Chronicle of Higher Education*, *Inside Higher Ed,* and other media outlets almost on a daily basis to understand the issues facing the for-profit higher education sector. Reports by the Government Accountability Office (2010), U.S. Department of Education (2004), and inquiries by the U.S. Justice Department (Blumenstyk, 2007) have shed light on a number of questionable, and sometimes illegal, tactics FPCUs utilize to conduct business. Federal agencies have investigated high profile FPCUs, such as the University of Phoenix and DeVry for improprieties related to questionable hiring practices, recruiting violations, and misuse of financial aid monies. Nevertheless, the increasing number of regionally accredited degree-granting FPCUs continues to rise as they increase their share of overall student enrollments (National Center for Education Statistics, 2009). Put another way, FPCUs are no longer operating at the fringes of postsecondary education. As scholars contend (Breneman, 2006a; Tierney & Hentschke, 2008), for-profit institutions have established themselves as long-term players in the higher education landscape.

The intent of this article is to neither advocate for nor disparage for-profit colleges and universities. Rather, my purpose is to examine how one for-profit university structures and organizes faculty work within a profit-seeking educational context. More broadly, this article examines the implications for faculty work when revenue generation–whether through investors, students, contracts, and grants–becomes an overriding priority of an institution. In this case, the institution under examination is a for-profit university. In what follows, I present data from a case study of one for-profit university that I refer to as National Collegiate University or NCU (a pseudonym). Given the nature of FPCUs as market-based business enterprises, organizational activities partially center on the efficient use of human and financial resources to increase profit generation and foster organizational growth and expansion (Hentschke,

2010). My point is not to imply that the manner in which FPCUs structure faculty work is one that traditional colleges and universities (TCUs) should employ. I argue, instead, that the sector in which postsecondary institutions reside (non-profit vs. for-profit) provides a basis from which to structure institutional work activities in ways that contribute to a sector-based notion of "high performance."

To begin, I offer a brief context in which FPCUs reside and offer a perspective on faculty work at FPCUs. I summarize the literature on high performing organizations and highlight previous discussions regarding higher education's intent to increase institutional performance through efficiencies that, in part, revolve around faculty work. Finally, I offer a framework from which to consider how faculty work is structured for greater efficiency and productivity at one for-profit university, and discuss the implications for other postsecondary institutional types. I premise my argument on two assumptions. First, that faculty work reflects an institution's ideological principles and values about the function and purpose of higher education. And second, that the desire to create high performing colleges and universities ought to take into account how faculty work is structured and organized. As others have suggested, the need for higher education institutions to become high performing while responding to the needs of the global marketplace, and preparing citizens for participation in a democratic society, necessitates a reexamination of faculty roles and responsibilities (O'Meara & Rice, 2005; Rice, 2006).

Literature Review

The Dual Roles of For-Profit Institutions

The extraordinary growth of the for-profit higher education sector can be attributed, in part, to their focus on offering consumer-valued "products and services" and skills-based education. Coupled with increasing student enrollments, FPCUs have dramatically increased their share of the multi-billion dollar U.S. higher education market over the past three decades (Tierney & Hentschke, 2008). For-profit colleges and universities are bifurcated by nature, that is, they function in both the realm of (profit-seeking) business and industry and in the (non-profit) traditional higher education arena. Moreover, as profit-seeking institutions, FPCUs strive to meet the needs of three sets of constituencies: 1) students seeking the requisite skills to be successful in

the job market, 2) employers and businesses seeking to employ well-qualified individuals, and 3) institutional owners/investors seeking a return on investment. Like other proprietary business enterprises, FPCUs seek profitability by developing approaches to organizational management that focus on maximizing institutional resources to increase efficiencies and performance. They consider loose coupling (Birnbaum, 1988; Cohen & March, 1974; Weick, 1979) to be counterproductive to profit generation (Lechuga, 2006) and see that it hampers their ability to function as "high performing," i.e., the ability to be responsive to the demands of students, employers, and investors (Lechuga, 2008; Ruch, 2001; Tierney & Hentschke, 2008).

Faculty Work at FPCUs

The literature on faculty work life at for-profit institutions is sparse. Nevertheless, a brief discussion about the roles and responsibilities of faculty members at FPCUs is warranted.   Faculty work-life differs by institution (Breneman, 2006b, Lechuga, 2006.) and involvement in curriculum developments. Two primary misnomers about faculty work at such institutions exist and are worth some focus. The first is that faculty members are primarily part-time employees. This may be true for the most visible institutions such as the University of Phoenix and Walden University, but many of the institutions with relatively lower student enrollments–two-year and less than two-year colleges–at times employ a greater number of full-time rather than part-time faculty (Lechuga, 2008). Curricular offerings differ by institution and can influence the type of faculty FPCUs employ (Tierney & Hentschke, 2008). Nonetheless, FPCUs as a whole generally hire faculty with professional field experience in the subject areas in which they teach (Lechuga, 2008).

The second misnomer regarding faculty work at for-profits is that they have relatively little input with regard to the curriculum and teach from "course syllabi [that] are centrally produced [and] effectively franchised-the 'McEducation' of criticism" (Breneman, 2006b, p. 82). While this is true at the most visible institutions with large student enrollments, faculty employed by institutions such as the University of Phoenix have some input into course development. As Breneman (2006b) states,

> Course syllabi are produced collectively, with input from
> individual instructors as well as full-time faculty in each

> [subject] area. . . . Once adopted, experienced faculty members
> are free to deviate and customize a course to some degree,
> providing they can demonstrate that the students are covering the
> material prescribed for the course. (p. 82)

For example, at the University of Phoenix, new faculty are provided with
the prescribed course syllabus, course materials and guides from which
to use for their course. Once they have established themselves as
competent instructors, they have some leeway in making changes to the
course.

Moreover, the generalization that faculty have no input regarding the
curriculum is exaggerated. The faculty at the majority of FPCUs often
develop their own courses; such courses are then subject to approval by a
chief academic officer and an accreditation specialist for new programs
(Lechuga, 2006). Given that faculty members at tradition colleges and
universities are accustomed to creating their own courses and utilizing
course materials of their choosing, the criticism of FPCUs regarding
development of the curriculum has implications for academic freedom.
Since FPCUs do not concern themselves with research, however, those at
for-profits consider academic freedom to be somewhat irrelevant
(Lechuga, 2008; Tierney & Hentschke, 2008). This perspective, in part,
is what allows FPCUs to be more agile and high performing.

High Performing Organizations

The notion of high performing organizations (HPOs) is not new to
scholars in business and management disciplines; its underlying
principles are also familiar to many organizational theorists in higher
education. Over the past three decades, scholars have defined high
performance in numerous ways and have provided various theoretical
approaches to understand the relationship between institutional structure
and performance. Measuring organizational performance is, without a
doubt, challenging. Scholars have defined HPOs using various sets of
organizational indicators or traits as a basis for measuring performance
(Child, 1972; McKenna, 2002; Staw, McKechnie, & Peffer, 1983).
Indicators can include the structure of organizational activities, the
concentration of authority, the control of workflow, and the size of
support components, e.g., support staff (Pugh, Hickson, Hinings, &
Turner, 1968). Financial and non-financial indicators also can contribute
to the performance of an organization (Reimann, 1974). Although trait

approaches to understanding high performance are valuable, it is important to recognize that the sole use of "success" indicators to measure performance assumes that organizations are similar in nature (Dennison, 1984) and are rational entities that are able to meet a similar set of goals (Pfeffer, 1981). A reliance on traits and characteristics also fails to consider the fluid nature that exists between the external environment and internal dynamics of an organization (e.g., fluctuations in the job market, needs of employers, and/or managerial philosophies). External market forces, legislative and accreditation barriers, and the needs of employers are key to understanding the paradigm from which FPCUs operate, which includes the parameters of faculty work.

An alternate approach from which to consider high performance is to view organizations as fluid and complex entities that are often difficult to characterize. Numerous scholars have examined specific organizational characteristics in conjunction with cultural components to gain a more comprehensive understanding of operational modes (Akin & Hopelain, 1986; Deal & Kennedy, 1982; McKenna, 2002; Saffold, 1988; Vaill, 1984). Examining aspects of both product and process can contribute to complex insights regarding organizational performance (Bolman & Deal, 1997). For example, Rummler and Brache (1990) argue that many organizations fail to perform well when their structure does not provide a clear understanding about the ways individuals should interact to accomplish organizational goals or when they structure activities in ways that isolate individuals.

Higher Education Institutions as HPOs

In discussing the notion of high performing colleges and universities, I propose that what is most important for understanding how one defines "high performance" is the *context* in which the definition resides. Characterizing postsecondary institutions as "efficient and productive" (i.e., high performing) necessitates researchers to examine particular organizational aspects while taking into account institutional norms and values specific to institutional type. For instance, the manner in which FPCUs define high performance differs from TCUs because each institutional type functions in different contexts, each with their own norms, practices, and values. Tierney (1998) defines high performance in higher education as an institution's ability to restructure its core activities and reconsider traditional notions of academe–more specifically the tenure system and the activities associated with faculty

work-to better serve the broader needs of society. Drawing upon the notion of learning organizations (Senge, 1990) and reengineering (Hammer & Champy, 1993), Tierney (1998) urges scholars to explore new ways of responding to the current challenges facing higher education.

Similarly, Chaffee (1998) takes an approach that focuses on restructuring colleges and universities to meet the needs of a specific constituency (i.e., students). In asking institutions to reconsider the people they serve, Chaffee (1998) argues that the "student as customer" perspective allows institutions to better align their missions and goals to improve service to their students. Her arguments are not framed from the perspective that universities should acquiesce to student demands. Instead, she introduces the notion of the caring university–one that is more astute in responding to the new needs of students and society. Emphasizing this idea within the context of faculty work, she states, "[A caring university] knows and intervenes if a field is changing faster than the faculty and courses are changing" (Chaffee, 1998, p. 36). While acknowledging that taking such steps would be challenging, she asserts that her examples "are nothing more than the ultimate outcome of a university that increasingly knows and values both the internal and external customers it serves" (Chaffee, 1998, p. 36). The author contends that colleges and universities who understand their customers and recognize their needs are able to operate in ways that meet those needs.

A discussion regarding the structuring of faculty work for high performance should take into account the norms of the institutions, the various internal dynamics, and the external forces that influence how faculty members do their work. Organizing faculty work at FPCUs for high performance, defined here as *work activities structured to maximize faculty productivity to best serve the needs of students, employers, and institutional owners/investors*, ought to consider the mission and goals of the organization, the context in which the institution resides, and the needs of various constituencies.

Methodology

Data Collection

Data presented here were taken from a comprehensive study that utilized a qualitative case study methodology to explore faculty work and faculty culture at four for-profit colleges and universities, one of which I will present here. I conducted semi-structured interviews lasting between 60-90 minutes; this served as the primary data collection mode. Interview questions focused on understanding faculty roles and responsibilities in addition to organizational practices that influenced faculty work life. A semi-structured interview format was chosen because of the exploratory nature of this study, which allowed for variations in participants' responses (Patton, 1990). Follow-up interviews with several participants subsequently took place by phone or through e-mail communications. All interviews were audio recorded and transcribed for analysis. Ancillary data were taken from publicly available and/or legally obtained sources, such as company documents, Security and Exchange Commission filings, institutional self-studies, and accreditation reports. As is the nature of qualitative inquiry, findings are not representative of all participants.

Participants

Fifteen faculty members participated in this particular case study and were employed by an on-ground, satellite campus of National Collegiate University (NCU). I selected faculty members with the assistance and approval of the campus president. The president provided me with a list of potential participants and their contact information. Snowball sampling (McMillan & Schumacher, 2001), in which participants helped to identify other faculty that would be beneficial to my study, was also utilized. Participants included seven part-time instructors and eight full-time faculty members' disciplines that represented the fields in which the largest number of bachelor's degrees were awarded at FPCUs (National Center for Postsecondary Statistics, 2009). Five faculty members held doctorates and the remaining ten held master's degrees. Only faculty members who taught in academic degree programs that led either to a Bachelors, Masters, or Doctoral degree were interviewed. Table 1 provides a general overview of the faculty participants by employment status, fields of expertise, and highest degrees held. Note that two of the

faculty participants taught courses that focused on general education requirements, such as English composition, literature, and philosophy. Also, note that NCU refers to full-time faculty as *core* faculty whereas part-time faculty are identified as *practitioner* faculty.

Table 1. Distribution of NCU Faculty by Academic Discipline and Employment Status

Discipline	Core Faculty	Practitioner-Faculty	Highest Degrees Held
Business	2	1	Doctorate (2) Masters (1)
Education	1	1	Doctorate (1*) Masters (1)
Information Technology/ Communications	1	2	Masters (3)
Health Sciences	1	1	Doctorate (1*) Masters (1)
Psychology	1	2	Doctorate (1+1*) Masters (1)
General Education	1	1	Masters (1) Doctorate (1)
Totals	7	8	Doctorate (7) Masters (8)

Note. *Designates doctoral degrees in-progress when interviewed with anticipated completion within 12 months

Analysis

Data were first subjected to a line-by-line analysis to facilitate the initial coding process and were subsequently grouped into broad categories that would serve as the basis for the development of themes (Lincoln & Guba, 1989). I utilized an interpretive approach during data analyses to develop an innate understanding of the social setting of the NCU, and based study findings on the events, accounts, actions, and experiences of participants (Denzin & Lincoln, 2005). An interpretive approach allows for social actors, in this case faculty members, to be actively involved in

the study by furnishing evidence through their own interpretations or meanings of their social environment; each participant made meaning of her and his world based on personal experiences. Implicit in this approach is the belief that the social actors are continuously interpreting their social environment. My job as a researcher was to understand how faculty members created meaning of their everyday experiences and to provide social science explanations to those experiences.

Data first were analyzed using line-by-line analysis and open coding to reflect the numerous issues and topics of which participants spoke. For this particular case study, 37 codes were initially established. Axial coding (Strauss & Corbin, 1998), a coding system in which the researcher analyzes causal relationships between the initial codes and groups them into categories, was used to develop 12 broad categories based on similarities across the initial codes. After grouping data into categories, I focused on refining and collapsing the categories into six topical themes through a selective coding process. Selective coding involves identifying core categories and systematically relating them to other categories (Glaser & Strauss, 1967). The aforementioned coding processes are usually associated with a grounded theory approach (Glaser & Strauss, 1967, Strauss & Corbin, 1998). However, data analysis for this study derived core categories during the selective coding process using the conceptual framework of high performing organizations. Seven categories emerged, which included such examples as "efficient practices," "surveying the market," "employer-involvement," and the like. Finally, I collapsed data further into the final three conceptual level themes (Huberman & Miles, 2002) – 1) Unit Collaboration; 2) Networked Communication; and 3) Ideological Consensus.

Triangulation and Trustworthiness

I ensured the credibility and trustworthiness (Lincoln & Guba, 1989) of the data by reviewing multiple data sources. These included institutional self-studies, marketing materials, and other publicly available documents. The data sources aided in the triangulation process, which allowed me to "examine conclusions (assertions, claims, etc.) from more than one vantage point" (Schwandt, 2001, p. 257) and to make certain that findings were "worth paying attention to" (Lincoln & Guba, 1989, p. 290). Periodic rechecking with participants during and after an interview

helped assure that data was not misread. By leaving the lines of communication open between the participants and myself, I was able to address inconsistencies that arose during subsequent interviews. This type of procedure helped ensure that the conclusions were believable and communicable to readers.

I utilized member checks (Lincoln & Guba, 1989) which provided participants the opportunity to view and edit their interview transcriptions. Additionally after all interviews had taken place, faculty were provided with study findings in order to provide feedback and increase the credibility of the data. *Peer-debriefing* provided me an opportunity to share my findings with a peer researcher familiar with the study. This peer offered comments and suggestions on how to improve the study. An *external audit* also was conducted, in which a completed draft was submitted to a researcher unfamiliar to me and to the topic, to provide an unbiased perspective of the research study. I incorporated the feedback from the external auditor to more clearly articulate the arguments I set forth in this text. Finally, I evaluated data across interviews to confirm that it was not misread (Mason, 1996; Merriam, 1998).

Findings

As previously mentioned, high performing organizations are characterized not only by financial indicators but also by their ability to be responsive to their changing environments (Chaffee, 1998). In the case of NCU, findings focus on how NCU defined and organized faculty work to foster high performance within the context of for-profit higher education. Three major themes emerged from the data analysis: 1) Unit collaboration, 2) Networked communication, and 3) Ideological consensus. After exploring each theme, I conclude by discussing how scholars might consider ways that TCUs can structure faculty work to be high performing without compromising the fundamental principles of academe, i.e., academic freedom, shared governance, and faculty autonomy.

Unit Collaboration

Participants viewed themselves as working in a distinct, yet coordinated
unit or team. The method used to create new academic programs
illustrates this notion. Developing a new degree program requires
coordinated planning by various organizational units to identify several
factors up front; institutional units are in parenthesis. They included
market demand (market research teams), budgetary needs (financial
administrators), course content (faculty and program advisory boards),
and student interest (marketing team and academic administrators).
Rather than delegating curriculum development activities solely to
individual faculty members, a number of organizational units from
within the institution engaged in the process. Each unit played a
different role with a specific function during the process. A part-time
faculty member explained, "We have programs, we have a number of
teams, each college has a [national] dean, and associate deans, and a
small administrative staff that surrounds that dean. The dean's [job] is to
enhance a number of degree programs" by working with teams made up
of different units from throughout the organization.

Organizational units extended beyond the institution's borders to external
constituencies in the form of external program advisory boards, usually
consisting of employers. A part-time faculty member in business
explained, "When you get to the major courses or the programs of study,
the faculty drive the [curriculum development], but they consult with
their advisory board…with those professionals who are out working in
the field to find out what we should be doing." He continued, "We have
an advisory board for childcare [program], for the optometry technician
program, etc."

Faculty participants considered themselves a unit and viewed
collaborating with other units as teamwork. For instance, a full-time
faculty member from education explained, "We truly do work as a team
in our college. It's cool, you know, because I come from a K-12, the
traditional academic world, and it's not the same." When discussing
why she enjoyed working for NCU she stated, "There's this huge
collaboration and, truly, the people that work there [keep] me there."
Another part-time faculty participant spoke of the collaboration and
exchange that also occurred within the faculty unit: "We will have a
drawer in the faculty file cabinet where I will pop in PowerPoint slides,

I've done this for a particular class, and if anybody wants to use them they don't have to ask. Most of us are very un-proprietary [sic] with our stuff." An informant summarized the idea of "faculty as a unit" by simply stating, "It's just collegial sharing that goes on."

On the one hand, being employed by an FPCU compromises faculty autonomy and decision-making authority (Lechuga, 2006; Ruch, 2001), but only from the perspective of tenured or tenure-track faculty members employed at TCUs. On the other hand, there is an alternative educational paradigm at play; one in which work is organized around units, resulting in a reduction of individual autonomy yet allowing for tighter coupling across the institution. Put another way, less autonomy leads to increased coordination of activities within and across organizational units. Furthermore, the manner in which NCU organizes work roles requires a system of communication that enhances intra-organizational performance activities.

Networked Communication

Integral to NCU's (National Collegiate University's) high performance is the notion of an *information interdependency* between different units of the organization. Vertical and lateral distribution of information is required for institutional planning purposes, which fosters alignment of work activities between organizational units and across the institution as a whole. No single unit was responsible for gathering all the necessary information. Instead, units worked together to consider the various data points and determine the best course of action. As a full-time faculty member and program chair explained:

> [NCU] does marketing studies in the area, and [makes] contacts with both potential students and businesses. Then [they] determine what is needed for the community, and generally something will or will not be offered based basically on the idea of whether it is going to fly or not.

As a revenue-centered organization, NCU dedicates a relatively large amount of human and financial capital to identify specific "in-demand" employment areas and to determine their revenue generating potential. One informant discussed how "the [research department] has their

websites and whatever, and there's a whole research team to figure out what is the best market."

The research department distributed their data to central administrators who assembled curriculum development teams from branch campuses throughout the country to create courses and programs that meet the needs of students and employers. A program chair described the process:

> I will receive a phone call from the [national level] associate dean, who says, "we are teaming this particular course, who do you think from your campus can make a valuable contribution?". ... So, I'll prepare a list, a short list of those [faculty] that I think, you know, that know the course. They're experts.

Faculty members, including part-time instructors, are sought out by national-level deans with the assistance of branch campus VPs and program heads to participate in activities where their expertise is valuable.

The aforementioned external program advisory boards were also part of the communication network. They provided valuable input at the national level, which is then used by curriculum development teams. "All of the colleges have an advisory board staffed by representatives of the fortune 500 companies and some smaller ones as well." The advisory boards participate in focus groups. As a full-time faculty participant explained, "The meaning in our program and the deliverables in our program are set by a focus group that is put together by the dean and the curriculum development team and they put together a career path for the particular program that meets the needs of the employers for graduates." The curriculum development teams then "debrief the focus groups" and utilize that information to develop courses and programs.

Given the corporate nature of NCU, hierarchical decision-making was the norm; yet, participants commented that faculty input was welcomed at all levels. Faculty members expressed satisfaction with the accessibility and receptiveness of senior administrators to hear ideas about new courses or potential changes to existing courses. "I can go right to my national dean and say 'I've got this crazy idea' and she'd say, 'Let's hear it.' So there's an open line of communication." Given that faculty possess professional expertise in a given field; participants felt

comfortable offering ideas not only to their immediate supervisors but also to curriculum development specialists and deans at the highest levels of the institution.

By networking communication channels across the organization, NCU was able to foster high performance through unit interdependency. A networked communication system provided the necessary components to cultivate and increase organizational performance–a concept that is aligned with Meyer's (2007) perspective on effective organizational performance. However, the notion of networked communication had its downsides. Participants were reluctant, at times, about the manner in which NCU made academically based decisions. For instance, a number of participants displayed mixed attitudes about a decision-making process in which input from non-academic units helped determine decisions based, in part, on profit generation. One informant summarized the beliefs of others. He asserted:

> There are many different people looking at [the curriculum], and in the end, it's truly a business decision. What is the likelihood of this program or degree will be profitable? That's what it comes down to. How much are we ready to invest to get to the point of profit building?

To be clear, I maintain there are inherent problems associated with non-academics having decision-making authority over academic issues. However, I leave that discussion for another time. Instead, my intent is to demonstrate how NCU utilizes a model that, for better or worse, fosters communication between organizational units (e.g., faculty, external advisory boards, and research and marketing departments). Moreover, networked communication and unit collaboration were most effective when members of the institution share similar beliefs about the aims of postsecondary education.

Ideological Consensus

NCU developed an educational paradigm with clearly defined goals and objectives aimed at providing students with practical knowledge and applicable skills, supplying the market with well-trained employees, and generating returns for shareholders. NCU's mission statement clearly articulated its ideological perspective about the function and purpose of

postsecondary education. To paraphrase, NCU's mission focuses on the development of knowledge and skills that enable students to remain relevant in a fluctuating job market. Moreover, the institution's two main purposes are: 1) to structure as a proprietary organization to facilitate innovation and 2) to generate profits to help support the institution's mission. Faculty were not only cognizant of their organization's mission and educational goals, but in many instances revealed similar ideological sentiments about the purpose of a postsecondary education. This collective ideological perspective about the purpose of a NCU served as a foundation for networked communication and unit collaboration. For instance, since one purpose of an NCU education is to provide practical knowledge there was a general consensus that faculty members should be employed full-time in the areas in which they teach. "In order to become a faculty member here you have to be full time employed in the area in which you teach…we want practitioner faculty that bring to the classroom real world experience. We look for people that do it for a living not the unemployed trying to make their rent." A full-time business faculty participant provided an example, "Pick a discipline. If you're a finance person and you work in the finance industry…You might be a business analyst or you might be a CFO…I can pretty much expect that you're worthy for an interview." When asked whether faculty were required to have teaching experience prior to being hired, an informant explained, "It's not as important. It's great, but sometimes it's not….We can teach them how to teach."

Faculty generally agreed with the notion that a major objective of higher education is to provide students with skills to realize their career objectives. "One of the most fun things is working on the curriculum [team] because to me it's a real challenge to get a curriculum that really meets the students' needs." Faculty participants as a whole, including those who had retired from teaching posts at TCUs, viewed NCU's educational philosophy of focusing on market demands as both practical and intelligent. "I think the whole question of how market research fits into the programs you are going to add is big, and clearly, probably no institution should start a program today without some idea [of what] that demand is for." Another faculty member in education expressed a similar sentiment by simply stating, "Somehow, you have to be in touch with the education world." Being responsive to student and market

needs and ensuring that curricula are relevant allows the institution to remain profitable and high performing.

Data from participants also illustrated collective support for the unbundling of faculty work. Part-time faculty were contracted by semester or course session and receive little to no benefits–a cost saving mechanism that has become standard practice at many TCUs. Not surprisingly, part-time faculty responsibilities were unbundled and lay in discrete domains that include classroom instruction, course development, or new faculty training, among others.

Participants expressed satisfaction with regard to the notion of unbundled faculty responsibilities stating that such an approach was beneficial because it provided job security to faculty who were unable to teach for an extended time-period. "We're paid by assignment, and at any time we could refuse any assignment for a while, but we'd still belong [to] the faculty." Another described the unbundling of faculty work as an innovative way to approach instructional responsibilities:

> … [faculty] take their [work] load depending on their own time and energy. Faculty members at NCU get paid by the number of students they have. They get paid every quarter for advising students. They get paid for every committee assignment they accept. They get paid to be a member of a dissertation committee. They get paid in piecework. It is exactly piecework, which is a rather entrepreneurial way to approach all of this.

NCU's approach to organizing responsibilities by discrete assignments provided faculty members with a clear sense of where one activity ends and another begins and served as a mechanism to maintain organizational efficiencies.

To be clear, my intention was not to portray participants as a monolithic group of faculty with similar values. Indeed, prior findings (Lechuga 2006, 2008) illustrate the varying degrees of concern about the potential for ethical dilemmas related to the co-mingling of education and profit. NCU participants expressed mixed sentiments about particular detrimental effects related to linking revenue generation with postsecondary education. A participant asserted that corporate executives ultimately decide whether or not to invest in academic

programs by asking "How much are we willing to invest to get to the point of profit building?" Tensions between academic and corporate divisions did exist. However, my point here is to illustrate that a shared ideological perspective about the purpose of an NCU education partially served as a basis for efficient institutional performance.

Analysis and Discussion

NCU's educational priorities focused on providing students with the requisite skills that meet employers' needs. Market research allowed for efficient use of financial resources pertaining to program development and retrenchment and the needs of businesses and employers. Consequently, institutional goals and marketplace needs were inextricably linked and reflected how instructional roles were structured and organized. Faculty work was the result of the three interconnected strategies that work together to meet *institutional goals and priorities*, creating the conditions for high performance. I argued that unit collaboration, networked communication, and ideological consensus were important elements that contributed to the ways in which NCU *developed and executed* its organizational activities to provide *market-based teaching and learning* opportunities to its students in an efficient and productive manner.

Findings illustrated that NCU's communication strategy provided the institution with numerous data points before making a final decision pertaining to the development [or discontinuation] of courses and programs. NCU drews transparent lines of authority; however, participants' remarks illustrated two important aspects of organizational functioning. First, unlike traditional hierarchical organizations, communication at NCU was multi-directional. Directives, such as new ideas for courses, could flow upward from faculty to senior level administrators or downward from central administration to curriculum development teams and finally to instructors. Second, distribution of information between different organizational teams fostered effective communication lines between various internal and external units of the organization. Furthermore, a collective understanding of how the organization functions fostered a clearer understanding of institutional mission and goals.

Scholars have argued that organizations will not perform effectively when they do not foster group interaction or promote a shared vision across organizational units. For example, Meyer (2007) asserted that the use of teams fosters high levels of performance by focusing team efforts on creating synergy between organizational units. Moreover, the most successful cases suggested that a shared vision across teams provided the basis for creating organizational synergy. Mohrman, Cohen, and Mohrman (1995) contended that in order for team-based organizations to function productively, "information regarding the bigger picture– information regarding how the various parts [of the organization] fit together–must be widely held throughout the organization" (p. 182, brackets added). Similarly, Senge (1990) argued that organizational teams built around a shared vision are able "to create the results its members truly desire" (p. 218).

Tierney (2008) posited that traditional colleges and universities were ideological entities where members engage their values, beliefs, and expectations in their work. Yet, the purpose of a postsecondary education often is debated within the context of traditional colleges and universities. Faculty at TCUs cannot be expected to hold similar values and beliefs, especially with regard to the role of higher education in society. With regard to ideological consensus at NCU, faculty members interviewed for this study placed a high value on the needs of the market and did not view this focus as potentially detrimental to students and the public good. Participants generally regarded higher education as an individual benefit. As the most visible unit of the organization, NCU faculty, along with their work responsibilities, personified the institution's ideological and paradigmatic perspectives.

For-profit institutions function in a market-based arena, which serve as the basis for their ideological perspectives on the roles and responsibilities of their faculty. For instance, NCU did not offer tenure and was neither research-oriented nor, from an ideological perspective, concerned with fostering democratic principles for informed citizenship. Similarly, the unbundling of work responsibilities was a cost-saving mechanism that enabled, rather than hindered, group collaboration and provided faculty with role clarity. The nature of faculty roles as delimited and bounded gave rise to collaborative efforts between and amongst faculty and other units throughout the organization, such as the sharing of course notes and other materials, and the development of

curricula. Critics of FPCUs contended that the unbundling of faculty work leads to greater administrative authority by reducing the number of tenured/tenure-track positions while creating a second-class and marginalized group of faculty members (Rhoades, 1998; Schuster & Finkelstein, 2006). Such criticisms, however, are based on 'traditional' notions of faculty work at TCUs not FPCUs.

Findings also illustrated that NCU's communication strategy provided the institution with numerous data points before making a final decision pertaining to the development [or discontinuation] of courses and programs. NCU drew transparent lines of authority; however, participants' remarks illustrated two important aspects of organizational functioning. First, unlike traditional hierarchical organizations, communication at NCU was multi-directional. Directives, such as new ideas for courses, could flow upward from faculty to senior level administrators or downward from central administration to curriculum development teams and finally to instructors. Second, distribution of information between different organizational teams fostered effective communication lines between various internal and external units of the organization. Furthermore, a collective understanding of how the organization functions fostered a clearer understanding of institutional mission and goals. I offer a model (See Figure 1) that broadly illustrates the manner in which faculty work is structured and organized for high performance at NCU.

Organizing for performance requires colleges and universities to reconsider how fundamental activities are structured and organized. As Tierney (1998) asserted, "[colleges and universities] need to rethink, and of consequence, restructure what we do. Change ought not come from around the edges, but rather go to some of our core activities" (p. 3). In addition, he challenged academe to "think of different ways to think about academic rewards and activities" (p. 3). Faculty work at NCU was a function of organizational strategies meant to maximize organizational efficiency and increase performance within the context of the proprietary higher education sector. In accordance with Rummler and Brache's (1990) assertion, for example, NCU can be viewed as high performing, in part, because it provided a clear understanding about the ways faculty interact with other units (i.e., administrators and external program boards) to accomplish institutional goals. As a result, NCU utilized and deployed faculty members in a unique manner given that their

Figure 1. A Strategic Approach to Organizing for High Performance

Educational Goals and Priorities

Collective Ideology

High Performing Faculty

Unit Collaboration

Networked Communication

Execution and Implementation

Planning and Development

High Performance

institutional goals are linked to profit generation, e.g., efficiency, productivity, and high performance. Thus, supporting Townsend and Rosser's (2007) findings that faculty productivity may be best defined in accordance with institution type – in this case FPCUs. Accordingly, faculty work is responsive only if it meets the needs of its constituents, regardless of institutional type. A shortcoming is that NCU faculty

relinquished autonomy in exchange for collaborative operational strategies (course consistency, uniform learning objectives, etc.) established to generate a profit.

Implications and Conclusion

To be sure, I do not intend to suggest that the core values of the professoriate–tenure, academic freedom, and the unfettered pursuit of knowledge–be altered at TCUs to foster high performance. Instead, I offer a perspective of high performance based upon a case study of one for-profit institution-a model from which traditional colleges and universities can draw upon to consider ways in which faculty work can be organized to best serve the needs of their specific constituents within the context of traditional public and non-profit higher education. The creation and dissemination of knowledge must remain a fundamental principle of the academy. Yet, scholars argue that "new ways of reintegrating that which we have known in the past as faculty work will need to be developed" (Rice, 2006, p. 12). Moreover, "getting faculty to change the way they think about their work–moving from an individualistic approach ("my work") to a more collaborative approach ("our work")–is a critical transition that challenges deeply rooted professional assumptions" (Rice, 2006. p. 12).

This reflection echoes Fairweather's (2002) suggestion to view productivity as best accomplished by faculty members working in units rather than as isolated individuals who are trying to be productive in all areas. The notion of the "complete scholar" (Rice, 1991) as one who is a skilled researcher, an outstanding instructor, and an individual who contributes greatly to the overall welfare of their university and scholarly community is a misnomer (Fairweather, 2002). Although there are exceptions, the ability for faculty to perform high in all three areas is arduous at best and impossible at worst. In its current form, faculty work at traditional private non-profit and public institutions compels faculty to focus their efforts on that which is rewarded most. As the literature suggests, faculty members are overworked because of their vigorous efforts to fulfill their teaching, research, and service responsibilities (Rice, Sorcinelli, & Austin, 2000).

I base the notion of high performance on the idea that increasing organizational efficiencies within the context of either for-profit or

traditional higher education arenas fosters greater productivity. Yet, how one defines "efficient" is dependent on institutional context. Structuring faculty work to be responsive to the needs of both internal and external constituencies at an FPCU is, in part, what differentiates them from TCUs. A fundamental component that contributes to NCU's ability to be high performing is their focus on being responsive to marketplace needs. NCU and FPCUs in general, have redefined what it means to be a higher education institution. Scholars continue to debate the extent to which for-profit institutions serve the public good (Pusser, 2006; Tierney, 2010). Nevertheless, FPCUs such as NCU play a role in providing a well-trained workforce that serves the needs of an ever-changing job market. Ewell (1999) maintains that recognizing the changing nature of the public's educational demands is critical for achieving high performing colleges and universities. Not unlike many community college programs, NCU focuses on workforce education and the development of human capital to serve societal needs. Its operational modes redefine the conventional notion of faculty work as teaching, research, and service, into one in which instructional functions dominate, work responsibilities are chosen not predetermined, and research responsibilities are nil.

Some similarities may exist with regard to the mission and goals of traditional institutions and those of NCU. The major difference between the two institutional types lies in the manner in which faculty members are deployed and utilized. TCUs structure faculty work as an individual endeavor–tenure is awarded based on an evaluation of an individual's accomplishments–whereas faculty members at NCU function as one of a number of collaborative units. Despite their profit-seeking motives, FPCUs have the potential to produce an educated citizenry that is able to contribute economically to the public good (Pusser, 2006; Ruch, 2001; Tierney & Hentschke, 2008).

Scholars argue that restructuring the core activities of higher education institutions, including faculty work, may better serve the needs of students and the public (Chaffee, 1998; Fairweather, 2002; Rice, 2006). Many offer suggestions on how to utilize scarce financial resources more efficiently and productively (Fairweather, 2002; Johnstone, 2005; Tierney, 1998). Johnstone (2005) asserts that an important "issue within the financing of higher education [relates to] the efficiencies in which resources are employed in the higher education enterprise, and their

productivity" (p. 375). Faculty instruction is the single largest institutional expenditure; these costs will continue to rise as the college-going population increases. NCU along with numerous for-profit colleges and universities draws upon an education paradigm that focuses on ways to structure organizational activities in a manner that increases instructional efficiencies while effectively serving the needs of the market and maintains their commitment to skills-based and market-driven learning and instruction.

References

Akin, G., & Hopelain, D. (1986). Finding the culture of productivity. *Organizational Dynamics*, *7*(2), 19-32. doi:10.1016/0090-2616(86)90029-X

Birnbaum, R. (1988). *How colleges work: The cybernetics of academic organization and leadership*. San Francisco, CA: Jossey-Bass Publishers.

Blumenstyk, G. (2007, April 23). Justice department drops 1 of 2 probes of Career Education Corporation. *The Chronicle of Higher Education*, p. A1. Retrieved from http://www.chronicle.com

Bolman, L. G., & Deal, T. (1997). *Reframing organizations: Artistry, choice, and leadership*. San Francisco, CA: Jossey-Bass Publishers.

Breneman, D. W. (2006a). Introduction. In D.W. Breneman, B. Pusser, & S.E. Turner (Eds.), *Earnings from learning: The rise of for-profit universities* (pp. ix-xv). Albany, NY: SUNY Press.

Breneman, D. W. (2006b). The University of Phoenix: Icon of for-profit education. In D.W. Breneman, B. Pusser, & S.E. Turner (Eds.), *Earnings from learning: The rise of for-profit universities* (pp. 71-92). Albany, NY: SUNY Press.

Chaffee, E. E. (1998). Listening to the people we serve. In W. G. Tierney (Ed.), *The responsive university: Restructuring for high performance* (pp. 13-37). Baltimore, MD: Johns Hopkins University Press.

Child, J. (1972). Organization structure and strategies of control: A replication of the Aston study. *Administrative Science Quarterly*, *17*(2), 163-177. Retrieved from http://www.jstor.org/stable/2393951

Cohen, M. D., & March, J.G. (1974). Leadership in an organized anarchy. In M.D. Cohen & J.G. March (Eds.), *Leadership and ambiguity: The American college president* (pp. 195-229). New York, NY: McGraw-Hill.

Deal, T. E., & Kennedy, A. A. (1982). *Corporate cultures: The rites and rituals of corporate life*. Reading, MA: Addison-Wesley Publishing Company.

Dennison, D. (1984). Bringing corporate culture to the bottom line. *Organizational Dynamics*, *13*(2), 5-22. doi:10.1016/0090-2616(84)90015-9

Denzin, N. K., & Lincoln, Y. S. (2005). *The Sage handbook of qualitative research* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Ewell, P. T. (1999). Achieving high performance: The policy dimension. In W. G. Tierney (Ed.), *The responsive university: Restructuring for high performance* (pp. 120-161). Baltimore, MD: Johns Hopkins University Press.

Fairweather, J. S. (2002). The mythologies of faculty productivity: Implications for institutional policy and decision making. *The Journal of Higher Education, 73*(1), 26-48. Retrieved from http://www.jstor.org/stable/1558446

Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory*. Chicago. IL: Aldine.

Government Accountability Office. (2010). *For-profit colleges: Undercover testing finds colleges encouraged fraud and engaged in deceptive and questionable marketing practices* (GAO-10-948T). Washington, DC: Author.

Hammer, M., & Champy, J. (1993). *Reengineering the corporation: A manifesto for business revolution.* New York, NY: Harper-Collins.

Hentschke, G. C. (2010). Evolving markets of for-profit higher education. In G. C. Hentschke, V. M. Lechuga, & W. G. Tierney (Eds.), *For-profit colleges and universities: Their markets, regulation, performance, and place in higher education* (pp. 23-45). Sterling, VA: Stylus.

Huberman, A. M., & Miles, M. B. (2002). *The qualitative researcher's companion.* Thousand Oaks, CA: Sage Publications.

Johnstone, D. B. (2005). Financing higher education: Who should pay? In P. G. Altbach, R. O. Berdahl, & P. J. Gumport (Eds.), *American higher education in the twenty-first century: Social, political, and economic challenges* (pp. 369-392). Baltimore, MD: Johns Hopkins University Press.

Lechuga, V. M. (2006). *The changing landscape of the academic profession: The culture of faculty at for-profit colleges and universities*. New York, NY: Routledge.

Lechuga, V. M. (2008). Assessment, knowledge, and customer service: Contextualizing faculty work at for-profit colleges and universities. *Review of Higher Education, 31*(3), 287-307.

Lincoln, Y. S., & Guba, E. (1989). *Naturalistic inquiry.* Beverly Hills, CA: Sage Publications.

Mason, J. (1996). *Qualitative researching.* Thousand Oaks, CA: Sage Publications.

McKenna, S. (2002). Can knowledge of the characteristics of "high performers" be generalized? *The Journal of Management Development, 21* (9), 680-701. doi: 10.1108/02621710210441676

McMillan, J. H., & Schumacher, S. (2001). *Research in education* (5th ed.). New York, NY: Longman.

Merriam, S. B. (1998). *Qualitative research and case study applications in education.* San Francisco, CA: Jossey-Bass.

Meyer, C. (2007). *Fast cycle time: How to align purpose, strategy, and structure for speed.* New York, NY: Free Press.

Mohrman, S. A., Cohen, S. G., & Mohrman, A. M., Jr. (1995). *Designing team-based organizations: New forms for knowledge work*. San Francisco, CA: Jossey-Bass.

National Center for Education Statistics. (2009). *Digest of education statistics, 2008*. Washington, DC: U.S. Department of Education.

O'Meara, K., & Rice, R. E. (2005). Introduction. In K. O'Meara & R. E. Rice (Eds.), *Faculty priorities reconsidered: Rewarding multiple forms of scholarship* (pp. 1-13). San Francisco, CA: Jossey-Bass.

Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2 nd ed.). Newbury Park, CA: Sage Publications.

Pfeffer, J. (1981). *Power in organizations.* Marshfield, MA: Pitman Publishing.

Pugh, D. S., Hickson, D. J., Hinings, C. R., & Turner, C. (1968). Dimensions of organization structure. *Administrative Science Quarterly*, *13*(1), 65-105. Retrieved from http://www.jstor.org/stable/2391262

Pusser, B. (2006). Higher education, markets, and the preservation of the public good. In D. W. Breneman, B. Pusser, & S. E. Turner (Eds.), *Earnings from learning: The rise of for-profit universities* (pp. 23-50). Albany, NY: SUNY Press.

Reimann, B. C. (1974). Dimensions of structure in effective organizations: Some empirical evidence. *The Academy of Management Journal*, *17*(4), 693-708. Retrieved from http://www.jstor.org/stable/255647

Rhoades, G. (1998). *Managed professionals: Unionized faculty and restructuring academic labor.* Buffalo, NY: SUNY Press.

Rice, R. E. (1991). The new American scholar: Scholarship and the purposes of the university. *Metropolitan Universities*, *1*(4), 7-18.

Rice, R. E. (2006). From Athens to Berlin to LA: Faculty work and the new academy. *Liberal Education, 92*(4), 6-13.

Rice, R. E., Sorcinelli, M. D., & Austin, A. E. (2000). Heeding new voices: Academic careers for a new generation. *New Pathways Working Paper Series #7.* Washington, DC: American Association for Higher Education.

Ruch, R. S. (2001). *Higher Ed, Inc.: The rise of the for-profit university.* Baltimore, MD: Johns Hopkins University Press.

Rummler, G., & Brache, A. P. (1990). *Improving performance: How to manage the white space in the organizational chart.* San Francisco, CA: Jossey-Bass.

Saffold, G. S. III (1988). Culture traits, strength, and organizational performance: Moving beyond "strong" culture. *Academy of Management Review*, *13*(4), 546-558. Retrieved from http://www.jstor.org/stable/258374

Schuster, J. H., & Finkelstein, M. J. (2006). *The American faculty: The restructuring of academic work and careers.* Baltimore, MD: The Johns Hopkins University Press.

Schwandt, T. A. (2001). *Dictionary of qualitative inquiry* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Senge, P. (1990). *The fifth discipline: The art and practice of a learning organization.*New York, NY: Currency-Doubleday.

Staw, B. M., McKechnie, P. I., & Peffer, S. M. (1983). The justification of organizational performance. *Administrative Science Quarterly, 28*(4), 582-600. Retrieved from http://www.jstor.org/stable/2393010

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Tierney, W. G. (1998). *The responsive university: Restructuring for high performance.* Baltimore, MD: Johns Hopkins University Press.

Tierney, W. G. (2008). *The impact of culture on organizational decision making: Theory and practice in higher education*. Sterling, VA: Stylus.

Tierney, W. G. (2010). The public good in a changing economy. In G. C. Hentschke, V. M. Lechuga, & W. G. Tierney (Eds.), *For-profit colleges and universities: Their markets, regulation, performance, and place in higher education* (pp. 171-188)*. Sterling, VA: Stylus.

Tierney, W. G., & Hentschke, G. C. (2008). *New players, different game: Understanding the rise of the for-profit colleges and universities*. Baltimore, MA: Johns Hopkins University Press.

Townsend, B. K., & Rosser, V. K. (2007). Workload issues and measures of faculty productivity. *Thought and Action, 23,* 7-20. Retrieved from http://cimail15.nhea.org/assets/img/PubThoughtAndAction/TAA_07_02.pdf

U.S. Department of Education. (2004). *Program review report: University of Phoenix* (PRCN 200340922254). Washington, DC: Author.

Vaill, P. (1984). The purposing of high-performing systems. In T. Sergiovanni & J. Corbally (Eds.), *Leaderships and organizational culture* (pp. 85-104). Urbana, IL: University of Illinois Press.

Weick, K.E. (1979). Educational organizations as loosely coupled systems.*Administrative Science Quarterly, 21*(1), 1-19.

Exploring Gender Disparities in Senior-Level Position Attainment in the Academic Workforce: Does Evidence Suggest a Glass Ceiling?

Elizabeth M. O'Callaghan and Jerlando F. L. Jackson
University of Wisconsin–Madison

Abstract: *This study investigates the role of gender in senior-level position attainment for teaching faculty and academic leaders in the academic workforce. Guided in part by the glass ceiling concept, employment models were specified to examine gender disparities in position attainment with regard to productivity-related variables. More specifically, the study investigates to what extent male and female employees differ on various indicators of career advancement. Results from the study highlight disparities by gender as well as its interaction with race/ethnicity regarding workplace experience and job satisfaction. Additionally, findings show that work-life balance issues (e.g., the presence of childcare benefits and leave policies) produced only minimal impact on the career prospects of either male or female employees.*

INTRODUCTION

Empirical research contends that women face disadvantages in the workplace, both in professional and academic settings (Glazer-Raymo, 2001, 2008; Jacobs, 1996; Mason & Goulden, 2002, 2004; Morrison & Von Glinow, 1990; Morrison, White, & Van Velsor, 1987). These

Elizabeth M. O'Callaghan, Ph.D. is a Lecturer in the Department of Educational Leadership and Policy Analysis at the University of Wisconsin–Madison.

Jerlando F. L. Jackson, Ph.D. is the Vilas Distinguished Professor of Higher Education and the Director and Chief Research Scientist for Wisconsin's Equity and Inclusion Laboratory at the University of Wisconsin–Madison.

disadvantages come in a variety of forms, including workplace discrimination and hostile climate, significant earning differentials for similar work, disproportionately slower promotion rates, and truncated professional experiences many refer to as the "glass ceiling." A growing body of research is beginning to explore the glass ceiling concept and gender-based differences in position attainment within educational settings and higher education in particular (Jackson & O'Callaghan, 2009, 2011; Johnsrud, 1991; Johnsrud & Heck, 1994; Lee, 2002).

Situated within a body of research on gender differences in professional outcomes and experiences in the higher education academic workforce, this article operationalizes the glass ceiling concept and provides research findings from an empirical study of gender disparities in position attainment. This study fits within an established line of inquiry on disparities in senior-level position attainment in higher education and extends previous findings by using an established framework that quantifies glass ceiling discrimination. Jackson and O'Callaghan (2011) explored senior-level employment disparities by race/ethnicity in the higher education academic workforce. Findings from that study supported the use of a glass ceiling framework (Cotter, Hermsen, Ovadia, & Vanneman, 2001; Maume, 2004) to further analyze differences for teaching faculty and academic leaders based on race/ethnicity and subsequently gender.

The current study extends this previous work by employing the glass ceiling framework to analyze gender differences in position attainment for the academic workforce. Accordingly, the following research question guided this study: Do gender differences exist for senior-level position attainment in the academic workforce[1], after controlling for productivity-relevant variables? Namely, what are the significant factors leading to position attainment for males and females, and how are they different? Moreover, this study considers whether any detected disparities indicate the presence of a glass ceiling.

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[1] In the context of this study, the academic workforce includes both teaching faculty and academic leaders at American colleges and universities at four year institutions.

Literature Review

Originally, glass ceiling research only informed a portion of the research that has been conducted on gender discrimination in the workplace. In particular, the glass ceiling concept is often used to describe gender-based discrimination that increases with women's movement up the employment hierarchy, the effects of which include differences in salary, promotion potential, and position attainment. As a starting point for the present research, articles relating to glass ceilings and academic leaders in higher education were reviewed. This body of research contributed to the development of the conceptual framework which gives focus to this inquiry.

Numerous topics have been covered in the name of glass ceiling research. Different employment sectors have been analyzed, such as the United States Federal Government (Powell & Butterfield, 1994; Yamagata, Yeh, Stewman & Dodge, 1997), the United States military (Baldwin, 1996b; Cohen, Broschak, & Haveman, 1998), corporate America (Bartol, Martin, & Kromkowski, 2003; Bell, McLaughlin, & Sequeira, 2002; Morrison & Von Glinow, 1990; Morrison et al., 1987), and academia (Chliwniak, 1997; David & Woodward, 1997; Glazer-Raymo, 2001, 2008; Johnsrud, 1991). Likewise, different factors—those upon which glass ceilings produce effects—have also been researched. Salary (Cotter et al., 2001; Cotter, Hermsen, & Vanneman, 1999; Fisher, Motowidlo, & Werner, 1993; Ginther & Hayes, 1999; Johnsrud, 1991; Johnsrud & Heck, 1994; Kay & Hagan, 1995; Morgan, 1998; Yamagata et al., 1997), position attainment and promotion (Bain & Cummings, 2000; Ginther & Hayes, 1999; Johnsrud, 1991; Johnsrud & Heck, 1994; Shultz, Montoya, & Briere, 1992), and gender segregation (self-segregation and otherwise) of the workplace (Kay & Hagan, 1995; Lemons, 2003; Reskin, 1988; Yamagata et al., 1997) are among the factors that have been investigated.

It is also important to ascertain what has been learned about glass ceilings, the resulting effects on individuals and society, and how to determine whether they exist in employment settings. For example, women face persistent earning gaps over the course of their careers (Cotter et al., 2001; Fisher et al., 1993; Yamagata et al., 1997) and are promoted at slower rates and in fewer numbers than their male

colleagues (Baldwin, 1996a; Ginther & Hayes, 1999; Johnsrud & Heck, 1994; Maume, 2004; McDowell, Singell, Larry, & Ziliak, 1999). There is, however, little consensus on how best to operationalize and measure glass ceiling effects as well as a general lack of agreement as to the causes or origins of glass ceilings. Additionally, very few studies have been dedicated to identifying and quantifying the existence of glass ceilings in particular organizations or institutions.

Glass ceilings—as defined by invisible barriers that prevent the ascension of women and other marginalized groups to positions of leadership—exist, it seems, for numerous and not mutually exclusive reasons. Research has suggested numerous causes of glass ceilings, including the self-segregation of the workforce into traditionally male-dominated and female-dominated professions (England, Farkas, Kilbourne, & Dou, 1988); the gendered nature of work within professions, such as women in 'care-taking' roles and men in decision making or authoritarian roles (Mason & Goulden, 2002, 2004; Wright, Baxter, & Birkelund, 1995); the dominance of a male figure in institutional organizations, that is pertaining to after-hours networking and extended travel (Wright et al., 1995); tension that exists for women in balancing work and family obligations (Mason & Goulden, 2002, 2004); overt gender discrimination in hiring and promotion processes (Johnsrud, 1991; Tomaskovic-Devey & Stainback, 2007); the influence of gender on the decision maker in said hiring and promotion processes (Glazer-Raymo, 2008; Johnsrud, 1991; Meier & Bohte, 2001), the lack of qualified women for positions of leadership, which conjures the leaky pipeline analogy (Frankforter, 1996; Morrison & Von Glinow, 1990); and lastly, gendered leadership styles that purportedly serve females poorly, especially those women in positions of power (Morrison & Von Glinow, 1990; Rosenfeld, 1980). This list, however, while it might accurately reflect the reasons that women repeatedly fail to achieve parity with males in the workforce, does not actually describe a glass ceiling or its effects with any specificity.

How a glass ceiling is measured remains a topic of great variability as well (Cotter et al., 2001; Jackson & O'Callaghan, 2009). In spite of a general understanding of the concept as a barrier to career success, measurement or assessment of that success appears open to interpretation. Scholars have relied on both qualitative and quantitative

research methods to assess glass ceilings and their impact on society. But these traditions indicate that the constructs used to measure glass ceilings and their effects have been obtained from a range of forms: salary data, position attainment data, and promotion data collected as part of rigorously conducted qualitative interviews (Glazer-Raymo, 2001).

When higher education research regarding position attainment and promotion (Bain & Cummings, 2000; Ginther & Hayes, 1999; Johnsrud, 1991; Johnsrud & Heck, 1994; Shultz et al., 1992) is juxtaposed with a vast and varied body of glass ceiling and gender discrimination research in academia, a connection between position attainment and glass ceilings begins to emerge. If a glass ceiling is generally viewed as a set of impediments and/or barriers to career success for women and people of color (Baxter & Wright, 2000; Morrison & Von Glinow, 1990; Morrison et al., 1987), lack of access or promotion to senior positions may be noted as barriers to career success. In fact, differential rates of position attainment (e.g., recruitment and promotion) fit squarely into a previous measurement of glass ceilings in previous research (Cotter et al., 2001; Maume, 2004).

To be certain, data regarding the representation of women in higher education are not very positive. The recent *American College President Report* issued by the American Council on Education (Cook & Kim, 2012), reveals only 26% of all college and university presidents are women. But gender-based, glass ceiling disparities still exist. Accordingly, this present study seeks to identify these gender-based differences in position attainment, ones that are not explicable by other productivity-relevant variables. In this manner, the present study connects the research on glass ceilings and gender discrimination, as it relates to position attainment in the context of higher education, by exploring the possible existence of glass ceilings in the academic workforce.

Guiding Framework

The conceptual framework that guides this study is informed primarily by research on glass ceilings. Variable selection stems from a larger body of research documenting gender differences in position attainment in higher education. The methods applied to these variables are an

outgrowth of work that seeks to identify glass ceilings in particular employment settings. With regard to variable selection, it should be noted that the concept of the glass ceiling in higher education has been explored using various methodologies (Glazer-Raymo, 2001). Some studies focus on the proportional representation of women in higher education and use demographic data to show their dismal representation in senior-level positions (Corrigan, 2002), while other studies focus on employment trends for women in colleges and universities (Johnsrud, 1991; Johnsrud & Heck, 1994). For example, differences between the positions that men and women hold, as well as discrepancies between their respective workplaces, demonstrate that women are not equal to men in terms of professional standing (e.g., levels of power, decision making, and authority) in educational institutions (Ards, Brintnall, & Woodard, 1997; Fisher et al., 1993; Johnsrud, 1991; Johnsrud & Heck, 1994). Gender differences in position attainment persist and possibly precipitate the glass ceiling effect for women in higher education. Yet these studies only provide an indication of where to look for gender differences, not how to measure for them or whether or not they approximate glass ceilings with any precision.

As noted by other scholars (Cotter et al., 2001; Maume, 2004), a glass ceiling occurs when discrimination increases in severity with movement up the occupational hierarchy. As a result, inequality grows over the course of an individual's career. Observation of racial and gender inequality is also apparent after controlling for productivity-relevant factors. Cotter et al. (2001) proposed a four-prong empirical test to measure for the existence of a glass ceiling. These include measuring for differences in career success that (a) are not explained by other job-relevant characteristics of the employee, (b) are greater at career end than in the beginning, (c) are proportionally different each successive stage of a career, and (d) grow greater over the course of a career. It is these four criteria, which direct and give structure to the current inquiry. In fact, Cotter et al.'s (2001) work has formed the basis of other studies (Maume, 2004) that seek to identify and understand glass ceiling effects. Accordingly, this study directly incorporates two of these criteria to discern glass ceiling effects for senior-level position attainment in the academic workforce, all for the sake of understanding employment disparities. First, a glass ceiling must represent a gender or racial difference that is not explained by other job-relevant characteristics of

the employee. This criterion is satisfied in the current study through the use of social capital, human capital, and ability variables, ones identified in relevant literature as contributing to gender differences in career advancement for members of the academic workforce. Second, a glass ceiling effect is greater at higher levels of an outcome rather than lower levels. The current study seeks to measure this by using data from six distinct employment groups, namely assistant, associate, and full professors as well as low-, mid-, and upper-level academic leaders.

Criteria 3 and 4 of Cotter et al.'s (2001) work require longitudinal data, and consequently, they are only casually referenced throughout this study. For example, the third requirement states that glass ceiling effects reside in chances of advancement into higher positions, not merely the proportion of individuals currently residing at those higher levels. Investigation into this type of discrimination requires the use of cohort data which is currently unavailable to higher education professionals on a national level. Alternatively, Cotter et al.'s (2001) fourth criterion for measuring glass ceiling effects states that these disparities represent advancement and opportunity differences for individuals, ones that increase over the course of their careers. Again, without the use of longitudinal data, this criterion remains unmeasured in this current study. Due to these limitations, glass ceilings are used only as guiding concepts for this study of gender disparities in the higher education workforce. While we cannot say for certain that any identified disparities are evidence of glass ceilings, they serve to highlight whether or not they might exist.

Method

In an attempt to understand differences in senior-level position attainment in the academic workforce based on gender, logistic regression analysis was utilized with data from a national survey of faculty in the United States. The dataset, variables, and analysis procedures are described in the next section.

Dataset

The National Study of Postsecondary Faculty (NSOPF), designed and conducted by the National Center for Educational Statistics (NCES), is

the most comprehensive dataset on the academic workforce and serves as the primary source of data for this research. This survey offers many advantages, including a design that permits the researcher to distinguish among the types of positions held by academic leaders, whereas other datasets tend to consolidate administrators into a single group. In each of the survey cycles, NSOPF gathers information regarding the backgrounds, responsibilities, workloads, salaries, benefits, attitudes, and future plans for both full- and part-time faculty (National Center for Educational Statistics [NCES], 2002). This current study utilizes data from the 1999 National Study of Postsecondary Faculty, or the NSOPF: 99 survey. While NSOPF: 04 data are available to researchers, they could not be used for these analyses because the principal activity variable used for the academic leader model in the NSOPF: 99 survey was eliminated and thus unavailable.

The data collection for NSOPF: 99 occurred during the academic year 1998–1999, surveying 960 degree-granting postsecondary institutions and retaining an initial sample of 31,354 faculty and instructional staff. Approximately 28,600 faculty and instructional staff were sent questionnaires. Subsequently, a sub-sample of 19,813 faculty and instructional staff were drawn for additional survey follow-ups. Approximately 18,000 faculty and instructional staff questionnaires were completed for a weighted response rate of 83%. The response rate for the institution survey was 93%. The weighted responses represent the national estimates for number of faculty in 1999 (957,767; NCES, 2002). In order to correct for the nonsimple, random sample design and to minimize the influence of large sample sizes on standard errors, the effective sample size was altered by adjusting the relative weight downward as a function of the overall design effect (Thomas, Heck, & Bauer, 2005). This end product was achieved by multiplying the relative weight by the reciprocal of the design effect (DEFF) value and then reweighting the data with the DEFF adjusted relative weight.

Dependent Variables

The dependent variables for both teaching faculty and academic leaders were based on individuals' responses to the modified primary activity question on the NSOPF: 99 survey. The question read, "What was your primary activity at this institution during the 1998 Fall term? If you have

equal responsibilities, please select one" (NCES, 2002). Responses were recoded to create three dummy variables for the academic workforce: (a) administration (i.e., academic leaders), (b) teaching, and (c) research. Faculty members in the administration category have assumed institutional positions committed to administrative functions (e.g., department chair, dean, and vice president of academic affairs). Faculty members categorized as "teaching" tended to represent the traditional tenured or tenure-track faculty profile (e.g., assistant, associate, and full professors), a mix of teaching, research, service, and outreach. Lastly, the research category (e.g., research professor and research scientist) included individuals who were mostly in non-tenure-track positions, focused on research.

The dependent variables for teaching faculty by rank were similarly based on individuals' responses to a question in regard to academic rank on NSOPF: 99. The question asked, "Which of the following best describes your academic rank, title, or position at this institution during the 1998 Fall term?" (NCES, 2002). Responses were likewise recoded to create three dummy variables for the teaching faculty: (a) full professor, (b) associate professor, and (c) assistant professor. These three options represent the professoriate trajectory through the tenure-track ranks. The full professor position represented the most senior-level rank, excluding special professorships (e.g., university, endowed, and named professors). The associate professor position typified the midcareer point for tenure-track faculty, having accumulated sufficient seniority and work production to be promoted from assistant professor, yet still requiring more seniority and work production to achieve full professorship. Lastly, the assistant professor position consisted of individuals who were generally not tenured, but rather individuals who usually seek tenure and promotion, thus representing the point of entry for faculty.

Lastly, the dependent variables for academic leaders by level were based on individuals' responses to another principal activity question on NSOPF: 99. The question asked: "What was your principal activity at this institution during the 1998 Fall term? If you have equal responsibilities, please select one" (NCES, 2002). Responses were similarly recoded to create three dummy variables for academic leaders: (a) lower-level, (b) mid-level, and (c) upper-level positions. Faculty members contained within these administration categories have assumed

institutional positions committed to administrative functions (e.g., department chair, dean, and vice president of academic affairs). The lower-level category consisted of entry level positions (e.g., assistant director), while the mid-level category included positions such as academic dean and department chair, and finally, the senior-level category included positions such as provost and president.

Independent Variables

In selecting independent variables, decisions were guided by research on gender-based discrimination in higher education, social capital theory, human capital theory, ability measures, and motivation. As glass ceiling criteria remains vague, a broad swath of published research was considered to select variables for the present model (Cotter et al., 2001; England et al., 1988; Glazer-Raymo, 2001, 2008; Jacobs, 1996; Morrison & Von Glinow, 1990; Morrison et al., 1987). The focus remained narrow, however, as this current study's main contention of glass ceiling criteria is that gender differences persist after controlling for other productivity-relevant characteristics of the employee (Cotter et al., 2001). The independent variables focused on the role of gender and emphasized the role of social capital variables (e.g., race/ethnicity) alongside human capital variables (e.g., experience and education), workplace productivity-relevant factors (e.g. publications, grants, and committee service), and job satisfaction. In addition, given the recent growth of research implicating work-life balance issues in the career success of women (Mason & Goulden, 2004), as well as the importance of institutional policies dealing with childcare and family leave, appropriate variables relevant to these factors (e.g., number of children, marital status, and the presence of institutional policy) were also included in the model. Lastly, given the growing body of research (Chatman, 1989) which emphasizes the importance of person-institution fit, the control variables for this study consisted of institutional variables as well (e.g., location, Carnegie classification, type, and control).

Accordingly, the logistic regression models included 18 independent variables. The human capital measures included: (a) age (used as a proxy for experience) and (b) degree level. The two social capital measures included gender: (a) female (male as referent group), and race: (b) American Indian (White as referent group), (c) Asian, (d) African

American, (e) Hispanic, and (f) Native Hawaiian/Pacific Islander. The work-life balance variables included: (a) number of dependents and (b) marital status (married as the referent group). The two institutional policy variables included: (a) the presence of a paid maternity/paternity leave policy and (b) the presence of a childcare benefit. The ability measures included: (a) career publications, (b) administrative committees, (c) teaching committees, (d) external funding, and (e) total number of grants. Finally, the motivation measure included overall job satisfaction.

Control Variables

Control variables for this study consisted of institutional variables. Institution location variables included: (a) New England region (Midwest as referent group), (b) Mideast region, (c) Plains region, (d) Southeast region, (e) Southwest region, (f) Rocky Mountain region, and (g) Far-west region. Carnegie classification variables included: (a) comprehensive institutions (research institutions as referent group), (b) doctoral institutions, and (c) liberal arts institutions. Institutional control variables included public institutions (private institutions as referent group).

Data Analysis

In an attempt to understand differences in senior-level position attainment in the academic workforce based on gender, logistic regression analysis was applied. In particular, the analysis was used to assess the effects of individual- and institutional-level characteristics on the probability of an individual faculty member obtaining a senior-level position by gender (Cabrera, 1994). Several measures of fit were used when judging the significance of each logistic regression model: X^2 of the model, Pseudo R^2, and PCPs. These fit indices determine how well a priori model fits the sample data. A significant X^2 indicates that the independent variable as a group correlates with the dependent variable. At most, the Pseudo R^2 represents the proportion of error variance in relation to a null model. PCPs represent the percent of cases predicted by the model. PCPs higher than 55% signify a good fit for the model (Cabrera, 1994). As a measure of the magnitude of effect, delta-p was used, a representation of the change in dependent variable probability

due to a change in the factor variable under consideration. For example, a delta-p value of 0.045 indicates that a one-unit change in the predictor is related to a 4.5 percentage point increase in the likelihood that a faculty member would become an academic leader.

Limitations of Study

There are several limitations of this study worth noting. First, its analyses were limited to variables contained in NSOPF: 99. The NSOPF: 99 survey is the most comprehensive survey of the academic workforce and a rich data source; its measures, however, were somewhat limited. While the 28 variables used for these analyses were applicable, other forms of social capital, human capital, ability, work-life balance, motivation, and institutional policy variables were unavailable. Second, analyses for this study were limited to cross-sectional data. Therefore, these results include members of the academic workforce employed during the year of data collection. In turn, implications of this study are derived from a relatively narrow duration of time and do not consider the use of the third and fourth glass ceiling measurement criteria, as indicated in Cotter et al.'s (2001) "The Glass Ceiling Effect." Lastly, the only data suitable for the present study is from NSOPF: 99. While these limitations are apparent in the present study, the results still provide a window for understanding the differential outcomes by gender in the academic workforce.

Findings

Descriptive Results

Table 1 presents the descriptive data for the observed representation of primary activity for faculty by gender. For all positions, males constituted the highest percentage regarding the observed representation in all positions. Therefore, the remainder of this section will focus on the percentage distribution by rank for females. Regarding teaching faculty, 40.3% were females. As for academic leaders, 35.3% were females. Women constituted 43.2% of the observed representation for assistant professors, 32.5% for associate professors, and 18.8% for full professors. With regard to lower-level positions, females held 44% of these positions. Mid-level positions were slightly different, with females

constituting 35.9%, and lastly, 19.5% of upper-level positions were held by women. For the most part, these data show a decrease in representation for females as they move through the ranks toward senior-level positions in the academic workforce.

Table 1
Observed Representation of the Primary Activity for Faculty by Gender at Four-Year Institutions: Fall 1998

	Gender	
	Males	Females
Position		
Faculty	59.7%	40.3%
Academic Leaders	64.7%	35.3%
Assistant Professor	56.8%	43.2%
Associate Professor	67.5%	32.5%
Full Professor	81.2%	18.8%
Lower-Level	56.0%	44.0%
Mid-Level	64.1%	35.9%
Upper-Level	80.5%	19.5%

Note. Observed representation was based on the adjusted weighted sample

Logistic Regression Results

This article examines access to senior-level positions with regard to gender, both for teaching faculty and academic leaders in the academic workforce. The following results address the first and second criteria for the existence of a glass ceiling provided by Cotter et al. (2001). The third and fourth criteria could not be addressed because longitudinal data were not available for this study. Table 2 shows the results of four separate logistic regression models. Four separate models were specified for traditional employment categories in the academic workforce: teaching

faculty and administration (i.e., academic leaders) for both males and females. Each model reports the delta-p values for statistically significant variables. Therefore, only significant variables are discussed in this section. The columns display the statistically significant delta-p values, which illustrate the change in the default probability[2] that each significant variable makes controlling for all others. Based on the goodness-of-fit indices, the academic leader model is an excellent fit and the teaching faculty model is a good fit.

In the teaching faculty model for males, the delta-p values indicate that there were eleven variables that generated significant effects in the probability of the observed representation in positions with the principle function of teaching. As for human capital variables, a higher degree level (0.0343***) increased the default probability. With regard to work-life balance variables, full-time positions (0.1574***) displayed increased the default probability. Concerning ability variables, more teaching committees served (0.0167***) and more external funding (0.0000*) yielded increased the default probability. In contrast, more career publications (-0.0006**), more administrative committees served (-0.0077*), and the higher the total number of grants (-0.0192***) all decreased the default probability. Considering the motivation variable, higher levels of job satisfaction (-0.0425***) decreased the default probability. Employment in the following institutional types: doctoral (-0.1999**), comprehensive (-0.3638***), and liberal arts (-0.3553***) institutions—as compared to research institutions—decreased the default probability. None of the social capital, institutional policies, region, and institutional control variables were significant.

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[2] In the context of this study, the default probability is the position of interest for each model represented by the respective dependent variables. Specifically, teaching faculty, academic leader, assistant professor, associate professor, full professor, lower-level, mid-level, and upper-level positions.

Table 2

Logistic Regression Results for Teaching Faculty and Academic Leadership at 4-Year Institutions by Gender

Variable	Teaching Faculty		Academic Leadership	
Gender	Male	Female	Male	Female
Individual Level Characteristics				
Human Capital Variables				
Age_1			0.0024***	0.0017*
Degree Level	0.0343***	0.0587***	-0.0107*	-0.0201***
Social Capital Variables				
American Indian (White)				
Asian				0.2074*
African American				
Hispanic				
Native Hawaiian/Pacific Islander				
Work-Life Balance	.			
Employed Full-time (Part-time)	0.1574***	0.1832***	-0.0609***	-0.0687***
Number of Dependents				
Single (Married)				
Institutional Policies				
Paid Maternity Leave				
Childcare Benefit				
Ability Variables				
Career Publications	-0.0006**	-0.0006*		
Administrative Committees Served	-0.0077*	-0.0131**	0.0173***	0.0173***
Teaching Committees Served	0.0167***	0.0170***		
External Funding	0.0000*	0.0000*		
Total Number of Grants	-0.0192***	-0.0175***	-0.0034**	
Motivation Variables				
Overall Job Satisfaction	-0.0425***		0.0282***	
Institutional Level Control Variables				
Region				
New England Region (Mid West)				
Mid East Region				
Plains Region				
South East Region				
South West Region				
Rocky Mountain Region				
Far West Region				
Carnegie Classification				
Comprehensive Institutions (Research)	-0.3638***	-0.2955***		
Doctoral Institutions	-0.1999**	-0.1834***		
Liberal Arts Institutions	-0.3553***	-0.3714***		

Table 2 (Cont.)
Logistic Regression Results for Teaching Faculty and Academic Leadership at 4-Year Institutions by Gender

Variable	Teaching Faculty		Academic Leadership	
Gender	Male	Female	Male	Female
Model X^2, df	636.238, 28	349.434, 28	246.369, 28	182.179, 28
Pseudo R^2	0.282	0.263	0.174	0.219
PCP	0.74	0.77	0.896	0.912

Note: Delta-p statistics are shown only for those variables whose coefficients were significant: *p< .05, **p<.01, ***p<.001

₁ Age is used in this model as a proxy for experience in the workforce/workplace.

In the teaching faculty model for females, the delta-p values indicate that there were ten variables that produced significant effects in the probability of the observed representation in positions with the principle function of teaching. In regard to human capital variables, a higher degree level increased (0.0587***) the default probability. Concerning work-life balance variables, full-time positions (0.1832***) increased the default probability. Regarding ability variables, more teaching committees served (0.0170***) and more external funding yielded (0.0000*) increased the default probability. Alternatively, more career publications (-0.0006*), more administrative committees served (-0.0131**), and the higher the total number of grants (-0.0175***) all decreased the default probability. As proved to be the case in the teaching faculty model for males, employment in the following institutional types: doctoral (-0.1834***), comprehensive (-0.2955***), and liberal arts institutions (-0.3714***)—as opposed to research institutions—decreased the default probability. None of the social capital, institutional policies, motivation, region, and institutional control variables were significant.

The delta-p values for the academic leader model for males indicate that there were six variables that generated significant effects in the probability of the observed representation in positions with the principally administrative functions. Regarding human capital variables, increases in age (0.0024***) increased the default probability. In contrast, a higher degree level decreased the default probability (-0.0107*). With regard to work-life balance variables, being full-time decreased the default probability (-0.0609***). Concerning ability variables, serving on administrative committees increased the default

probability (0.0173***), while a higher number of grants decreased the default probability (-0.0034**). Per the motivation variable, overall job satisfaction significantly increased the default probability (0.0282***). None of the social capital, institutional policies, region, Carnegie classification, and institutional control variables were significant.

The delta-p values for the academic leader model for females indicate that there were five variables that produced significant effects in the probability of the observed representation in positions with the principle function of administration. As for human capital variables, increases in age (0.0017*) in turn increased the default probability. On the contrary, a higher degree level decreased the default probability (-0.0201***). In relation to social capital variables, being Asian increased the default probability (0.2074*). With regard to work-life balance variables, being full-time decreased the default probability (-0.0687***). Regarding ability variables, serving on administrative committees increased the default probability (0.0173***). None of the institutional policies, motivation, region, Carnegie classification and institutional control variables proved significant.

Table 3 shows the results of six separate logistic regression models for teaching faculty by rank and gender. Six separate models were specified for traditional employment ranks for tenure-track faculty: (a) assistant professor, (b) associate professor, and (c) full professor for both males and females. Each model reports the delta-p values for statistically significant variables. The columns display the statistically significant delta-p values, which show the change in the default probability that each significant variable makes controlling for all others. Again, using the goodness-of-fit indices, these six models proved to be a good fit.

In the assistant professor model for males, the delta-p values indicate that there were four variables that generated significant effects in the probability of the observed representation in assistant professor positions. Considering human capital variables, as age increased, the default probability decreased (-0.010***), and higher degree levels increased the default probability (0.0362***). With regard to work-life balance variables, being full-time decreased the default probability (-0.1097***). As for ability variables, more career publications decreased the default probability (-0.0023***). None of the social

Table 3

Logistic Regression Results for Teaching Faculty by Rank at 4-Year Institutions by Gender

Variable	Assistant Professor		Associate Professor		Full Professor	
Gender	Male	Female	Male	Female	Male	Female
Individual Level Characteristics						
Human Capital Variables						
Age_1	-0.010***	-0.0067***	0.0014*	0.0042***	0.0177***	0.0144***
Degree Level	0.0362***	0.0780***	0.0324***	0.0630***	0.1098***	0.0935***
Social Capital Variables						
American Indian (White)						
Asian						
African American		-0.0598*				
Hispanic						
Native Hawaiian/Pacific Islander						
Work-Life Balance						
Employed Full-time (Part-time)	-0.1097***	-0.1139***	-0.0897***	-0.1178***	-0.1532***	-0.1314***
Number of Dependents			0.0188***			
Single (Married)						
Institutional Policies						
Paid Maternity Leave						
Childcare Benefit						
Ability Variables						
Career Publications	-0.0023***	-0.0012***	-0.0008***		0.0019***	0.0034***
Administrative Committees Served			0.0072**		0.0074*	
Teaching Committees Served					0.0047*	
External Funding						
Total Number of Grants						
Motivation Variables						
Overall Job Satisfaction			0.0260***		0.0370**	0.0429*
Institutional Level Control Variables						
Region						
New England Region (Mid West)						
Mid East Region						
Plains Region						
South East Region						
South West Region						
Rocky Mountain Region						
Far West Region						
Carnegie Classification						
Comprehensive Institutions (Research)			0.0355*			
Doctoral Institutions						
Liberal Arts Institutions						
Institutional Control						
Public (Private)						
Adjusted Weighted Sample	6845	4990	6845	4990	6845	4990
Estimate Population Size	604,351	371,416	604,351	371,416	604,351	371,416
P_o	0.1524	0.1524	0.1519	0.1519	0.2028	0.2028
Model X^2, df	492.962, 28	301.751, 28	204.761, 28	265.835, 28	1178.456, 28	386.732, 28
Pseudo R^2	0.268	0.247	0.109	0.239	0.479	0.382
PCP	0.844	0.82	0.788	0.832	0.809	0.896

Note: Delta-p statistics are shown only for those variables whose coefficients were significant: *$p < .05$, **$p < .01$, ***$p < .001$

[1] Age is used in this model as a proxy for experience in the workforce/workplace.

capital, institutional policies, motivation, region, Carnegie classification, and institutional control variables were significant.

In the assistant professor model for females, the delta-p values demonstrate that there were five variables that produced significant effects in the probability of the observed representation in assistant professor positions. In regard to human capital variables, as age increased, the default probability decreased (-0.0067***). By contrast, higher degree levels increased the default probability (0.0780***). In relation to social capital variables, being African American decreased the default probability (-0.0598*). Concerning work-life balance variables, being full-time decreased the default probability (-0.1139***). Per ability variables, more career publications decreased the default probability (-0.0012***). None of the institutional policies, motivation, region, Carnegie classification, and institutional control variables proved significant.

In the associate professor model for males, the delta-p values indicate that there were eight variables that generated significant effects in the probability of the observed representation in associate professor positions. With regard to human capital, increases in age increased the default probability (0.0014*), as did higher degree levels (0.0324***). Concerning work-life balance variables, being full-time decreased the default probability (-0.0897***), and more dependents increased the default probability (0.0188***). As for ability variables, more career publications decreased the default probability (-0.0008***) while more administrative committees served (0.0072**) increased the default probability. The motivation variable (i.e., overall job satisfaction) significantly increased the default probability (0.0260***). Lastly, employment in comprehensive institutions, as compared to research institutions (0.0355*), increased the default probability. None of the social capital, institutional policies, region, and institutional control variables were significant.

In the associate professor model for females, the delta-p values demonstrate that there were three variables that produced significant effects in the probability of the observed representation in associate professor positions. In relation to human capital variables, as age increased, the default probability increased (0.0042***). Higher degree

levels also increased the default probability (0.0630***). With regard to work-life balance variables, being full-time decreased the default probability (-0.1178***). None of the social capital, work-life balance, institutional policies, ability, motivation, region, and institutional control variables proved significant.

In the full professor model for males, the delta-p values indicate that there were seven variables that generated significant effects in the probability of the observed representation in full professor positions. In relation to human capital variables, as age increased, so too did the default probability (0.0177***). The default probability also increased with higher degree levels (0.1098***). Considering work-life balance variables, being full-time decreased the default probability (-0.1532***). As for ability variables, more career publications (0.0019***), more teaching committees served (0.0047*), and more administrative committees served (0.0074*) all increased the default probability. The motivation variable (e.g., overall job satisfaction) significantly increased the default probability (0.0370**). None of the social capital, institutional policies, region, Carnegie classification, and institutional control variables were significant.

In the full professor model for females, the delta-p values indicate that there were five variables that generated significant effects in the probability of the observed representation in full professor positions. In relation to human capital variables, as age increased, the default probability increased as well (0.0144***). A higher degree level also increased the default probability (0.0935***). Considering work-life balance variables, being full-time decreased the default probability (-0.1314***). As for ability variables, more career publications increased the default probability (0.0034***). The motivation variable (e.g., overall job satisfaction) significantly increased the default probability (0.0429*). None of the social capital, institutional policies, region, Carnegie classification, and institutional control variables proved significant.

Table 4 shows the results of six separate logistic regression models for academic leaders by rank and gender. Six separate models were specified for traditional employment ranks for faculty assuming administrative positions: (a) lower-level, (b) mid-level, and (c) upper-level for both

Table 4

Logistic Regression Results for Academic Leaders by Level at 4-Year Institutions by Gender

Variable	Lower-Level		Mid-Level		Upper-Level	
Gender	Male	Female	Male	Female	Male	Female
Individual Level Characteristics						
Human Capital Variables						
Age_1			0.0027***			
Degree Level	-0.0109***	-0.0243***				
Social Capital Variables						
American Indian (White)						
Asian						
African American						
Hispanic					-0.0057*	
Native Hawaiian/Pacific Islander						
Work-Life Balance						
Employed Full-time (Part-time)	-0.0281***	-0.0335***	-0.0458***	-0.0532***		
Number of Dependents						
Single (Married)						
Institutional Policies						
Paid Maternity Leave						
Childcare Benefit						
Ability Variables						
Career Publications					0.0000*	
Administrative Committees Served			0.0131***	0.0141***	0.0021***	
Teaching Committees Served	-0.0065*					
External Funding					0.000*	
Total Number of Grants					-0.0009*	
Motivation Variables						
Overall Job Satisfaction			0.0154*		0.0074*	
Institutional Level Control Variables						
Region						
New England Region (Mid West)						
Mid East Region						
Plains Region						
South East Region	-0.0259*					
South West Region	-0.0304**					
Rocky Mountain Region						
Far West Region						
Carnegie Classification						
Comprehensive Institutions (Research)	0.0577**		0.0018*			
Doctoral Institutions						
Liberal Arts Institutions						
Institutional Control						
Public (Private)		-0.0333*			0.0140*	
Adjusted Weighted Sample	6845	4990	6845	4990	6845	4990
Estimate Population Size	604,351	371,416	604,351	371,416	604,351	371,416
P_o	0.0417	0.0417	0.0653	0.0653	0.007	0.007
Model X^2, df	109.764, 28	114.105, 28	191.488, 28	153.252, 28	108.628, 28	19.975, 28
Pseudo R^2	0.139	0.197	0.153	0.206	0.317	0.3
PCP	0.962	0.951	0.916	0.927	0.99	0.995

Note: Delta-p statistics are shown only for those variables whose coefficients were significant: *p< .05, **p<.01, ***p<.001

1 Age is used in this model as a proxy for experience in the workforce/workplace.

males and females. Each model reports the delta-p values for statistically significant variables. The columns display the statistically significant delta-p values, which show the change in the default probability that each significant variable makes controlling for all others. Based on the goodness-of-fit indices, these six models were an excellent fit.

In the lower-level model for males, the delta-p values indicate that there were six variables that generated significant effects in the probability of the observed representation in lower-level positions. In relation to human capital variables, as degree level increased, the default probability decreased (-0.0109***). Considering work-life balance variables, being full-time decreased the default probability (-0.0281***). As for ability variables, more teaching committees served decreased the default probability (-0.0065*). With regard to regional variables, being located in both Southeast (-0.0259*) and Southwest (-0.0304**) regions (compared to Midwest regions) decreased the default probability. Lastly, employment in the comprehensive institutions, as compared to research institutions, increased the default probability (0.0577**). None of the social capital, institutional policies, motivation, and institutional control variables proved significant.

In the lower-level model for females, the delta-p values show that there were three variables that produced significant effects in the probability of the observed representation in lower-level positions. In regard to human capital variables, the default probability decreased as degree level increased (-0.0243***). Per work-life balance variables, being full-time decreased the default probability (-0.0335***). As for institutional control variables, being at a public institution—as compared to a private institution—decreased the default probability (-0.0333*). None of the social capital, institutional policies, ability, motivation, region, Carnegie classification, and institutional control variables were significant.

In the mid-level model for males, the delta-p values indicate that there were five variables that generated significant effects in the probability of the observed representation in mid-level positions. Concerning human capital variables, as age increased, the default probability increased (0.0027***). Considering work-life balance variables, being full-time decreased the default probability (-0.0458***). With regard to ability variables, more administrative committees served increased the default

probability (0.0131***). Per the motivation variable, overall job satisfaction significantly increased the default probability (0.0154*). Lastly, employment in the comprehensive institutions, as compared to research institutions, increased the default probability (0.0018*). None of the social capital, institutional policies, region, and Carnegie classification, and institutional control variables were significant.

In the mid-level model for females, the delta-p values show that there were two variables that produced significant effects in the probability of the observed representation in mid-level positions. In relation to work-life variables, being full-time decreased the default probability (-0.0532***). In regard to ability variables, more administrative committees served increased the default probability (0.0141***). None of the human capital, social capital, institutional policies, motivation, region, Carnegie classification, and institutional control variables were significant.

In the upper-level model for males, the delta-p values indicate that there were seven variables that generated significant effects in the probability of the observed representation in upper-level positions. Considering social capital variables, being Hispanic decreased the default probability (-0.0057*). As for ability variables, more career publications (0.0000*), more administrative committees served (0.0021***), and more external funding (0.000*) all increased the default probability. Interestingly though, a higher total number of grants resulted in decreased default probability (-0.0009*). Per the motivation variable, overall job satisfaction significantly increased the default probability (0.0074*). Lastly, employment in public institutions—as compared to private institutions—increased the default probability (0.0140*). None of the human capital, work-life balance, institutional policies, region, and Carnegie classification variables were significant. In the upper-level model for females, the delta-p values indicate that there were no variables that produced significant effects in the probability of the observed representation in upper-level positions.

Discussion

The results from this study show some differences, although minimal, between male and females in the academic workforce. Statistically

significant results emerged for each of the models, yet the overall the magnitude of these variables was small. Nonetheless, at least six conclusions based on Cotter et al.'s (2001) two applicable glass ceiling criteria may be drawn from this study and applied to our research question. To reiterate, these two criteria include differences in career success that a) are not explained by other job-relevant characteristics of the employee and b) are greater at career end than in the beginning.

First, with regard to the human capital variables, it is unclear as to why having a higher degree level showed a negative relationship for both males and females with the academic leadership and lower-level models. These results first came to our attention while performing the original analyses, which included both two- and four-year institutions. In an effort to address this unexpected occurrence, the authors restricted the analyses to four-year institutions, and the same results still emerged. Our only speculation in this regard is that individuals with higher levels of education (e.g., J.D.), but not doctorate degrees, are securing these positions and potentially skewing the results.

Second, examining age as a proxy for experience seems to be a good predictor for academic leadership positions as well as movement through teaching faculty ranks for both males and females. Our results seem to support the conventional thought that there is no substitution for work experience with regard to moving through the ranks in the academic workforce. Likewise, the number of an individual's career publications provides a good indication of the career stage of teaching faculty. This conclusion also makes intuitive sense; generally, the number of publications achieved by an individual is a crude, but nonetheless accepted, approximation of scholarly ability and career success.

Third, while race/ethnicity was not the focus of this study, there are several occasions when race/ethnicity variables were significant. Namely, being Asian was a positive significant factor for females in academic leadership positions. In contrast, being African American was a significant negative factor for females in assistant professor positions. Likewise, being Hispanic was a significant negative factor for males in upper-level positions. Therefore, the intersection of race and gender yielded mixed results. That is, our models showed both positive and negative outcomes when race/ethnicity and gender intersect.

Fourth, overall job satisfaction changes at various stages within the academic workforce. Males express higher levels of overall job satisfaction than females. For example, males in academic leadership, mid-level, upper-level, associate, and full professor positions showed significant positive job satisfaction. It must also be noted that a significant negative effect was found for male teaching faculty. Both males and females were more likely to be satisfied with their work when they were in senior-level positions (i.e., full professor). This finding is an important one, as it highlights the fact that once individuals achieve career success as defined by position attainment, they are generally satisfied with their work.

Fifth, the work-life balance variables in these models did not prove to be significant for either males or females. Neither marital status nor the presence of dependents were significant determining factors in regard to senior-level position attainment. Likewise, the presence of institutional policies regarding family leave and childcare were not driving factors. Interestingly, males with higher numbers of children were more likely to be associate professors. Therefore, it appears that the presence of more children does not impede the progress of males toward tenure. Lastly, of particular note, when considering the full group of professionals in both the teaching faculty and academic leadership models, the results were surprisingly uniform for both genders, with four exceptions out of 32 significant coefficients. When considering position level, however, differences by gender started to emerge. The factors in the models were better predictors of presence for males in the academic workplace, with very few significant mid-level coefficients and none in the upper-level for females.

In applying the findings from this study to Cotter et al.'s (2001) glass ceiling framework, the following observations were made. Concerning the first criterion, do the results of the study demonstrate gender differences in position attainment that are not attributable to characteristics of the individual? The results of the study demonstrate, with regard to gender, that there are few, if any, differences in the significant variables for position attainment between males and females. Males and females did not differ, to a large degree, in those items that increased or decreased the probability of holding a senior-level position.

Regarding the second criterion, the existence of glass ceilings is implied when examining significant gender differences, such that women are especially disadvantaged in the upper tail of the outcome distribution(s). With respect to the findings of this study, this conclusion does not seem to be the case. There were no instances where female teaching faculty and academic leaders experienced a significant, much less negative effect on the chances of achieving a position that differed from males. In summary, these results are unable to conclusively demonstrate the existence or absence of glass ceilings with any degree of certainty. The results of this study, however, hint that glass ceilings may not be as impermeable in the academic workforce as once thought. These inconclusive, and at times counterintuitive, results certainly help to build a case for demanding a full-scale investigation into higher education glass ceilings.

Implications for Future Research

With regard to position attainment, the study presents multiple opportunities for future research. First, the interactive effects of race/ethnicity and gender, as well as previously identified racial differences in position attainment (Jackson & O'Callaghan, 2011), indicate that further research at the point of multiple, intersecting identities (Crenshaw, 1991; McCall, 2005) is warranted.   Second, job satisfaction as an indicator of career motivation—and ultimately, career success—remains an intriguing line of research. An area of particular interest to explore is whether or not an individual's degree of job satisfaction changes over the course of an individual's career. Further inquiry into those career stages where satisfaction registers as negative, neutral, or positive would be useful in determining how best to support individuals throughout said careers. This line of inquiry could add to existing research regarding the role of professional development activities (Luna & Cullen, 1995; Ferreira, 2003; Leveson (1990); Rosser, 1990) in continued career satisfaction.

Third, there is great potential for future research efforts on glass ceilings and gender inequities in position attainment. As demonstrated by this study, the existence or absence of glass ceilings in higher education for female teaching faculty and academic leaders was unable to be confirmed. Yet a more thorough investigation into the glass ceiling

phenomenon would be possible with access to longitudinal employment data. For the knowledge base to expand beyond its current scope, these data sets are required (Cotter et al., 2001). Lastly, this study only examined significant differences between male and females when models for each gender were run separately. As a result, the data reveal that men and women as groups of employees do not differ from each other to a significant degree in the factors that contribute to career success. The structure of analysis was purposeful, so as to be concerned with the role of each of the variables in individual experiences, and not which variables made a difference in the entire academic workforce.

In closing, our research provides a rubric for the degree to which gender inequities may or may not be present in the academic workforce. It is imperative that institutions take further action to remediate inequality if this research confirms widespread gender-based discrimination in the recruitment, hiring, retention, and promotion processes in regard to female teaching faculty and academic leaders. To this end, further research related to effectually eliminating these barriers will be required. There is certainly a modest amount of research that reveals the steps that individuals take to remove these barriers to career success in their own personal lives (e.g., Chliwniak, 1997; Eagly & Johnson, 1990), but there also exists a complementary and growing body of research that details programs and initiatives that institutions, professional associations, and doctoral preparation programs can undertake to ensure that their hiring and admission processes are fair and that their promotion and retention efforts are equitable. The findings from the current research support expansion into this area of research, primarily due to the result that as groups males and females do not significantly differ on variables such as human capital, social capital, work-life balance, institutional policy, ability, motivation, or institution type and location that traditionally influence position attainment. Therefore, more research into external variables that affect career achievement for women is warranted.

References

Ards, S., Brintnall, M., & Woodard, M. (1997). The road to tenure and beyond for African American political scientists. *The Journal of Negro Education, 66*(2), 159–171.

Bain, O., & Cummings, W. (2000). Academe's glass ceiling: Societal, professional, organizational, and institutional barriers to the career advancement of academic women. *Comparative Education Review, 44*(4), 493–514.

Baldwin, N. J. (1996a). Female promotions in male-dominant organizations: The case of the United States military. *The Journal of Politics, 58*(4), 1184–1197.

Baldwin, N. J. (1996b). The promotion record of the United States Army: Glass ceilings in the Officer Corps. *Public Administration Review, 56*(2), 199-206.

Bartol, K. M., Martin, D. C., & Kromkowski, J. A. (2003). Leadership and the glass ceiling: Gender and ethnic group influences on leader behaviors at middle and executive managerial levels. *Journal of Leadership & Organizational Studies, 9*(3), 8–20.

Baxter, J., & Wright, E. O. (2000). The glass ceiling hypothesis: A comparative study of the United States, Sweden, and Australia. *Gender and Society, 14*(2), 275–294.

Bell, M. P., McLaughlin, M. E., & Sequeira, J. M. (2002). Discrimination, harassment and the glass ceiling: Women executives as change agents. *Journal of Business Ethics, 37*(1), 65-76.

Cabrera, A. F. (1994). Logistic regression analysis in higher education: An applied perspective. In J. C. Smart (Ed.), *Higher education: Handbook for the study of higher education* (Vol. 10, pp. 225-256). New York, NY: Agathon Press.

Chatman, J. A. (1989). Improving interactional organization research: A model of person-organization fit. *Academy of Management Review, 14*(1), 333-349.

Chliwniak, L. (1997). Higher education leadership: Analyzing the gender gap. *ASHE-ERIC Higher Education Reports*, *25*(4), 1–97.

Cook, B., & Kim, Y. (2012). *The American college president 2012*. Washington, DC: Center for Policy Analysis, American Council on Education.
g
Cohen, L. E., Broschak, J. P., & Haveman, H. A. (1998). And then there were more? The effect of organizational sex composition on the hiring and promotion of managers. *American Sociological Review, 63*(5), 711–727.

Corrigan, M. E. (2002). *The American college president: 2002 edition*. Washington, DC: Center for Policy Analysis, American Council on Education.

Cotter, D. A., Hermsen, J. M., Ovadia, S., & Vanneman, R. (2001). The glass ceiling effect. *Social Forces, 80*(2), 655-682.

Cotter, D. A., Hermsen, J. M., & Vanneman, R. (1999). Systems of gender, race, and class inequality: Multilevel analyses. *Social Forces, 78*(2), 433–460.

Crenshaw, K. (1991). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford law review*, 1241-1299.

David, M., & Woodward, D. (Eds.). (1997). *Negotiating the glass ceiling—Careers of senior women in the academic world*. Washington, DC: Falmer Press.

Eagly, A. H., & Johnson, B. T. (1990). Gender and leadership style: A meta-analysis. *Psychological bulletin*, *108*(2), 233.

England, P., Farkas, G., Kilbourne, B., & Dou, T. (1988). Explaining occupational sex segregation and wages: Findings from a model with fixed effects. *American Sociological Review, 53*(4), 544-558.

Ferreira, M. (2003). Gender issues related to graduate student attrition in two science departments. *International Journal of Science Education*, *25*(8), 969-989.

Fisher, B. D., Motowidlo, S., & Werner, S. (1993). Effects of gender and other factors on rank of law professors in colleges of business: Evidence of a 'glass ceiling'. *Journal of Business Ethics, 12*(10), 771–778.

Frankforter, S. A. (1996). The progression of women beyond the glass ceiling. *Journal of Social Behavior and Personality, 11*(5), 121-132.

Ginther, D. K., & Hayes, K. J. (1999). Gender differences in salary and promotion in the humanities. *The American Economic Review, 89*(2), 397–402.

Glazer-Raymo, J. (2001). *Shattering the myth: Women in academe*. Baltimore, MD: Johns Hopkins University Press.

Glazer-Raymo, J. (Ed.). (2008). *Unfinished agendas: New and continuing gender challenges in higher education*. Baltimore, MD: Johns Hopkins University Press.

Jacobs, J. A. (1996). Gender inequality in higher education. *Annual Review of Sociology, 22*(1), 153-185.

Jackson, J. F. L., & O'Callaghan, E. M. (2009). What do we know about glass ceiling effects? A taxonomy and critical review to inform higher education research. *Research in Higher Education, 50*(5), 460-482.

Jackson, J. F. L., & O'Callaghan, E. M. (2011). Understanding employment disparities using glass ceiling effects criteria: An examination of race/ethnicity and senior-level position attainment across the academic workforce. *Journal of the Professoriate, 5*(2), 67-99.

Johnsrud, L. K. (1991). Administrative promotion: The power of gender. *The Journal of Higher Education, 62*(2), 119-149.

Johnsrud, L. K., & Heck, R. H. (1994). Administrative promotion within a university: The cumulative impact of gender. *The Journal of Higher Education, 65*(1), 23-44.

Kay, F. M., & Hagan, J. (1995). The persistent glass ceiling: Gendered inequalities in the earnings of lawyers. *The British Journal of Sociology, 46*(2), 279–310.

Lee, S. M. (2002). Do Asian American faculty face a glass ceiling in higher education? *American Educational Research Journal, 39*(3), 695-724.

Lemons, M. (2003). Contextual and cognitive determinants of procedural justice perceptions in promotion barriers for women. *Sex Roles, 49*(5/6), 247–264.

Leveson, N. G. (1990). *Educational pipeline issues for women*. Paper presented at the Computing Research Association Conference, July, 1990. Snowbird, UT.

Luna, G., & Cullen, D. L. (1995). *Empowering the Faculty: Mentoring Redirected and Renewed. ASHE-ERIC Higher Education Report No. 3*. Washington, DC: ERIC Clearinghouse on Higher Education.

Mason, M. A., & Goulden, M. (2002) Do babies matter? The effect of family formation on the lifelong careers of academic men and women. *Academe, 88*(6), 21-27.

Mason, M. A., & Goulden, M. (2004). Marriage and the baby blues: Redefining gender equity in the academy. *The Annals of the American Academy of Political and Social Science, 596*(1), 86-103.

Maume, D. J., Jr. (2004). Is the glass ceiling a unique form of inequality? Evidence from a random-effects model of managerial attainment. *Work and Occupations, 31*(2), 250–274.

McCall, L. (2005). The Complexity of Intersectionality. *Signs: Journal of Women in Culture and Society, 30*(3), 1771-1800.

McDowell, J. M., Singell, J., Larry, D., & Ziliak, J. P. (1999). Cracks in the glass ceiling: Gender and promotion in the economics profession. *The American Economic Review, 89*(2), 392–396.

Meier, K. J., & Bohte, J. (2001). Structure and discretion: Missing links in representative bureaucracy. *Journal of Public Administration Research and Theory*, *11*(4), 455-470.

Morgan, L. A. (1998). Glass-ceiling effect or cohort effect? A longitudinal study of the gender earnings gap for engineers, 1982 to 1989. *American Sociological Review, 63*(4), 479–493.

Morrison, A. M., & Von Glinow, M. A. (1990). Women and minorities in management. *American Psychologist, 45*(2), 200-208.

Morrison, A. M., White, R. P., & Van Velsor, E. (1987). *Breaking the glass ceiling: Can women reach the top of America's largest corporations?* Reading, MA: Addison-Wesley.

National Center for Educational Statistics [NCES]. (2002). *1999 National study of postsecondary faculty (NSOPF: 99) methodology report*. Washington, DC: Author.

Powell, G. N., & Butterfield, D. A. (1994). Investigating the glass ceiling phenomenon: An empirical study of actual promotions to top management. *The Academy of Management Journal, 37*(1), 68–86.

Reskin, B. (1988). Bringing the men back in: Sex differentiation and the devaluation of women's work. *Gender and Society, 2*(1), 58–81.

Rosenfeld, R. A. (1980). Race and sex differences in career dynamics. *American Sociological Review, 45*(4), 583-609.

Rosser, S. V. (1990) *Female friendly science*. Elmsford, NY: Pergamon Press.

Shultz, E., Montoya, A. L., & Briere, P. M. (1992). *Perceptions of institutional climate*. Kutztown, PA: Kutztown University.

Thomas, S. L., Heck, R. H., & Bauer, K. W. (2005). Weighting and adjusting for design effects in secondary data analyses. In P. D. Umbach (Ed.), *Surveying research: Emerging issues* (pp. 51-72). San Francisco, CA: Jossey-Bass.

Tomaskovic-Devey, D., & Stainback, K. (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.

Wright, E. O., Baxter, J., & Birkelund, G. E. (1995). The gender gap in workplace authority: A cross-national study. *American Sociological Review, 60*(3), 407-435.

Yamagata, H., Yeh, K. S., Stewman, S., & Dodge, H. (1997). Sex segregation and glass ceilings: A comparative statics model of women's career opportunities in the federal government over a quarter century. *The American Journal of Sociology, 103*(3), 566–632.

Reframing the Two-Body Problem in U.S. STEM Departments: Asian Women Faculty Negotiation of Career and Family

Tamara Yakaboski
University of Northern Colorado

Abstract: *This qualitative study examines the transition of 21 Asian women in the fields of science, technology, engineering, and mathematics (STEM) into faculty positions within a U.S. context. The participant's strategies for negotiating career, family, and childbirth included: 1) the woman functioning as a "tied migrant;" 2) her partner functioning as a "tied migrant" or trailing spouse; or 3) entering into a long distance relationship where both partners pursued their careers separately. This study stresses the need to understand international women faculty's simultaneous balancing of their professional and personal lives within gender and cultural contexts influenced by pregnancy and the role of seniority within marriage.*

> Women are not just following their husbands.
> They might choose to follow their husbands and husbands choose to follow their wives.
> The family unit makes a lot of decisions that may or may not be balanced one way or the other.
>
> (Indian woman engineer)

Tamara Yakaboski is an Associate Professor in the Higher Education & Student Affairs Leadership Department at University of Northern Colorado.

Introduction

Studies of the "the two-body problem," which refers to situations involving academic couples trying to find jobs together, often minimize issues of race and ethnicity, but have particularly done so on the issue of national origin (e.g., Didion, 1996; Ferber & Loeb, 1997; Kulis & Sicotte, 2002; Wolf-Wendel, Twombly, & Rice, 2000). This is unfortunate because many institutions of higher education actively seeking to increase female and minority faculty representation in the science, technology, engineering, and mathematics (STEM) fields could benefit from a better understanding of how nationality influences candidate recruitment and retention. Foreign-born women are increasingly migrating to the U.S. to study at universities and to seek employment. In fact, 45% of international students at U.S. institutions are women (*Open Doors*, 2010) and 90% of Asian science and engineering faculty are born outside of the U.S. (National Science Foundation [NSF] Division of Science Resources Statistics, 2007). Of particular significance to this study, in 2006, foreign-born Asian women constituted 3% of doctoral faculty in science and engineering fields, compared to just 1% for Black and Hispanic women (Burrelli, 2009). "Immigrant women professors" may become a "new American academic generation" (Skachkova, 2007, p. 697) if there are increasing work prospects in the STEM fields and if institutions seek to add diversity by hiring minority women (Burrelli, 2008).

Asian born women in STEM fields represent a significant and growing percentage of the faculty in these traditionally male-oriented disciplines (Pillis & Pillis, 2008). It is therefore important that researchers and administrators better understand how these individuals negotiate gender and the intersection of home country cultures within an American cultural context (Aquirre, 2000). Most existing studies of female faculty members combine native-born and immigrant international faculty into a single category, which makes understanding their different experiences difficult (Skachkova, 2007). In addition, because Asian-born female faculty members are also frequently part of an academic couple, or coupled with partners who also hold a Ph.D., partner relationships are an additional factor shaping their experiences (Astin & Milem, 1997; Grant, Kennelly, & Ward, 2000; McNeil & Sher, 1998; Schiebinger, Henderson, & Gilmartin, 2008). Researchers exploring the experiences of international women faculty should consider these issues to properly

understand their experiences at U.S. institutions. Such information may help with recruitment and retention issues, and may also be helpful for improving the experiences of all women faculty members who are negotiating relationships and/or family and academic careers.

This study uses a framework blending Western feminist theoretical perspectives with third world feminism (Mohanty, 1991; Trinh, 1989) to collect and analyze qualitative data from 21 Asian female faculty participants. The goal of the study is to better understand the experiences of international women in U.S. academe, and in particular how partnering relationships with fellow academics or Ph.D. educated individuals influences these experiences. By considering how foreign-born women faculty in STEM fields negotiate among career options while also considering family and partner's careers, this study may help us to better understand the decisions they make regarding faculty positions within the U.S. while also adding to the existing U.S. focused literature on academic couples.

Literature on Academic Couples and STEM

The American professoriate has become more diverse and internationalized as a result of hiring increases in the numbers of foreign-born professionals (Lin, Pearce, & Wang, 2009; Nelson & Rogers, 2005; Skachkova, 2007). Not only do women experience faculty careers differently than men, but when nationality and race become factors (Ferber & Loeb, 1997; Johnsrud, 1995; Perna, 2001; Wolfinger, Mason, & Goulden, 2008; Wolf-Wendel & Ward, 2003), their experiences varied even more. This occurrence was even more pronounced within the traditionally male-dominated fields of STEM (Etzkowitz, Kemelgor, & Uzzi, 2000; Gatta & Trigg, 2001; Olson, 2002; Pillis & Pillis 2008; Valian, 1998; 2006). Two main areas that researchers have extensively examined are the role of gender in the STEM fields' traditionally White male environment (e.g., Etzkowitz et al., 2000; NSF, 2007; Olson, 2002; Pillis & Pillis 2008; Valian, 1998; 2006) and women faculty and family (e.g., Armenti, 2004; Mason & Goulden 2002; Wolfinger et al., 2008), but these research areas have largely ignored international women (Philipsen, 2008; Skachkova, 2007). Marriage, children, and gender all play a role in professional immigration and international women faculty's experiences (Kannankutty & Burrelli, 2007; NSF, 2007; Skachkova, 2007) making it important to examine these intersections.

Background on Dual Academic Couples

While literature on academic couples exists, institutions largely have resisted addressing the intersection of personal and professional life (Wells, 2005) in their hiring practices. This is problematic for institutions and fields seeking to recruit and retain woman, particularly non-white women because they fail to appreciate the unique concerns of academic couples. Of the academic women who marry, many do so with other scientists, engineers, and/or academics. Reasons range from meeting partners during graduate school (Sweet & Moen, 2004) to making a conscious strategic decision to enter into a relationship with someone in a similar demanding academic or scientific discipline (Grant et al., 2000). The range varied from 40% for the general faculty population (Astin & Milem, 1997; Grant et al., 2000; Schiebinger et al., 2008) to as high as 68% in physics (McNeil & Sher, 1998). Research also indicated that 50% of Asian women science and engineering doctorate holders are married to another scientist or engineer and 56.1% have children living in the household (Burrelli, 2009; NSF Division of Science Resources Statistics, 2007).

One factor affecting the experiences of international women faculty members was that they were likely to partner or marry other faculty who were often in the same or similar discipline (Astin & Milem, 1997; Didion, 1996; Ferber & Loeb, 1997; Kulis & Sicotte, 2002; Schiebinger et al., 2008; Wolf-Wendel et al., 2000; Wolfinger et al., 2008). This pattern emerged during the 1960s and 1970s when, in earlier decades, academic women typically remained unmarried (Ferber & Loeb, 1997; Miller-Loessi & Henderson, 1997). Scholarship on the inequality and discrimination of women in academe in the 1970s confirmed the obstacle of societal expectations framed by traditional roles for women regarding priority of family over career (Freeman, 1977).

Most notable, starting in the 1980s, academic women combined "education and career with marriage and family" (Kulis & Sicotte, 2002, p. 4), which created the ongoing pattern of dual academic career couples. Academic dual hiring increased from 3% of all hires in the 1970s to 13% in the 1990s, with women faculty utilizing and being the recipient of dual hiring practices at higher rates than men (Schiebinger et al., 2008).

A recent survey of 9,000 U.S. faculty found that 40% of women faculty had partners who were also a faculty member compared to only 34% of men (Schiebinger et al., 2008), thus creating a dual academic career couple. Although exact numbers are difficult to isolate, a survey within physics showed that 50% of female physicists are married to other scientists (McNeil & Sher, 1998). Additionally, Asian born women were more likely to have children than White, U.S. born women (NSF Division of Science Resources Statistics, 2007) causing the intersection of career and family to affect these women more due to childbirth and a larger responsibility for childrearing (Olson, 2002). Dual (U.S.) academic couples are likely to negotiate "more egalitarian arrangements" (Astin & Milem, 1997, p. 141); however, Astin and Milem's research did not address non-Western relationships. More research on international couples is warranted since existing literature has shown that the combination of marriage and children may have a negative impact on women's ability to obtain a tenure-track position (Ferber & Loeb, 1997; Wolfinger et al., 2008).

Dual Strategies

Dual academic career couples are unique because they work in jobs that require specialized, high level education and training, and face the difficult situation of finding two of these limited positions in a geographical space that allows them to be together while both pursue their careers. Researchers have examined various strategies that involve sharing one academic position or living apart (Didion, 1996; Ferber & Loeb, 1997; Wolf-Wendel et al., 2000; Wolfinger et al., 2008). Large cities or diverse geographical locations often have higher concentrations of women scientists due to an increased number of work opportunities (Kulis & Sicotte, 2002) that allow couples to take positions within a commuting proximity.

Dual academic career couples' strategies vary based on geographical issues, relationship seniority, children or pregnancy timing, and institutional hiring policies. Kulis and Sicotte (2002) use the terms "trailing spouse" and "tied migrant" to explain how one partner moves away from their doctorate training location to follow the other partner's career. In their original application of tied migrant, they were not examining individuals who were foreign; however, this study extends their phrase to also include those participants who are indeed

immigrants. Thereby, the phrase "tied migrant" has a dual meaning in this study.

Even though a couple may approach dual careers in a more or less equalitarian way, according to Kulis and Sicotte (2002), the results more often have a negative impact for women:

> Regardless of academic achievement, wives in dual-career households are more likely to be the "trailing spouse" or "tied migrant" whose career suffers after a move, or to be the one who is constrained from moving to a more advantageous career destination. (p. 6)

With more women as the tied migrant, it means that women are less likely to be in a tenure-track position (Miller-Loessi & Henderson, 1997; Wolfinger et al., 2008), which makes it difficult to recruit and retain female faculty. The trailing partner instead may find employment as an adjunct, instructor, or administrator (Schiebinger et al., 2008; Wolf-Wendel & Ward, 2003) or leave the field. This pattern's consequence places women more often than men in positions where they have to prioritize career or family in spite of their education level or academic ability.

A related issue is the traditional pattern of women marrying older men who often have more advanced careers. This pattern was the norm until the 1980s when it began switching to "homogamy" or "marrying those similar in age and education" (Kulis & Sicotte, 2002, p. 5; Schiebinger et al., 2008). When men were the first hired in faculty positions, women were more likely to become the trailing spouse and have their careers suffer as the men stated that their positions were of higher priority. However, when the women were the first hired, the women were likely to be partnered with someone of equal rank or to be the senior ranked person in the relationship (Schiebinger et al., 2008). In this latter situation, women stated that both their own and their partner's careers have equal status. Academic women overall, regardless of being the first or second hire, reported that they have a more equitable approach towards both careers (Schiebinger et al., 2008).

One strategy for dealing with relationships and academic careers is to long distance commute. While one study showed this was beneficial to

women's careers (Bellas, 1997), this benefit came at the cost of other stresses and dilemmas (Miller-Loessi & Henderson, 1997). The decision to live apart required individuals to temporarily detach from personal relationships in exchange for the best job possible. Etzkowitz et al. (2000) described this behavior as "a man's approach to things" (p. 135) or stereotypical male behavior that would lead to rewards for taking his career seriously. Yet, it is debatable if women are rewarded for prioritizing their career over family responsibilities especially when considering cultural perspectives and gender role expectations. This strategy might be one of the ways women acculturate and try to fit their life requirements into a male model of academe (Rich, 2000; Wolfinger et al., 2008).   Although research has explored the nature of dual academic couples in U.S. institutions, there is little known about how similar issues affect academic couples who come to the U.S. from other countries with different cultures.

Methodology

To investigate Asian women faculty's experiences in U.S. higher education, I designed a qualitative study that explored educational and career decisions. Because my focus was on women, I used a feminist theoretical perspective to frame the study. My guiding question concerned the strategies Asian women use to navigate from graduate school to faculty positions in the United States. The perspectives presented in this paper focus on the women's narratives and what was meaningful to them as they interacted within the American university environment.

Theoretical Framework

My framework blends a Western feminist theoretical perspective with third world feminism (Mohanty, Russo, & Torres, 1991; Trinh, 1989). The phrase "third world" represents not imperialism but is associated with Chandra Mohanty (1991) representation of "new immigrants" to the U.S. where "alliance is a common *context of struggle* rather than color or racial identifications" (p. 7). This blended theory approach permitted me to focus on the intersection of cultures, gender, nationality, race and class, which are all specific to international women living and working in another country. While Western feminism historically has focused on equal rights based around gender, this combination recognized the

relational nature of gender and nationality and acknowledged that international women experience Western higher education institution's patriarchy in more complex ways than U.S. born women of color. Additionally, the framework recognizes that the "politics of "personal life" may be differently defined for middle-class whites and for [third world women]" (Mohanty, 1991, p. 9). I chose this framework to help ensure the Asian women's voices were respected and represented in ways that can empower other women in similar positions and serve as a call to action for higher education institutions and STEM departments to change the masculine culture (Crotty, 1998; Ramazanoglu, 2002).

Site Selection

I recruited 21 participants who were born in Asian countries and who, at the time of the study, were faculty members at two research universities within STEM departments in the same Western state. The participants were from two public research universities both with the same Carnegie classification of very high research activity. While these were a convenient sample, they also were selected so that the role of state and institutional policies on international faculty hiring and dual couple hiring could be considered. Both universities had dual recruiting policies, which the state's board of education supported. Also, both institutions were located in urban environments that provided related job opportunities for themselves or their partners. Both institutions had the highest numbers of international students and scholars in the state (*Open Doors*, 2010) and employed Asian born female faculty. The one other public university in the state did not have any STEM female faculty who met these criteria and the institution was not in the same Carnegie classification.

Participants

I chose participants through convenience and snowball sampling techniques (Denzin, 1997) and first identified participants through public departmental websites after selecting the institutions. Some participants also provided names of other Asian female colleagues whom they knew. This sample represents 21 out of a total 32 identified. Some of these "missing" women were unavailable due to sabbaticals or other conflicting commitments during the study's timeframe.

As shown in Table 1, participants came from China (eight), India (six), Japan (two), and South Korea (five). I wanted a comprehensive representation of all available Asian women so the selection was a full spectrum of career stages: post doctorate (one), lecturer (two), assistant professor (eight), associate professor (six) and professor (four). There were nine in science fields, which included physics and computer science, eight women in engineering related fields, and four in mathematics. Nineteen of the women were married at the time of data collection, one was divorced, and one was single. Twelve women had children under 18 years of age at the time.

Prior to the interviews, I conducted a supporting document analysis of curriculum vitaes and used public websites to provide background educational and career information. The interviews were approximately an hour and a half and were all conducted in English in the women's campus offices.

Data Analysis

The purpose of a feminist theoretical framework was to guide the research and analysis and to avoid just "adding women" in but instead to examine problems from the "perspectives of women's experiences" as the indictor of "reality" (Harding, 1987, p. 7). Third world feminism was a reminder to represent the "multiple consciousness" of the women who participated in this research (Mohanty, 1991, p. 36). With each woman's transcription, I contextualized their migration, education, and career stories with how they dealt with family life grounded in the idea that data analysis involves not only retelling but interpretation (Denzin, 1997; Gibbs, 2007).

I coded the data using both a concept-driven approach combined with an open coding approach (Gibbs, 2007; Strauss & Corbin, 1997). Beginning with a preliminary code list based on relevant literature and a feminist theoretical perspective, I then returned to the transcriptions and used a constant comparison method to determine emergent categories and themes. The combined feminist framework revealed experiences of nationality and gender with behaviors of resistance and empowerment.

Limitations

This study has several limitations that should be considered by readers. First, it focuses on the experiences of Asian born woman at particular institutions located in the same state. Although I am not aware of any specific institutional characteristics that make these institutions unique, there may be state level policy or cultural issues that make my participant's experiences different from similar individuals at institutions in other states. This could be especially true for institutions located in more rural regions.

Another limitation is that my participants may have been reluctant to discuss various personal or professional matters with me, or felt it inappropriate to share negative experiences. For example, it is possible that participants may have intentionally presented their partner relationships in the most positive light possible. I did attempt to establish rapport and researcher trustworthiness so that the participants felt comfortable sharing their experiences. This limitation is often a concern for qualitative research and should not limit the importance of the findings.

Readers should also be aware that my participants were limited to women who were successful in migrating to the U.S. for either graduate school or post doctoral work. The voices missing from this study are those who returned home after graduate school by choice or because they were unsuccessful in locating employment, and those who may have stayed in the U.S. but pursued a position in the private sector. This omission, however, offers an opportunity for future longitudinal study by interviewing individuals during graduate school and following them after graduation.

Table 1
Participant Details

Birth Country	Field	Faculty Status	Marriage Status	Partner Status	Partner Degree	Children
China	Science	Assistant Professor	Chinese husband	Science faculty, Different university	PhD	yes
China	Engineering	Assistant Professor	Chinese husband	Engineering student, Different university	PhD	no
China	Engineering	Assistant Professor	Chinese ex-husband, European 2nd husband	Engineering faculty / Industry engineer	PhD / PhD	yes
China	Science	Assistant Professor	American husband	Science faculty, Same department	PhD	yes
China	Engineering	Assistant Professor	Chinese husband	Industry engineer	PhD	yes
China	Science	Assistant Professor	Chinese husband	Engineering faculty, Same university	PhD	yes
India	Engineering	Associate Professor	Indian husband	Industry scientist, Same field	PhD	yes
India	Engineering	Associate Professor	Indian husband	Engineering faculty, Same department	PhD	yes
India	Engineering	Associate Professor	American husband	Engineering faculty, Same department	PhD	yes
India	Science	Professor	Indian husband	Industry engineer, Same field	PhD	yes

Table 1 (Cont.)
Participant Details

Birth Country	Field	Faculty Status	Marriage Status	Partner Status	Partner Degree	Children
India	Science	Associate Professor	American husband	Science faculty, Same department	PhD	yes
India	Mathematics	Professor	American ex-husband	Mathematics faculty	PhD	no
Japan	Engineering	Associate Professor	American husband	Industry engineer, Same field	Masters	no
Japan	Engineering	Senior Lecturer	Indian husband	Engineering faculty, Same department	PhD	no
South Korea	Mathematics	Post doctorate	Korean husband	Industry scientist	PhD	yes
South Korea	Mathematics	Assistant Professor	Not married	Not applicable	NA	no
South Korea	Science	Professor	Korean husband	Engineering faculty, Same university	PhD	yes
South Korea	Mathematics	Lecturer	Korean husband	Engineering faculty, Same university	PhD	no
South Korea	Science	Assistant Professor	Korean husband	Industry engineer, Different country	PhD	yes

Asian Women Faculty and Career Couple Strategies

"My family is totally attached to my own career or it can affect my career as well." (Chinese, assistant professor, engineering)

The women's experiences required strategy and negotiation in how they transitioned into faculty and negotiated family life once they decided to pursue academia as their career choice. Since 20 of the participants either met their partners during graduate school or a post doctorate position or migrated to the U.S. together for education and employment, all the

married women in this study were at some point or still are part of a dual academic career couple.

As one female Indian associate professor engineer explained, "it became a question of two people trying to make their lives match and work together." Another Indian engineer and her spouse, who was also an Indian engineer, both pursued academic positions. For them, this meant that early in their careers they compromised on the geographical location in order to stay together, which was not the norm for the other participants:

> It was very clear that neither one of us was not going to pursue our wish to be in academics. ... So, look at big cities or look at multiple places …We have not taken jobs in two different places. And I think we have been able to work it out so far. It doesn't mean [that] we don't spend a lot of time working away from each other, but we were planning on having a child or family, so at that time we were looking for places that would take both of us.

It took about three years before they were able to both obtain faculty positions at the same university. During that limbo time, they both continued to work in the same city by pursuing post doctorate positions and industry opportunities, although her work was on hold for one year due to pregnancy.

In the transition to faculty positions, the women negotiated career strategies to include marriage and family. The negotiation revealed three main strategies: 1) the woman functioning as a "tied migrant;" 2) her partner functioning as a "tied migrant" or "trailing spouse;" or 3) entering into a long distance relationship where both partners pursued their career separately. Marriage and childbirth strongly influenced which one of these three strategies the women chose. It is important to note that these three strategies apply only to the "successful" women who stayed in academia and did not "opt out" for an industry job, stay at home or return to their home countries. While these strategies are not specific to international women, these findings demonstrate that they share similar concerns but at higher rates due to the increased likelihood of marriage and childbirth compared to American born women faculty.

The Woman as Tied Migrant

Thirteen participants were tied migrants meaning that they followed their partners who were also immigrants to the U.S. Four of those women were Chinese and specifically migrated to the U.S. with or followed their Chinese husbands who moved for graduate school. One Chinese participant explained that women's responsibilities made being the tied migrant part of a compromise that women make because of family obligations and responsibilities:

> Women in this study definitely have to put out a lot because you do make a compromise in the family to follow the path and maintain the family life. So, if I say how much between my husband and I. ... I pretty much follow wherever he ends up first. So, you know, it's not completely equal but on the other hand that's the compromise you have to make. (Associate professor, science)

As shown in Table 1, 18 of the women in this study married men with doctorates in STEM. The chance of the women's career suffering was greater when they partnered with older or more established persons. An Indian physics associate professor said:

> A lot of women marry people senior to them. So, [if] he's more advanced in his career than she is, then she falls farther and farther behind because his professorship is always more important than her assistant professorship.

A Japanese engineering lecturer whose spouse, an Indian national, was already a tenured faculty member, stated that her geographical location and position were both pre-determined because her husband got a job first and "at this point … [my] husband has the priority, so where he goes, [I] go." She has been in a lecturer position in engineering for the past eleven years. A South Korean woman, who had migrated to the U.S. with her husband to both pursue doctorates at a university in the Southeast, stated, "When you're married you have to really compromise with your spouse and plus, too, he kind of graduated six months before I graduated and he got the job in the [metropolitan] area. So, I was looking at what would be available for me."

The Indian mathematician who had married (and later divorced) an older American mathematician, said that her geographical location and decision to remain in the U.S. was dictated by that marriage:

> I got married when I came to the United States. When I was in [a Midwest state], my then-husband finished his degree and found a job, and in those days [1970s] a wife went with the husband, so I had to change. So, I went to [the same state].

The role of pregnancy. In addition to marriage, the timing of pregnancy influenced a woman's status as a tied migrant. Pregnancy was a reason for one Chinese woman, who married an American science professor, to become a trailing migrant spouse:

> That [moving away from her doctoral institution] actually was a personal thing because my husband, we actually, we knew each other in graduate school but he is, like, one or three years ahead of me, so at that time he was ready for the next position. I was not really ready, so he moved to this clinic for a faculty permanent position. I was not ready for a faculty position at that point. I didn't finish my training yet but that's for personal reason, I was pregnant, so I decided I will move with him. (Chinese, assistant professor, science)

As another Chinese woman, who is now an assistant professor, stated:

> First, I came to [East coast city] with my husband, I came as J-2, so the spouse of someone. My husband was in the physics department for Ph.D. study. So, I was supposed to start my graduate study in chemistry department, we were in the same building, and by August, I found out I was pregnant, so I gave up Ph.D. study at that point. So, I stayed at home and took care of my first one. So, that was very hard because basically just my husband's student stipend. You know, the three of us, so I stayed, waited basically for 4 and half years, total, took my husband 5 years to get his Ph.D..

Unfortunately for her educational pursuits, that was not the end to the obstacles. After her husband found a post doctorate position five years after her first attempt at her own doctorate, she applied again:

> So, before I got [my] admissions letter, I found out I was
> pregnant again, …, so I was like, struggle, and thought that I
> kind of like, don't want to give up both so then, you know, this
> time I think and actually we were more strong because my
> husband was a post doc, so very much better than five years ago
> when he had a student stipend. So, finally, I decided [to] delay
> one semester, my second daughter was born December 16 and I
> started my Ph.D. study January 1st.

Her spouse served in two post doctorate positions causing the family unit
to move twice, thus, making it difficult for her to complete a graduate
program. When her spouse accepted a tenure-track position in a small
Midwestern town, he asked for a dual appointment. Unfortunately, the
receiving department was less than supportive and she experienced a
negative career setback:

> My husband ma[d]e [the] deal because [it] was a very small
> town. So, [he told them] "if you want me, you have to ask other
> department to invite my wife." … I went for [an] interview and
> they liked me and they made a verbal offer. Well, I ask[ed] for
> [some]thing written and they said that since it is a state
> university they cannot hire [me directly]. They have to do open
> search next year, they kind of promised me that it was just
> formality.

Based on the verbal messages, the couple moved their family to this
small Midwestern town with the lure of an eventual tenure track position
for her. After a year of lecturing and interviewing, the department denied
her the position. Due to state and institutional policies, her immediate
hiring was prevented and the couple moved to another university. She
received a research assistant professor position, but the tenure track
position still eluded her. She experienced an eight year delay between her
doctorate education and first tenure track faculty position. These
experiences led her to take their two daughters and move to a different
state from her husband, so she could accept a tenure-track appointment.
The cost of pursuing her career was that she maintained responsibility for
the children and essentially was raising her daughters as a single parent.
Unfortunately, her story of delayed career and inhospitable academic
department is not an uncommon narrative.

Another academic scientist couple changed institutions due to negative experiences and a desire for a more accommodating environment towards spouses working together. The Chinese woman stated that:

> Actually one of the reasons we left, they [the department] were not very supportive of couples. I think they started to make rules that family members were not allowed in same lab … They made me go through a lot of unnecessary difficulties, in my opinion, just purely because I'm another faculty's wife and I'm already there, which I saw was not fair but I can't change anything. One thing I can do is move to a different place that is more supportive. (Assistant professor, married to an American scientist, associate professor)

After this negative experience, they accepted academic positions at a new university that was supportive of their dual status and their shared research agenda:

> The policy of [our current institution] is very beneficial for the couple to find a place. He actually got the position first and then I didn't have anything lined up until I got here. Then I pursued [a position] just to see whether or not I could and actually they [the department] encouraged and made arrangements for me to find a position [in the same department as tenure track].

Even when universities encourage dual career couple hiring, departmental culture can either support or work against the policies.

The Man as Tied Migrant or Trailing Spouse

Supportive departments. In three situations, the male partner was the tied migrant or trailing spouse. Both terms are used for the men since not all of them were immigrants whereas all of the women in this study were. In these circumstances, the college departments had a chair or dean who was proactive in finding a position for the husbands in order to recruit and retain the women. When one Indian engineer graduated, she accepted an assistant professor position in a neighboring state while her spouse remained behind to finish his doctorate. However, she chose a location that took into consideration her future spouse. After completion of his own postdoctoral training, her fiancée followed her since she had

already started in a tenure track position. Her department was actively involved in finding a position for him to retain her. She explained:

> Once I got married, my department chair wanted to know, they had hired me and wanted keep me and they wanted to know what [my husband] was doing and so on and so forth and he [the chair] kind of initiated the whole thing about trying to get him here, like a visiting faculty for a couple of months and then they made it into a position. (Indian, associate professor, engineering married to another engineering professor)

Dual career couple hiring was a priority for her engineering department and the department's efforts made a positive impact in the number of female faculty within that unit. The department retained both through promotion and tenure.

Similarly, a Korean scientist experienced her department's support twice when her husband, a Korean engineer, was in need of an academic position:

> We were looking whether we are going to move home [to Korea] or stay here, but we need to find two jobs. That was the goal. And how it happened was a professor here, the assistant director of this school ran into me and said, "send me your resume and your husband is finishing up, so I might be looking and, so send your husband's resume, too." So, we submitted two resumes here and [it] worked out that he got a post doc here and I came here as [an] associate professor. And then, again, we are on the job market again because he finished his post doc, three years track, so we are looking and at which time my dean said, "you are not going anywhere, I want to retain you here" and he's got a job …and good news, he [just] got a letter that he got promoted to full professor.

These examples support the research on how women's careers lead her partner's when she is further along educationally than he is (Kulis & Sicotte, 2002; Schiebinger et al., 2008). These women's experiences demonstrate the critical role that departmental hiring committees and administrators have in recruiting and retaining women academics. These narratives also express the positive impact on recruitment and retention

when departments and more specifically, an individual with power, considers not only the academic position, but the position of the family unit.

Supportive spouses. In five cases, when the husband was interested in pursuing industry work rather than academic work, the woman's faculty career became priority:

> I always wanted to be academic. And my husband actually realized that I wasn't totally thrilled not being able to pursue what I wanted to, so he actually encouraged me to start applying. I said what about our dual career thing and he said you know we will take care of it. So, you know he's been the backbone of all this excess that I've been through. You know without this support I couldn't have done it. He's been so supportive of all that I've done. You know, even giving up his [national industry] position and coming here. So, that's why I said I've had an easy ride. (Indian, associate professor, engineering)

For a Chinese woman who was married to a European born engineer, she also expressed the support of her spouse for her to pursue an academic job while he moved with her and found industry work:

> That's another interesting thing about my husband, the moment I accept or got this offer, this department also agreed to look for a job for him. He was [in the industry], so he quit his job and followed me here so that was probably not very normal for guys to do that but he did it and, so he said he trusted we can find something here. So, first year we came here, end up I got the offer and started my job here but somehow he couldn't really get a job in this university, so he finally found [another industry job locally]. So, that was basically it, I would say he sacrificed quite a bit for me.

One Indian science professor shared how supportive her engineering husband has been for her academic career:

> There were many points when I could have chosen not to continue with research or gone off in a totally non-academic track but to some extent it's his dream too to keep me in research

because he believes. He's never articulated it that way but I think he believes that when someone has a talent you have to nurture it and, I think, I don't believe [in] myself that I have such a great talent but he believes it.

Another Chinese woman explained how her husband moved for her assistant professor position only to eventually apply for one himself:

After I got the job here, then he had to look for jobs and for the time he was working at [industry]. It was because it was the only choice, so he was actively contacting people here and they happened to have a job opening, so he applied and they like[d] him and [gave] him a job, so it works out nicely. But he does make a lot of effort into this otherwise it wouldn't happen so smoothly.

For the only participant who was married to someone without a Ph.D., the Japanese associate professor expressed that "as long as there's a program [in my field], I can see myself motivated to go anywhere. ... Nothing actually restricts us, so if there is opportunity I can apply if it is positive for my career development."

Unsupportive departments. Not all women in this study experienced these positive interactions. While interviewing for academic positions after graduate school, one woman Indian engineer received numerous offers while her spouse was interviewing also for engineering positions. Her need for a dual career option ultimately dictated her decision not to take a position at a more prestigious institution. One university told her, "we are hiring you and you alone." Her institutional selection was made because of the desire to support her husband's career as well as her own. While the more prestigious institution may have offered her greater professional opportunities or financial incentives, the fact that that institution refused to make provisions related to the career of her spouse prevented her from accepting.

Another Chinese science professor described her experience with her first husband, who was American, and ultimately how the marriage failed due to an inability to relocate together and both pursue their careers in science:

> He never had an opportunity to come here. Partly because I had no support from the department here or the college here to actually help my spousal relocation. That, in a way, may actually be the first sort of sense of, not intentional, some sort of discrimination part of the female faculty, if I were a male faculty, I believe that if my spouse needed a job coming back here, maybe it would be a different thing. And has something to do with me being female. Maybe I didn't go out and be aggressive. I didn't fight hard enough and that, so in a way through out my training I didn't really sense any sort of difference in gender but I think as I get further up the ladder I started sensing differences but it might just be our particular head of department or circumstance.

Long Distance Relationship Strategy

Although some couples had a more direct pathway to two tenure-track positions, other couples went to separate institutions where each could pursue career advancement. The long distance relationship strategy was a decision to geographically live apart during the early stages of postdoctoral training or a first academic position to minimize negative impact on both careers. Over one-third of the women in this study at some point in their career maintained long distance relationships as a strategy to focus on their career in the manner they desired rather than putting either partner in the position of tied migrant or unemployment.

As stated by one Chinese assistant professor in the study: "I ma[d]e up my mind that my career is also important, but I want [a] family and I also want [a] career." She was unsure if her husband would leave his position to follow her to her university and was unsure of how long they would stay separated since being in a long distance situation as a dual academic career couple presents many uncertainties. Another Chinese dual academic couple had been living in different states for over three years and each hiring season tried to find a new location with two positions.

A common experience for academic couples is difficulty during the job search process to find a shared location for employment:

> Well my husband and I were both [same university] Ph.D.'s and we were looking for positions together. Different but both

> aerospace, but different specializations, and he was getting offers at different places and faculty positions were something I was interested in, always, but I was getting offers in different places. Different parts of U.S. They were not converging. (Indian, associate professor, engineering)

Some couples initially live apart as a short-term strategy. As stated by one Indian physicist, she and her academic spouse lived apart early in their careers so that later they did not have to make these concessions, but rather, could demand a dual appointment:

> It was hard in the beginning, so for our first post docs we got jobs in different cities and we were already married but we took the best jobs we could because that way we are building up our reputations. So, sort of delayed gratification and then three years later we got jobs. We took slightly less good jobs to be in the same city. (Indian, science, associate professor, married to American scientist in the same department)

In order to negotiate a dual career situation, they sacrificed prestige for accommodation. She and her spouse accepted dual career positions later once their careers were established:

> So, what we decided was that we could bear some hardship early on and then take the best job that would make a better future, career wise then cash in on that. …So, we were hired together. That was our condition for coming here.

For women earlier in their careers, there was not the same certainty of how things would work out. One Korean scientist accepted a teaching position in another state while her husband took an engineering job overseas. The living apart strategy required her to function as a single parent in a tenure track position:

> But it is hard, this living separately, I have a kid, but when you have two spouses that have two professional careers it's really, really hard to find the job in same place but I think you can work it out.

The role of pregnancy. Pregnancy was one significant influence that changed couples' ability or desire to live apart and in all these situations it was always the woman that became the trailing spouse. For example, a Chinese scientist was not ready to move to the next position but when she became pregnant she moved to where her husband was in a tenure track position. Another example was a Korean mathematician and her partner who had lived apart since 2002. In 2006, she moved closer to him because the geographical distance was too great with a child:

> The reason I moved to [another state] is I didn't want to be apart and I decided too, it is very hard to find a job for two persons in [the] U.S. because [the] U.S. is really big cause if I live in Korea, then even though we have a job in other place, it's kind of small country, so you can at least visit every week, or so, but here it's more than three hours drive or flight. So, it is hard to do over one month and since we have a baby, I decided it's not good to live only with mom because I [took] care of my baby for eight months and it [was a] really hard time for me. I worked and my babysitter was home and then [I] ran and take care of my baby and the baby at that time, they don't sleep at night. It's really hard for me. It's important to have a career for me, but it's more important for a child to have a two parent. It is not good for her to have only one. So, I decided to go. (South Korean, mathematics, lecturer)

While the couple previously decided not to sacrifice their careers, the timing of a child altered the career strategy and focus. The couple eventually moved back to South Korea where she pursued an industry job as an engineer.

Pregnancy timing impacted women's careers more than their spouses while putting a strain on the women and their careers. Women face a difficult situation of negotiating family decisions and career decisions simultaneously especially in male-dominated departments and traditional marriages. The implications are not only for the academic couples but also for the departments who risk higher turnover with female faculty due to the need to negotiate career, family, and personal.

Conclusion

The recruitment and retention of STEM women is an important issue in the U.S. and the increasing number of Asian women students and faculty provides an opportunity for male-dominated departments to enhance intellectual, gender, and cultural diversity. Analyzing the perspectives of these STEM women illustrates critical issues that, if addressed, could more effectively attract qualified Asian women who are often part of a dual career couple.

The Asian faculty women in this study developed and continually reassessed their career strategies in accordance with not only career and professional goals but with personal and family influences as well. Careers and personal decisions are not due to cause and effect, but are active decisions that require complex considerations of personal career goals and the needs of family with an intersection of gender and multiple cultures. Multiple influences and forces surround and persistently influence how the women and their families continually negotiate career decisions, choices, and personal life. Research should not limit the examination of career decisions to the American context, but must holistically examine the international faculty's experience.

During the early career stage of faculty work, the life changes of marriage and childbirth influenced the women to continually re-negotiate and shift career strategies. Seniority in professional life strongly impacted which partner would be the first hire or leading spouse. Women's shift from marrying older men points to a changing pattern in who serves as the "tied migrant" or trailing spouse. When institutions and departments fail to accommodate academic couples, they miss not only potential contributions and the opportunity to increase intellectual diversity, but also both gender and cultural diversity as well.

 The literature on international female faculty is minimal; yet, their numbers are increasing each year and their presence in STEM departments serves to improve the numbers of women and the diversity in STEM fields. As colleges and universities try to increase their numbers of female faculty, they are turning to international graduate students and scholars. If this population is to be successful, it is important to examine their experiences not only as Asians, but also as international women to address issues of recruitment and retention.

Implications

As a recent study on the masculine and authoritarian nature of engineering schools pointed out, it is critical to change the culture of masculine fields and for policy makers and administrators to make change beyond attempting to "add women in" (Pillis & Pillis, 2008). STEM continues to place women on the outside of the culture; however, this research stresses the importance of dual hiring if departments truly are interested in diversifying faculty and recruiting and retaining women faculty.

The influence of family on choice further demonstrates the need for researchers and administrators to examine all areas of a woman's life rather than separating career from personal choices especially since it impacts recruitment, attrition, and retention. Research and policy should reframe the two-body problem as a two-body opportunity. A part of these women's success is due to the role that institutions and departments played in supporting dual academic couple hiring as a part of family-friendly policies. Although research has explored American women faculty, this study shows that Asian women face similar issues of family and career negotiation but it is even more critical for the international population. The strict role that age played in career decisions demonstrates a potential difference between U.S. and Asian born women.

Higher education institutions should examine "archaic anti-nepotism policies that have barred academic partners from working in the same department or institution" (Kulis & Sicotte, 2002, p. 26). If women faculty meet their future partners in graduate school and often in the same departments, then universities need to remove nepotism concerns otherwise they will continue to lose qualified academic couples. Moving beyond just removing anti-nepotism, family-friendly policies should be the goal if departments and institutions truly wish to recruit and retain women and their academic partners. The existence of family-friendly policies demonstrates that departments are not dealing with individuals but rather academic couples and their family unit. Without supportive policies and a family-friendly culture or environment in place STEM will continue to experience low numbers of women.

Three studies in particular offer suggestions on crafting dual policies that this research supports with an interest towards extending the

conversation to international faculty. Wolf-Wendel et al., (2000) posit questions for institutions to consider on the tangible and intangible costs of not having couple hiring policies. Schiebinger et al. (2008) suggest centralizing a dual career program office to facilitate and coordinate with departments on couple recruitment. They also suggest that universities need to allow departments enough flexibility to waive open searches in order to go forward with partner hiring. The American Council on Education's (2005) report, *An agenda for excellence: Creating flexibility in tenure-track faculty careers*, recommends creating flexibility in faculty positions and decisions from the recruitment stage through promotion and tenure stage so that policies are family-friendly and that life decisions do not penalize work ones.

However, having dual policies in place is not enough to create an environment that is family-friendly. As Wolf-Wendel et al. (2000) point out in their study on dual hiring policies and practices that stating there is a policy is different than actually doing something to make it happen. However, having a written policy known to current faculty and administrators does create a positive climate of awareness (Schiebinger et al., 2008) and assists in narrowing negative feedback from existing faculty. A written policy can then be advertised which helps make an institution more welcoming. Institutions need a cultural change so that women and their partners do not face penalties for requesting or using dual-couple policies. As demonstrated in the relationships of long distance, women who become pregnant move unless their departments are willing to recruit and hire their partners. Without attention to how women's biological reproduction timing overlaps with graduate school and the tenure process, departments will continue to have high attrition rates for women. This issue becomes even more critical in STEM fields that lack both diversity of color and gender.

Finally, as is the nature of qualitative research, this study does not attempt to generalize but rather to disseminate these women's career stories so that higher education department chairs, hiring committees and administrators can better understand their experiences. These narratives can help in the recruitment and retention of a more diverse faculty for STEM by establishing not only the need for family focused policies but also the role of the family in academic decisions. Power is regained and the goal of raising consciousness is completed by writing and sharing women's stories (Mohanty et al., 1991).

References

American Council on Education. (2005). *An agenda for excellence: Creating flexibility in tenure-track faculty careers.* Westport, CT: Greenwood.

Aquirre, A. (2000). *Women and minority faculty in the academic workplace: Recruitment, retention and academic culture.* ASHE-ERIC Higher Education Report Volume 27, Number 6. San Francisco, CA: Jossey-Bass.

Armenti, C. (2004). May babies and posttenure babies: Maternal decisions of women professors. *The Review of Higher Education, 27*(2)*,* 211-231.

Astin, H. S., & Milem, J. F. (1997). The status of academic couples in U. S. institutions. In M. A. Ferber & J. W. Loeb (Eds.), *Academic couples: Problems and promises* (pp. 128-155). Urbana, IL: University of Illinois Press.

Bellas, M. L. (1997). The scholarly productivity of academic couples. In M. A. Ferber & J. W. Loeb (Eds.), *Academic couples: Problems and promises* (pp. 156-181). Urbana, IL: University of Illinois Press.

Burrelli, J. (2008). *Thirty-three years of women in S&E faculty positions. "*Infobrief", Science Resources Statistics, National Science Foundation, 08-308. Retrieved from www.nsf.gov/statistics/infbrief/nsf08308/

Burrelli, J. (2009, October 27). Women of color in STEM education and employment. Presentation at CEOSE Mini-symposium on Women of Color in STEM. Arlington, VA: National Science Foundation.

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. Thousand Oaks, CA: Sage Publications.

Denzin, N. K. (1997). *Interpretive ethnography*. London, UK: Sage Publications.

Didion, C. J. (1996). Dual-careers and shared positions: Adjusting university policy to accommodate academic couples. *Journal of College Science Teaching*, *26*(2), 123-123.

Etzkowitz, H., Kemelgor, G., & Uzzi, B. (2000). *Athena unbound: The advancement of women in science and technology.* Cambridge, MA: Cambridge UP.

Ferber, M. A., & Loeb, J. W. (Eds.). (1997). *Academic couples: Problems and promises*. Urbana, IL: University of Illinois Press.

Freeman, B. C. (1977). Faculty women in the American university: Up the down staircase. *Higher Education, (6)*2, 165-188.

Gatta, M., & Trigg, M. (2001). *Bridging the gap: Gender equity in science, engineering and technology*. Rutgers University, NJ: Report for the Center for Women and Work.

Gibbs, G. (2007). *Analyzing qualitative data*. London, UK: Sage Publications.

Grant, L., Kennelly, I., & Ward, K. B. (2000). Revisiting the gender, marriage, and parenthood puzzle in scientific careers. *Women's Studies Quarterly, 28*(1/2), 62-85.

Harding, S. (1987). Introduction: Is there a feminist method? In S. Harding (Ed.), *Feminism & Methodology* (pp. 1-14). Bloomington, IN: Indiana University Press.

Johnsrud, L. K. (1995). Korean academic women: Multiple roles, multiple challenges. *Higher Education, 30*(1), 17-35.

Kannankutty, N., & Burrelli, J. (2007). *Why did they come to the United States? A profile of immigrant scientists and engineers*. Infobrief: National Science Foundation, NSF 07-324.

Kulis, S., & Sicotte, D. (2002). Women scientists in academia: Geographically constrained to big cities, college clusters, or the coasts? *Research in Higher Education, 43*, 1-30.

Lin, Z., Pearce, R., & Wang, W. (2009). Imported talents: Demographic characteristics, achievement and job satisfaction of foreign born full time faculty in four-year American colleges. *Higher Education, 57*, 703-721.

Mason, M. A., & Goulden, M. (2002). Do babies matter?: The effect of family formation on the lifelong careers of academic men and women. *Academe, 88*, 21-27.

McNeil, L., & Sher, M. (1998).*Dual-science-career couples: Survey results*. Manuscript. Retrieved from http://www.physics.wm.edu/~sher/survey.pdf

Miller-Loessi, M. A., & Henderson, D. (1997). Changes in American society: The context for academic couples. In M. A. Ferber & J. W. Loeb (Eds.), *Academic couples: Problems and promises* (pp. 25-43). Urbana, IL: University of Illinois Press.

Mohanty, C. T. (1991). Cartographies of struggle: Third world women and the politics of feminism. In C. T. Mohanty, A. Russo, & L. Torres (Eds.), *Third world women and the politics of feminism* (pp. 1-47). Bloomington, IN: Indiana University Press.

Mohanty, C. T., Russo, A., & Torres, L. (1991). *Third world women and the politics of feminism*. Bloomington, IN: Indiana University Press.

National Science Foundation, Division of Science Resources Statistics. (2007). *Women, minorities and persons with disabilities in science and engineering: 2007.* NSF 07-315: Arlington, Virginia. Retrieved from http://www.nsf.gov/statistics/wmpd

Nelson, D. J., & Rogers, D. C. (2005). A national analysis of diversity in science and engineering faculties at research universities. Norman, OK: Diversity in Science Association. Retrieved from http://cheminfo.chem.ou.edu/~djn/diversity/briefings/Diversity%20Report%20Final.pdf

Olson, K. (2002). Who has tenure? Gender differences in science and engineering academia. *Journal of Women and Minorities in Science and Engineering, 8*(3&4), 347-362.

Open Doors. (2010). *Open Doors 2010: Fact sheets by U.S. State*. New York, NY: Institute of International Education.

Perna, L. W. (2001). The relationship between family responsibilities and employment status among college and university faculty. *Journal of Higher Education, 72*, 584-611.

Philipsen, M. I. (2008). *Challenges of the faculty career for women: Success & sacrifice*. San Francisco, CA: Jossey-Bass.

Pillis, E., & Pillis, L. (2008). Are engineering schools masculine and authoritarian? The mission statements say yes. *Journal of Diversity in Higher Education, 1*(1), 33-44.

Ramazanoglu, C. (2002). *Feminist methodology: Challenges and choices*. Thousand Oaks, CA: Sage.

Rich, A. (2000). Toward a woman-centered university. In J. Glazer-Raymo, B. K. Townsend, & B. Ropers-Huilman (Eds.), *Women in American higher education: A feminist perspective* (pp. 3-15). Boston, MA: Pearson Custom Publishing.

Schiebinger, L., Henderson, A. D., & Gilmartin, S. K. (2008). *Dual-career academic couples: What universities need to know*. Palo Alto, CA: Michelle R. Clayman Institute for Gender Research, Stanford University. Retrieved from http://www.stanford.edu/group/gender/Publications/index.html

Skachkova, P. (2007). Academic careers of immigrant women professors in the U.S. *Higher Education, 53*(6), 697-738.

Strauss, A. L., & Corbin, J. (1997). *Grounded theory in practice*. London, UK: Sage Publications.

Sweet, S., & Moen, P. (2004). Coworking as a career strategy: Implications for the work and family lives of university employees. *Innovative Higher Education, 28*(4), 255-272.

Trinh, T. M. (1989). *Women, native other*. Bloomington, IN: Indiana University Press.

Valian, V. (1998). *Why so slow? The advancement of women*. Cambridge, MA: M.I.T. Press.

Valian, V. (2006). Women at the top in science - and elsewhere. In S. Ceci & W. Williams (Eds.), *Why aren't more women in science?* (pp. 27-37). Washington, DC: American Psychological Association Press.

Wells, J. (2005). Beyond the joint hire: Options and strategies for academic couples. *Modern Language Studies*, *35*, 68-73.

Wolfinger, N. H., Mason, M. A., & Goulden, M. (2008). Problems in the pipeline: Gender, marriage, and fertility in the ivory tower. *The Journal of Higher Education, 79(4),* 388-405.

Wolf-Wendel, L. E., Twombly, S., & Rice, S. (2000). Dual-career couples: Keeping them together. *The Journal of Higher Education*, *71*(3), 291-321.

Wolf-Wendel, L., & Ward, K. (2003). Future prospects for women faculty: Negotiating work and family. In B. Ropers-Huilman (Ed.), *Gendered futures in higher education: Critical perspectives for change* (pp. 111-134). Albany, NY: State University of New York Press.

Elitism or Pragmatism? Faculty Hiring at Top Graduate Programs in Higher Education Administration

Sydney Freeman, Jr.,
University of Idaho

David DiRamio
Auburn University

Abstract: *This study is an examination of the hiring practices of top-ranked higher education administration graduate programs in the United States. A total of 39 program coordinators, department heads, and/or deans were asked using qualitative methods to address the phenomenon of faculty hiring, including why a majority of top-ranked programs preferred hiring faculty who have doctorates from other top programs. One of the findings indicates that top-programs indeed hire them for very practical reason as identified in the study. Findings from this study should inform the decision-making of higher education program coordinators, department heads, and deans as they conduct faculty searches.*

> You go to college not only for the latest knowledge but also to meet people from different backgrounds. That's the genius of the American higher-education system compared with the Europeans'. We don't simply skim the elite.
>
> *Donna Shalala*
> *Professor of Political Science and*
> *President of the University of Miami*

Sydney Freeman, Jr. is an Associate Professor of Higher Education in the Leadership and Counseling Department at the University of Idaho.

David DiRamio is an Associate Professor and Higher Education Program Coordinator in Educational Foundations, Leadership, and Technology at Auburn University.

Introduction

Ask any undergraduate student studying economics in college and that student is likely be familiar with the neo-classical economic theory of Alfred Marshall and his view of firms as "profit-maximizers" (1890/2009). Interestingly, a corollary exists in higher education, as first noted by Bowen (1981), in which non-profit colleges and universities are "prestige-maximizers." Some years later Winston (1999) compared the competitive process in higher education to an arms race. Part of this competitiveness phenomenon includes the hiring of faculty, particularly among elite schools and programs.

For example, DiRamio, Theroux, and Guarino (2009) found that 70% of faculty members at top-ranked higher education programs received their doctorate from another top-ranked school, which was ten points higher than a previous study of graduate programs in special education (Bair & Bair, 1998). Additional analysis by DiRamio and colleagues (2009) found a noteworthy social network, a statistical "clique," in which the very top programs had closer network connections when compared with other programs and sources for faculty hiring. If a clique exists among the elite programs, what are the implications for diversity in graduate education?

Faculty Hiring by Top Programs

The practice by elite programs of hiring graduates from other elite programs is not a new phenomenon. This phenomenon occurs in the full spectrum of academic disciplines, including the physical and social sciences, humanities, and professional degree programs (Fabrianic, 2011). However in some fields, such as information studies, institutional prestige is weighted heavier than program prestige when judging the quality of a graduate's educational background (Wiggins, 2007). Capobianco (2009) found that there is a limited correlation between having high ranks from guides such as the *U.S. News and World Reports* rankings of colleges and universities and job attainment at the undergraduate level. In the field of higher education administration, research has shown that graduate programs that are perceived as prestigious by their academic peers are more likely to hire individuals from other top programs (DiRamio et al., 2009).

The maintenance and/or growth of prestige appears to be of paramount importance (Capobianco, 2009; Fabrianic, 2011), but it is unclear if the prestige motive is the prime motivator for higher education administration programs. And, while the study by DiRamio and colleagues (2009) revealed statistically that close connections between elite programs existed, no study using qualitative methods has emerged to better describe the phenomenon and ask the question, "why?" One reason this question is important is the limited tenure-track positions available to higher education graduates. Moreover, as globalization continues to impact the field of higher education, it is important to ensure that a diversity of ideas are represented in the composition of all faculty rosters, not just those from prestigious programs (DiRamio et al., 2009).

 The goal of this study was to use qualitative methods to investigate why top programs in higher education administration may prefer to hire faculty members from other top programs. This is a typical next step in a thread whereby the proverbial "why" question is used to investigate the quantitative results from the previous study, without *a priori* assumptions, and including the development of a conceptual framework for understanding the phenomenon under study (Maxwell, 2005). This study is a follow up examination of the hiring practices and "interconnected competitiveness" of top-ranked higher education administration graduate programs in the United States.

 A total of 39 program coordinators, department heads, and deans were asked using qualitative methods to address the phenomenon of faculty hiring, including addressing the question of why a majority of top-ranked programs preferred hiring faculty who have doctorates from other top programs. The two guiding research questions for this study included: "Why do a majority of top-ranked higher education programs prefer hiring faculty who have doctorates from other top programs?" and "What suggestions do program coordinators, department heads, and/or deans have for improvements of developing a more diverse composition of future faculty?"

Findings from this study will inform higher education program coordinators, department heads, and deans as they consider and conduct faculty searches. Moreover, the findings and recommendations presented here will assist graduate students and aspiring faculty in identifying areas in which they can better prepare for future faculty positions. Finally,

insights gained from this study will provide greater understanding of the need for diversity within search pools in order to enhance their programs.

Review of Literature

Higher Education Graduate Programs

The field of higher education administration is considered to be more than a century old (Goodchild, 2002). However, it has only been within the last 40 years that graduate programs have been studied (Altbach, Bozeman, Janashia, & Rumbley, 2007; Barnett, 2007; Dressel & Mayhew, 1974; Fife & Goodchild, 1991; Kienle & Lloyd, 2005; Wright & Miller, 2007). Goodchild (2002) described the study of higher education as:

> Sophisticated knowledge about and research on colleges, universities, and related postsecondary institutions, as well as the professional skills used by those persons who work in them [and] educate and train professionals for administrative, faculty, student life, and policy analyst positions in the country's approximately 4,000 postsecondary institutions and elsewhere. (p. 303)

Although there is limited literature describing the characteristics of faculty members serving specifically in higher education graduate programs, Harris (2007) and Wright (2007) have written about the need for a diverse composition of faculty within these programs. Harris' (2007) work suggested that it is important for higher education preparation programs to be composed of faculty from diverse professional backgrounds. He advised that a diverse set of faculty can expose students to both the theoretical and practical concepts that they will need to be effective in their future careers. Moreover, Harris (2007) noted that a diversity of instructor backgrounds, including full-time, adjunct, and emeriti faculty members, was common practice within higher education programs. Wright (2007) suggested that this arrangement gives students the opportunity to be exposed to new theoretical and research-based knowledge as well as the practical aspects of the higher education enterprise.

Faculty Hiring and Prestige

Tierney and Rhoads (1993) suggested, "One way of producing organizational change is to bring in new people with different values and orientations. Hiring new faculty represents an opportunity to reshape the organization . . ." (p. 35). However, when writing about hiring in his seminal report on faculty research performance, Creswell (1985) reported that colleges and universities often attempt to increase research productivity at their institutions by hiring graduates of top-ranked, prestigious graduate schools, which have the reputation of being highly productive. Interestingly, he found that the organizational culture of the hiring school did not substantively change for the better despite the influx of promising new faculty. In fact, over time the productivity of the new faculty dropped to the level of the older faculty. The culture of the organization did not change despite the influx of new faculty (Creswell, 1985).

If research productivity is not a wholly satisfying reason for explaining why elite institutions emphasize hiring from other top-ranked programs, then what is a better answer? It appears that the answer is rooted mostly in reputation and prestige. Lovett (2005) wrote of "the avid quest by institutions for places at the top of higher education's prestige pyramid" (p. B20). Interestingly, the quest for institutional prestige has done little to advance the reputations of many colleges, and it may be causing some of them to become less distinguishable from their competitors (Sweitzer & Volkwein, 2009). Moreover, in the study preceding the follow-up research presented here, DiRamio and colleagues (2009) noted that the pursuit of prestige may actually be causing a closed system to emerge, which is troublesome when considering that "these programs continue to move through an era of increased accountability, pursue new educational markets, and face globalization. Closed systems are not well suited to confront these challenges because of their inability to adapt to difficult situations and incorporate new ideas" (p. 158).

If new voices and fresh ideas, in the form of diverse faculty from an array of graduate programs in higher education, are not present in a hiring exchange of faculty among top programs, what are the broader implications? As American higher education grapples with rapid change and globalization, can replication of the status quo in graduate studies adequately prepare the next generation of scholars and practitioners to

meet that challenge? This study investigated the existence of a so-called clique in higher education graduate programs.

Method

A qualitative approach was utilized to investigate the findings such as examining why a majority of top-ranked programs preferred hiring faculty who have doctorates from other top programs. In order to collect initial demographic information and determine a sample group and the primary positions of that sample, an initial survey was sent to each faculty member, program coordinator, and/or dean that worked in the top 20 higher education programs ranked by *U.S News & World Report Best College 2011 Edition*.

U.S. News & World Report uses seven criteria to rank each higher education administration program including tuition charged, enrollment, average GRE verbal and quantitative scores of entering doctoral students, average amount of externally funded research expenditure per faculty member, total amount of externally funded research conducted by the school, and doctoral programs acceptance rate.

Phase Population and Sample Selection

Participants were solicited via email. The email included an Internet link to an online survey website. A university institutional review board approved the link and survey for this study. This survey included one open-ended question, which asked, what strategy(ies) can students from unranked higher education administration programs employ to make them more competitive for a position at a top ranked institution? After which participants were asked if they would be willing to share their perspectives in a follow-up interview. Participants were able to confirm their desire to be interviewed by sending an email to a secure university email account. Through email exchanges times were scheduled to interview participants individually and over the phone. Prior to the interviews the informed consent forms were sent to the participants and signed. Interviews were completed over the phone and through an open-ended questionnaire using online data-collection software. Participants were able to withdraw at any time without question.

In light of the recommendation of Morse (1994) this study had a sample size of 39. Morse suggested that when conducting a phenomenological study, more than ten participants should be included. In-depth interviews were conducted via phone conversations with program coordinators, department heads, and deans to explore the phenomena of prestige in hiring, as well as the closed system, "clique-effect" that may exist among top-ranked higher education administration programs, as described by DiRamio and colleagues (2009).

The participant population was comprised of faculty members, program coordinators, department heads, and deans employed in the top 20 higher education programs ranked by *U.S News & World Report Best College 2011 Edition*. Deans, department heads, and faculty were chosen as the participant population because they are integral to the hiring process of new faculty within a department. The responses of deans in particular were sought, as they are generally the university authority within a college or school of education that provides direction regarding academic expectations for faculty. And they also are generally responsible for offering positions to new faculty and they determine the start-up packages and salary offered to faculty candidates (F. K. Kochan, personal communication, August 2012; F. Miller, personal communication, March 2013).

All groups represented in this study have the unique opportunity to influence the way the program is operated on a daily bases. This study enabled these leaders to have an opportunity to suggest ways of developing a more diverse composition of future faculty. The only demographic information sought for this study was the distinctions between the various primary positions of the participants. Thirty-four (87%) of the participants identified their primary position as either an assistant, associate, or full professor in the field of higher education. Both groups that had individuals that identified themselves as either program coordinators (5%) or deans (5%) had two persons to identify as such. One participant (3%) self-identified as an academic coordinator.

The population of programs from which the sample was drawn can be found in the *U.S News & World Report* (2011) listing of the top 20 higher education administration programs (Table 1). From that pool, the researchers contacted deans, department heads, and faculty. Each were sent an email, called by telephone, and invited to participate in the study.

Once the initial contact was made, a follow up email was sent and call by telephone was made to confirm the time of the interview with each participant. Ultimately a convenience sample of 39 individuals participated in this study.

Table 1

U.S News and World Report 2011: *List of Top Higher Education Administration Programs*

Rank	School Name
1	Penn State University
2	University of Michigan
3	University of California-Los Angeles
4	Michigan State University
5	University of Georgia
5	Indiana University-Bloomington
7	University of Southern California
8	University of Pennsylvania
9	Vanderbilt University
10	Stanford University
11	Harvard University
12	University of Maryland-College Park
13	Iowa State University
14	Teachers College, Columbia University
15	University of Iowa
16	University of Wisconsin-Madison
17	Ohio State University
18	University of Arizona
19	Boston College (Lynch)
20	University of Virginia (Curry)

Each interview was both audio recorded and transcribed. Instruments used to complete this project included the following: interview questions, email, paper, pens and audio recording devices. These six instruments were the only tools used to collect interview data and were essential to the data collection process. Detailed notes were taken while audio recording each interview. Five questions were asked in the interview phase of this study which included: (1) In a recent study, it was found

that seventy percent of faculty members at top ranked higher education programs earned their doctorate from a top ranked program. What are your thoughts about that?; (2) In the same study, data revealed the presence of a clique comprised of the top higher education programs indicating a closer connection between these programs vs. unranked programs. What are your thoughts about that finding?; (3) When considering the globalization of higher education and administration as well as the diversity of students and the settings, and their settings, do you have any concern about enough outside viewpoints being found in top higher education preparation programs?; (4) Do you feel that your department would be open to hiring higher education faculty from outside the top ranked programs?; and (5) What suggestions would you have for a student that has been trained in an unranked program who aspires to become a faculty member in a top ranked program?

Coding Process

All data from the participants' interviews and responses from the open-ended survey questions were used to create priori codes. There were a total of 20 *priori* codes that were found to be applicable to the study. These were numbered in accordance with the protocol recommended by Miles and Huberman (1994) and all instances were coded. A "start list" was compiled as suggested by Miles and Huberman (1994) and included: natural collaboration, reproductive cycle, sharing ideas, networking, publishing, presenting, research, teaching, and grants/external funding. As data were coded, the start list began to expand, much like Spradley's (1979) semantic data approach suggested. In addition to using the start list, the "incident-to-incident" coding approach advocated by Charmaz (2006) was implemented. This process allowed the researchers to compare similar responses by different participants.

Concerns for Validity and Reliability

After collecting the responses from the survey participants, all follow-up phone interviews were incorporated for purposes of member checking and data validation. Utilizing the member checking approach enabled the participants to review the information from the survey to ensure that they accurately reflected their feelings and responses (Creswell, 1998). The follow-up interviews also enabled additional questioning related to the study. Additionally, this study utilized two of Lincoln and Guba's (1985)

criteria for trustworthiness, which were external audits and credibility. The researchers allowed a respected colleague to examine the results of the study and to provide critical feedback regarding the quality of the inquiry process. We also were able to have a colleague outside of the field of higher education serve as a peer de-briefer, which helped establish additional credibility for the study.

Limitations

Due to the nature of qualitative research, there are certain limits to generalizability. Although the interviews yielded both "thick" and "rich" descriptive and narrative data, the limited sample size forces the restriction of the application of results to a limited population of coordinators, department heads, and deans who have served or are serving in top higher education administration programs. Additionally in a study such as this it is difficult to always detect or prevent researcher bias. And the subjectivity of the responses of the participants can prove challenging.

Findings

Four themes emerged from the interviews (Structural, Externalities, Prestige, and Research) and a graphical conceptual framework was developed as visual aid to better understand the findings (see Figure 1). Slone (2009) suggested the use of visualization tools to strengthen qualitative analysis. Moreover, the use of a graphical display of qualitative information addresses two other of the four criteria set out by Lincoln and Guba (1985), transferability and confirmability. Each of the four themes is comprised of two or more "inputs" or ideas that enable top programs to participate in the phenomenon of prestige and hiring. Referring to Figure 1, moving from left to right, the rectangular shapes labeled "Inputs" represent characteristics of the top programs themselves and are grouped by the four themes. The square shape notes the "Program Outcomes" resulting from the influence of the inputs. "Context" is depicted as circular and surrounding the outcomes. The context element represents the setting or environment in which the phenomenon under study can be better understood and assessed, including professional associations and an inexorable pressure to publish.
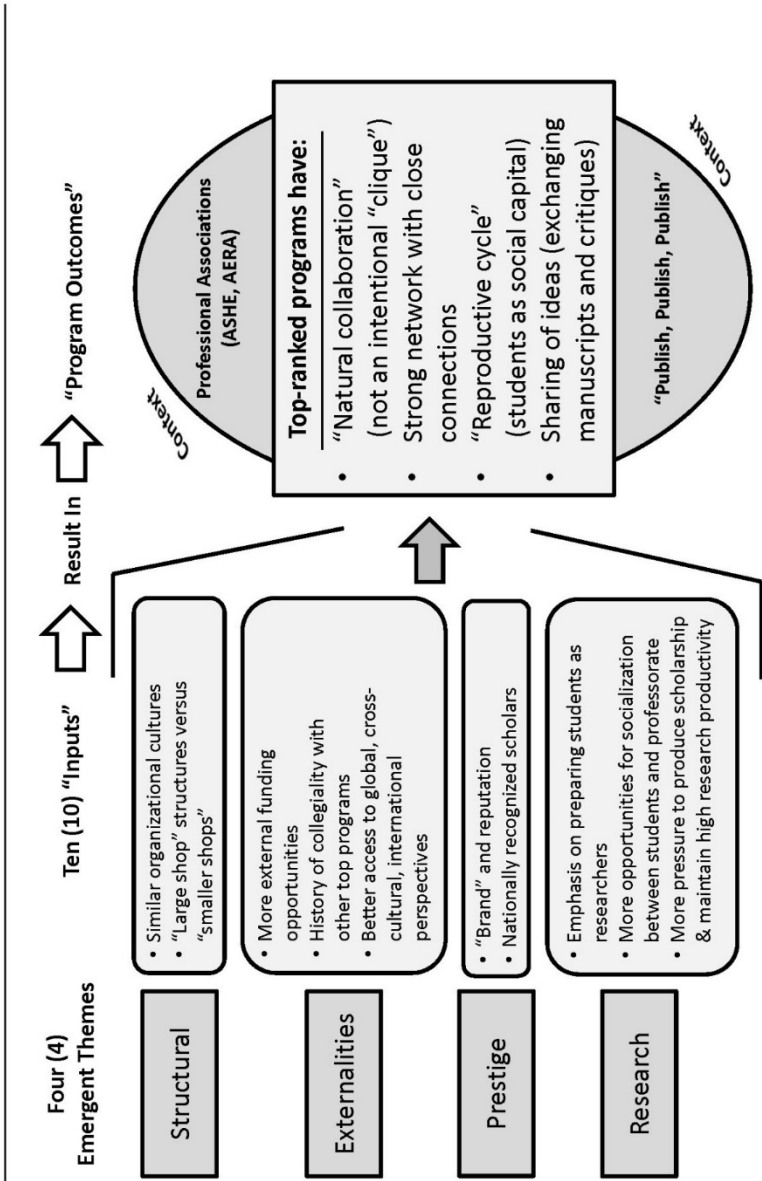
Readers should familiarize themselves with the four themes and the idea that all (or some) of the ten inputs, to a greater or lesser degree, are the influencers which result in the hiring of faculty by elite higher education programs from other elite programs. This will aid in a better understanding of the discussion to follow, including the implications for the higher education enterprise and for future research.

Theme One: Structural

Ideas about the cultural structures and sizes of higher education programs emerged from the data. Manning (2012) noted the important role of structure because "without knowledge of organizational structure, faculty are hard pressed to make policy decisions regarding curriculum and other issues" (p. 3). The structural similarity of top programs is an important factor for considering reasons why they might hire both recent graduates and established faculty members from each other.

   Similar organizational cultures. A majority of respondents felt that one of the reasons graduates from top-ranked programs are routinely chosen over non-ranked graduates is due the fact that top programs have similar cultures. Schein (1992) defined organizational culture as "[A] pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration…" (p. 12). Clearly, culture plays a key role in shaping faculty members and the program structures they create (Bergquist & Pawlak, 2008). An assistant professor in the study who served on several search committees shared: "I think often times top ranked programs feel that they share a similar

Figure 1. Conceptual framework used for explaining and understanding the relationship of top-ranked graduate programs in higher education administration.

Four (4) Emergent Themes

Structural
- Similar organizational cultures
- "Large shop" structures versus "smaller shops"

Externalities
- More external funding opportunities
- History of collegiality with other top programs
- Better access to global, cross-cultural, international perspectives

Prestige
- "Brand" and reputation
- Nationally recognized scholars

Research
- Emphasis on preparing students as researchers
- More opportunities for socialization between students and professorate
- More pressure to produce scholarship & maintain high research productivity

Ten (10) "Inputs" Result In → **"Program Outcomes"**

Professional Associations (ASHE, AERA)

Top-ranked programs have:
- "Natural collaboration" (not an intentional "clique")
- Strong network with close connections
- "Reproductive cycle" (students as social capital)
- Sharing of ideas (exchanging manuscripts and critiques)

Context

"Publish, Publish, Publish"

organizational culture within their program, and across other top ranked programs and so they hire from similar cultures to strengthen that culture within their own program."

Another participant who served as both a chair and full professor seconds this sentiment when mentioning that the networking between top programs are so strong. He shared:

> The people who are doing more research and producing publications are folks coming from some of these top programs and so they network pretty well with others who are doing research in that area and make connections and share ideas and probably exchange manuscripts or critique it before they submit it to a journal, for example.

In addition to addressing the role that networking plays between top programs, a former department chair and full professor explained how the characteristics of these types of institutions are similar:

> They have some advantages because they usually have a full-time compliment of five or six really well known faculty who are either stars or emerging stars in the field of higher education. They're not dependent on the success of their program.

Interestingly, these responses coincide with the work of Toma, Dubrow, and Hartley (2005). There are real and perceived advantages that come from being associated with one of the elite institutions. Toma and colleagues (2005) described the phenomenon of elite schools and programs in this way:

> In higher education, names like Harvard, Amherst, and Berkeley have a certain mystique in higher education as a result of their long traditions as market leaders, the perceived value that their degrees offer recipients in the marketplace, the resources they have available, and the attractiveness of their campus atmospheres. (p. 30)

"Large shop" structures versus "small shops." The participants shared that although non-ranked and top ranked programs share similar characteristics one of the elements that distinguishes them

from one another is the sheer number of faculty dedicated to their program. In addition, participants share that the culture of the environments can be completely different. Graduates from non-ranked programs may not be prepared to be successful at top ranked programs because of this fact. For example, a program coordinator shared:

> As someone that coordinates our higher education program it [hiring graduates of top ranked programs]becomes practical. If you have no remote idea of what it means to get tenure at a said (Top-Ranked) institution, you can't get hired, period. And, yes does that mean that certain viewpoints that are in certain spaces are left out, yeah. But, guess what, those viewpoints aren't valued in the tenure process at said institutions.

One of the study's faculty members also addressed the areas in which non-ranked programs are different than their top-ranked counterparts:

> If you're at an institution that's not top ranked it's probably because you don't have that many faculty exclusively dedicated to those key themes, and those faculty that are dedicated may find that their isolation means that they're unable to successfully attract large federal and state and private grant support, and sponsored research support.

He went on to explain more about top ranked programs, especially the role that mentorship plays in the development of their students.

> A more prestigious institution is going to have top ranked faculty with large research grants who can support the student to do research on the research grant that can align with opportunities for publication. They're also going to have a mentor who is committed to informing the field of practice and the knowledge base by doing top quality research.

Talent development is complex and there are various factors that play into whether a person is successful in their vocation (Henriksen, Stambulova, & Roessler, 2010). Another participant shared that he believed the curriculum at top ranked programs was different than at non-ranked programs: "I think the really strong programs have a more comprehensive curriculum, I think they prepare their students better in

areas of research methods and research design." He went on to elaborate: "Many of the top programs, I believe, have some concentration in what they would call a minor area that helps to enhance the qualifications of the individuals that graduate from those programs."

Not only is the curriculum at top ranked programs perceived as superior, but the image of the program can result in higher student academic performance. Polat (2011) notes that, "perceived organizational image is a factor that significantly affects students' academic achievement" (p. 260). He found students' academic achievement increases as their perceived organizational image increases.

Another participant shared that he believed that a top ranked program was in a better position to divide responsibilities among its faculty members because of their size. Larger shops have a critical mass of people who not only attract students but also allow for the diversification of the duties and responsibilities necessary for running a successful program.

Theme Two: Externalities

In the study of economics, an externality is a phenomenon in which an affected party is influenced by one or more activities under the control of others (Randall, 1983). In this study, the affected party is an unranked higher education program that is not part of the network of top programs, the "others" are the top programs themselves, and the activities are those identified in the interview data and listed below. These externalities are the side effects of a social market of prestige that exists in the higher education graduate program marketplace. Perhaps more so than any of the other themes that comprise the basis for the conceptual framework for this study—structural, prestige, research—the externalities that were revealed in this study are what fuel the belief, whether perceived or real, that top programs have formed a clique (DiRamio et al., 2009).

More external funding opportunities. An area in which participants felt that top ranked programs had an advantage was in the area of external funding. At least half of the participants believed that most of the opportunities to work on a large grant are garnered through working with well-known faculty at top programs. And as the expectations for tenure continue to rise, several participants believed that

faculty candidates would need to have experience with external funding. For example, one participant expressed it this way:

> It's the grantsmanship piece, increasingly these type of (top-ranked) programs really want to know that you can bring in research and if you think about what it means to be a brand new faculty member and if you're just trying to figure out how to teach classes, usually the research piece, which is the point of priority is a major emphasis in time consumption. Now if you've never done grantsmanship and you've never been on a funded project there is, it's almost impossible to add that component to the table because you're coming in and you're doing all these brand new things at a very high level and it's very difficult to learn something on the job.

A faculty member adds to this notion that external funding seems to be emphasized at top ranked programs: "I think that there are assumptions about top ranked programs that publication production and external funding production is generally more valued and so they want to sustain those activities and those resources."

The responses of participants in this study align with the literature (Barnett, Danowski, Feeley, & Stalker, 2011; Hevenstone, 2008; Laudel, 2005). The importance placed on external funding is very strong and the majority of these research dollars are awarded to the top programs. Laudel (2005) wrote:

> External funding is used at the individual level as a criterion in academic job decisions; for example, in tenure track decisions in the United States, applicants must list the grants they won in the last couple of years or during their whole research career. Usually, the source of the grant is taken into consideration; highly competitive grants from funding sources with a rigorous peer review system (e.g. grants from the National Science Foundation) are weighted higher than others. (p. 28)

History of collegiality with other top programs. The brand and reputation of top ranked programs extends to the way in which admiration is shown in the form of collegiality. Over seventy percent of the participants mentioned that collegiality was an important part of the

relationships within the top ranked programs. One participant suggested that collegiality among these programs is less intentional and more predicated on similar interest and dependability when participating in collaborative projects: "The top researchers tend to work with other top researchers and you get known for quality and so you tend to work with those people who you know can deliver."

He goes on to suggest that the preferences that develop can go afoul when those same preferences are used in the faculty selection process:

> Some of the positive things are that you have a bit of assurance I guess, and perhaps more built in collegiality. I think some of the negatives things are that it really disenfranchises some pretty amazing candidates out there and it creates an elite hierarchical structure across our higher education preparation programs that perhaps provides a disservice to the field as a whole.

Another participant seems to agree with these statements with respect to the nature of the closeness of the top ranked programs. Below he acknowledges that this does play a role in the faculty selection process:

> I do think that there's probably a cultural relationship among scholars in top ranked programs. I think that every time a position opens up especially a position at the senior level, among senior faculty members, I think that there's probably that like hidden handshake, nudge, nudge thing going on where you can ask another faculty member from another top ranked program, hey, are you happy there, you know we're looking for somebody, how would you like to come over here. I think that happens probably more frequently within the top ranked programs than it does in other programs.

In summary, when considering collegiality among top programs, one faculty member in the study stated it best when he shared that faculty at top ranked programs speak among themselves first when searching for candidates for a faculty position:

> I will say that in the preliminary phase of a search for a new faculty member, the faculty at a top ranked institution are very likely to have a network of colleagues who are at other top

ranked programs as a function of the fact that they share the same professional associations and memberships and have met each other before. As a consequence, you're going to probably make more contacts with faculty at the leading institutions and they're more likely to submit the names of candidates from their institutions.

Better access to global, cross-cultural, and international perspectives. The notion of globalization and the importance of diversity have grown since the 1970's when American Higher Education began a concerted effort to focus on these areas (Hutcheson, 2011). Understanding the role that higher education plays around the world is of vital importance. Svensson and Wihlborg (2010) indicated, "internationalization of higher education is a strategic theme in the current research on higher education and in policy debates. Both at national and institutional levels, in many countries, internationalization is stated to be an educational goal" (p. 595). At least one-third of the participants believed that because of the nature and characteristics of top programs, they are able to attract students from other countries outside of the United States. One participant in particular shared how his program facilitates cross-cultural conversations:

There's also a lot of reaching out to some of the higher education programs in Europe and in other countries, in Australia for example. And so there are some connections being made across those kinds of programs. Our program tends to get a lot of international students and those international students go back to their countries and then maintain contacts with our faculty and because of that I think there is a lot of diversity of ideas involved. I don't think that there's a limitation in, where people will look to find their research.

Although his program has in its mission to ensure diversity in the classroom, another participant makes a salient point below as he emphasizes the invaluable role that diversifying the faculty will play in addressing issues that affect higher education across the world:

I think that as the world is shrinking it's going to be more and more important to have scholars who can come in to speak to the imperative higher education issues across the globe; I also think it's going to

become increasingly important to have faculty members who represent diverse perspectives on a variety of issues. Yes, I do think that's going to become increasingly important and I think the standards for how we look at candidates is going to have to change as a result.

Theme Three: Prestige

It is no secret that prestige plays a prominent role in higher education (Brown, 2010; Lovett, 2005; Sweitzer & Volkwein, 2009) and two concepts related to prestige were found in this study. As the editor-at-large of *The Chronicle of Higher Education*, Jeffrey Selingo (2013) noted, "Prestige in higher education is like profit is to a corporation" (p. 12). However, an overemphasis of the prestige motive can be detrimental because, according to Newman, Courtier, and Scurry (2004), an unhealthy pursuit in American higher education has led to an increase of unneeded, low-quality graduate programs.

Brand and reputation. More than half of the participants shared that the brand and reputation of the institution from which a faculty candidate is affiliated does indeed play a factor in the selection process. This is also confirmed by Toma et al. (2005) when they wrote that, "In higher education, strong brands are also linked to institutions having clear values that they articulate through a variety of forms. These institutions have distinctive identities—norms, values, and beliefs that they continually announce and reinforce through symbols, language, narratives, and practices" (p. 34). In addition, one faculty member expressed that the various aspects of a faculty candidate's portfolio that a search committee would place emphasis on would generally look different for graduates from non-ranked programs: "The networking is not going to be quite the same, the sponsorship is not going to be the same, the placement of possible journals aren't going to be the same." This happens because the brand and reputation of a graduate's institution signals to a search committee that the candidate likely has access to an influential network and has been trained to publish in top tier periodicals.

One participant who identified himself as a former chair, associate dean, and full professor also noted that top ranked programs generally are known by several characteristics. He shared, "Top ranked programs tend to produce the most scholarship and they tend to have people who are extremely well known in the profession."

Another participant confirmed this idea that the distinctive brand differentiation of top ranked programs are their reputation for producing high-impact scholarship: "The reason why there are some close connections between people in some of the top programs is because many of the people that are doing the significant research are coming from these top programs." Another assistant professor articulated this theme succinctly when noting, "I think the brand of certain institutions is certainly something that's still a major power player in decision making for search committees all over the country."

To maintain the brand identity of a top-ranked institution, search committees generally want to hire individuals who come from institutions which have identities comparable to or stronger than their own. Again, Toma et al. (2005) explained:

> Institutions use these ties and stress their distinctiveness when attempting to appeal to the important constituents that provide them the support that enables institutions to not only survive but also to thrive and build. In furthering community, institutional culture adds distinctiveness to otherwise similar large and impersonal institutions. (p. 74)

Nationally recognized scholars. Not surprisingly, another area that emerged as a general characteristic of top ranked programs is that they usually have nationally recognized scholars on their faculty. Melguizo and Strober (2007) found in their research that "institutional and professional incentives move faculty to concentrate on research in order to maximize their own and their institution's prestige" (p. 665). In this study we learned that those highly recognized scholars networked with one another. One participant characterized the phenomenon in this way: "They tend to have people who are extremely well known in the profession." Another faculty member acknowledged that prominent faculty in top ranked programs network with each other and this is most evident in the faculty selection process: "Faculty in top ranked programs reach out to other prominent faculty across the country and they do that, because they know them from professional association meetings, from publications and their scholarship, that builds a network of people."

Although a candidate for hire can solicit a letter from a faculty member who does not have a nationally recognized record of scholarship, another

participant suggested that receiving a letter of support from a prominent faculty member from a top ranked institution would help in the faculty selection process:

I would think that if a student were from a non-ranked program competing against a student who had a prominent mentor in higher education and that mentor had written that person a letter of support, I think the individual who had the prominent higher education faculty member would have a leg up, because in a search committee or another context, if you know you are getting a letter from somebody that you know in the field, who's very prolific and that letter is glowing about a certain person, that's going to carry more weight than a letter that comes from somebody you don't know, even though they may be prolific in another area.

Theme Four: Research

The final of the four themes identified in this study is research and it was not surprising that the data supported the perception that top programs emphasize research and policy studies, while unranked programs tend to emphasize administration and leadership. Bok (2003) described the emphasis on research and the role it plays for the top institutions when writing:

> The best young scholars and scientists usually go to institutions that already have strong faculties. Foundations and government funding agencies also give the bulk of their support to universities with the best-known professors. The ablest students likewise gravitate to universities with established reputations. (p. 104)

Washburn (2005) quoted one graduate student as saying, "If you want to succeed as an in academic, he said, what matters are publications, prestige, and grant money" (p. xiv). Therefore, as described by participants in the interview data, top programs do indeed stress preparing researchers, use research as a vehicle to increase interactions between professors and students, and place an emphasis on research productivity and scholarship.

Emphasis on preparing students as researchers. Half of the participants believed that top programs place a strong emphasis on preparing students as researchers. This is an important point to consider, especially because graduate programs are often judged based on their research reputation and output. One participant who is an associate professor and program coordinator believed that top ranked programs not only prepared their students to be researchers, but also ensured that they published before they completed their programs. He noted,

I think select programs do have a culture, set of program courses, and formal and informal practices for preparing their students for the professoriate through opportunities. The days of getting a faculty job with no publications, that day is over, that's gone.

Results from this study also suggest that some search committees believe that graduates who have attended top ranked programs are trained to serve as faculty. One participant, in particular shares his perspective on the assumptions that some search committees make when evaluating the background of a faculty candidate. He explains:

> I think there's an assumption that students at top ranked programs are more interested in participating in faculty research; that students at top ranked programs are more interested in participating in academic life as a future faculty member.

Not only can top ranked programs overlook candidates because they perceive they lack the research background, it is sometimes also assumed that students from non-ranked programs will not have exposure to compete for external funding. Smaller institutions generally gain less external funding through research than their research university counterparts (Campbell, 1998).

More opportunities for socialization between students and the professorate. At least half of the participants in the study believed that top ranked programs provided more opportunities for their students to be socialized into the professoriate. One participant espoused this notion. He shared:

> It's kind of like a reproductive cycle, the highest ranked institutions in higher education for example, will be able to

attract the most prolific faculty and so if you are in the hiring process and you know that a graduate student is graduating from our program, and has worked with one of these prolific faculty members, you would hope that the training they received in that mentoring experience would be enough to, give you some insight or to help you know, that these people that you are going to hire are going to be very successful and self-directed scholars when you actually get or recruit them as faculty members.

There are very few higher education institutions that have intentional programs that formally socialize their faculty beyond their university teaching and learning centers. Individual colleges and academic department generally lack programs that provide new faculty with formal training on how to improve in their new role (Hamilton, 2006). So it is important that candidates develop and hone academic skills prior to being hired.

More pressure to produce scholarship and maintain high research productivity. Another characteristic that participants believe differentiated top ranked programs was the amount of scholarship that is produced from its faculty. One particular participant stated this concisely and emphatically: "Top ranked programs tend to produce the most scholarship!"

The participants attributed this characteristic to the expectations placed on them by external constituencies such as the institutions they serve. One faculty member in the study explained the phenomenon best: "I think that there are assumptions about top ranked programs that publication production and external funding production is generally more valued and so they want to sustain those activities and those resources."

Preference for top-ranked graduates. The evidence provided in the four themes and associated ten inputs (Figure 1) makes it reasonably clear that top-ranked higher education graduate programs do indeed prefer to hire faculty members who have doctorates from other top programs. To further investigate this phenomenon, a section of the interview script was designed to capture the overall sentiment of the participants and the response listed below is representative, particularly for students who have aspirations of serving at a top-ranked program:

It's less likely that faculty at a less prestigious institution are going to enjoy large grants to support doctoral research. So, to overcome that the student in the less prestigious institution needs to do research and publish on topics of interest to higher education that are congruent, that are aligned with their areas of interest. If you're into student development theory and you're thinking about developing a dissertation in that field, you should be reading the literature in that field, you should be thinking about what kind of pilot studies could I do that would contribute to the development of my dissertation and that might end up being publishable work that would help me demonstrate before I actually start applying for jobs that I'm a competent researcher, and that I have experience in writing publications.

It is particularly challenging for regional institutions, along with others whose mission is primarily teaching, to provide their faculty members with the time and resources to conduct research on a scale that the flagship research universities do (Li-Ping & Chamberlain, 2003).

Program Outcomes

Conceptually, as depicted in Figure 1, the four emergent themes and their manifestation in the ten inputs leads to several outcomes. For example, we found that there exists a natural collaboration among the top programs rather than an intentional clique. In other words, this is an organic occurrence in social networks and not a conspiracy to ensure that the top programs remain elite and others are shut out. Moreover, these natural collaborations produce strong networks over time and the connections between top program networks continue to strengthen. One participant remarked, "There are some close connections between people in some of the top programs because…my knowledge of the field of higher education administration is that many of the people that are doing significant research are coming from these top programs." Faculty colleagues from the top programs produce their own doctoral graduates as part of a reproductive cycle and, in a sense, the students themselves represent social capital in the network, which is analogous to the ideas of Bourdieu (1988) in his seminal work, *Homo Academicus*. Another participant provides an example of his personal experience with this phenomenon:

> I graduated from a top ranked program and I'm now working in a top ranked program and it was no accident that there were people here who also graduated from my top ranked program years earlier and knew some of the same faculty that I had…I think that network is strong across top programs because…it's much easier for me to hire somebody from my alma mater because I know what that alma mater produces and I keep in touch with people from there and…I think it's a list of reproduction of social capital.

One of the strengths of the network of top program faculty is the exchange of ideas that occurs in the form of formal and informal critiques of each other's' work, including research projects and manuscripts. All of this occurs in the context of the professional associations, where network participants often gather and exchange ideas, and the ethos of publish or perish permeates the profession.

Discussion

This study is one of a few studies that utilized the *US News and World Report* rankings as a variable to gauge the extent of the role prestige plays in academic programs and institutions (Bedeian, Cavazos, Hunt, & Jauch, 2010; Capobianco, 2009; Wiggins, 2007). However, contrary to the findings in this study, Capobianco (2009) found little relationship between the rankings of academic departments and graduate employment. One of Capobianco's main findings was that previous work experience played the largest role in hiring decisions. Interestingly, this study and the Capobianco study found agreement regarding degree field and employee referral.

Although Capobianco (2009) did not find that the prestige associated with an academic program played a role in the hiring practices of most graduates, a more recent study by Bedeian and colleagues (2010) found that the status and prestige of doctoral programs in business management did have an effect on graduate hiring. It appears that higher education administration doctoral programs and graduate programs in criminal justice have similar prestige networks, as well (Fabianic, 2011). Moreover, these similarities include the fact that each of these fields— higher education administration, business management, and criminal justice—have barriers that persist that do not allow for upward mobility

and inclusion (Weakliem, Gauchat, & Wright, 2011). Other factors identified included program faculty size, diversity of course offerings, and number of specializations (Barnett & Feely, 2011). Another challenge that persists is the stagnancy of academic rankings and resistance against status elevation, primarily due to top researchers rarely moving to less prestigious academic institutions or programs (Hevenstone, 2008). These research "superstars" are, of course, more likely to move laterally to an institution that is considered to be the same tier as their current institution or move up to an institution with higher perceived prestige. Reason for leaving could include financial mobility, higher status, and/or professional growth.

Generalizability concerns notwithstanding, this study confirmed the finding from previous work by DiRamio and colleagues (2009) that faculty in top programs are more likely to be graduates of other top programs. This coincides with the findings of Xuhong (2011) who found a correlation between the prestige of an academic department and the research production of its faculty. This is important as outside constituencies seek to find ways in which to gauge the quality of academic programs. Barnett and Feeley (2011) concluded that program placement is a legitimate measure of program quality. They also found that to be the case when investigating the role of faculty hiring network methods in doctoral programs in communication. So, how can deans, department heads, program coordinators and interested faculty members at higher education administration programs, both ranked and unranked, use the findings of this study?

Based on the themes and results of this study, three recommendations for both policy and practice have emerged. These suggestions are primarily addressed to higher education programs that are seeking to enhance the quality of their students' academic marketability. The recommendations are: (1) Students should be encouraged to collaborate with faculty on grants from their institution and outside of their institution. (2) Students should be directed to attend professional meetings within their field, reach out and meet faculty and peers from other institutions, and begin developing their professional network, and (3) Students should strive to author or coauthor a paper (or papers) since publishing research is so much a part of the fabric of the phenomenon described in this study, both inside and outside the network of top programs.

Implications for Future Research

Because this study included only program coordinators, department heads, and deans who served in higher education programs ranked 20 or higher by *U.S News & World Report*, it may be wise to explore the perspectives of coordinators, department heads, and deans from non-ranked programs. These participants could share their ways of preparing students for faculty positions in higher education programs. Of course, this would provide useful data that could be compared with the results of this study. Another suggestion for future research includes surveying the perspectives of first year doctoral students within higher education graduate programs, perhaps from both top programs and programs not ranked. A study of this type could explore students expectations related to career outcomes based on the impact of earning their doctoral degrees and the prestige of their programs. In a larger sense, findings from such a study could provide higher education administration program faculty and curriculum developers with information to use to enhance the quality of their own graduate programs.

Conclusion

Can graduates from non-ranked higher education programs gain the opportunities to serve as faculty in top ranked programs in the future? The answer is clearly "yes," with no evidence of a glass ceiling or exclusionary wall found in this study. However, because of effects of the economy on higher education and the dearth of professorial opportunities to teach in the field of higher education administration, it is less likely that someone who does not have the academic pedigree of an elite institution will garner such a position, although not impossible. Higher education programs ranked by US News and World Report can be viewed as what Daloz (2011) describes as political elites. Political elites in this context can be viewed as representing the best of a larger group. As an emerging field, some look to those programs as standard bearers for the field at-large (Freeman Hagedorn, Goodchild, & Wright, 2014). So, perhaps it is important that the "elites," the top programs, hire those that can best represent the field. This is particularly evident as some foreign institutions are hiring top researchers to increase their global academic standing (Bhattachariee, 2011)

Although this paper discusses themes related to why top-ranked higher education administration programs generally prefer to hire graduates from other top programs, higher education programs of all types can learn from these findings. Of particular importance is the notion that a diverse faculty, in both thought and background, is critical for enhancing all higher education programs in the future. Specific attention should be paid to international diversity. Our world is becoming increasingly global and higher education program faculty need to be able to address the needs of graduate students from diverse backgrounds, both domestic and international.

Graduates from non-ranked programs may have a keen sensitivity to higher education problems experienced by the non-elite institutions, which constitute the majority of institutions of higher learning around the world. The authors see this study as an important and useful first step in broadening the discussion regarding how higher education programs can ensure that they remain responsive to the needs of diverse students. Continued dialogue in this area will provide an opportunity for scholars of all backgrounds to better serve their institutions and share resources that support research addressing a broader range of issues affecting the field of higher education.

References

Altbach, P. G., Bozeman, L. A., Janashia, N., & Rumbley, L. E. (Eds.). (2007). *Higher education: A worldwide inventory of centers and programs* (Rev. ed.). Rotterdam, The Netherlands: Sense Publishers.

Bair, J. H., & Bair, R. K. (1998). Linkages among top-ranked graduate programs in special education: A brief report. *Mental Retardation, 36(1),* 52-54.

Barnett, N. (2007). Higher education as a field of study at Historically Black Colleges and Universities (unpublished doctoral dissertation). Ball State University, Muncie, IN. Retrieved from *Dissertations & Theses: A&I.* (Publication No. AAT 3288300)

Barnett, G., Danowski, J., Feeley, T., & Stalker, J. (2011). Measuring quality in communication doctoral education using network analysis of faculty-hiring patterns. *Journal of Communication, 60*(2), 388-411.

Barnett, G., & Feeley, T. (2011). Comparing the NRC and the faculty hiring network methods of ranking doctoral programs in communication. *Communication Education, 60*(3), 362-370.

Bedeian, A., Cavazos, D., Hunt, J., & Jauch, L. (2010). Doctoral degree prestige and the academic marketplace: A study of career mobility within the management discipline. *Academy of Management Learning and Education, 9*(1), 11-25.

Bergquist, W.H., & Pawlak, K. (2008). *Engaging the six cultures of the academy.* San Francisco, CA: Jossey-Bass.

Bhattachariee, Y. (2011). Saudi universities offer cash in exchange for academic prestige. *Science, 334* (6061), 1344-1345.

Bok, D. (2003). *Universities in the marketplace: The commercialization of higher education.* Princeton, NJ: Princeton University Press.

Bourdieu, P. (1988). *Homo academicus.* Stanford, CA: Stanford University Press.

Bowen, H. (1981). Observations on the costs of higher education. *Quarterly Review of Economics and Business, 21*(l), 47-57.

Brown, R. (2010). *Higher education and the market.* London, England: Routledge.

Campbell, W. E. (1998). Writing proposals with faculty: A strategy for increasing external funding at small undergraduate teaching institutions. *SRA Journal,* 30(1 & 2), 63-68.

Capobianco, F. (2009). *Reputation versus reality: The impact of US News and World Report rankings and education branding on hiring decisions in the job market* (unpublished doctoral dissertation). Pepperdine University, Santa Clara, CA.

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. London, England: Sage.

Creswell, J. W. (1985). Faculty research performance: Lessons from the sciences and the social sciences. *ASHE-ERIC Higher Education Report, No. 4.* Washington, DC: ASHE.

Creswell, J. W. (1998). *Qualitative inquiry and research design choosing among five traditions.* Thousand Oaks, CA: Sage Publications.

Daloz, J. (2011). The distinction of social and political elites. *Comparative Sociology, 10*(4), 443-455.

DiRamio, D., Theroux, R., & Guarino, A.J. (2009). Faculty hiring at top-ranked higher education administration programs: An examination using social network analysis. *Innovative Higher Education, 34*(3), 149-159.

Dressel, P.L., & Mayhew, L.B. (1974). *Higher education as a field of study.* San Francisco, CA: Jossey-Bass.

Fabianic, D. (2011). PhD program prestige and faculty location in criminal justice and sociology programs. .*Journal of Criminal Justice Education, 22*(4), 562-577.

Fife, J. D., & Goodchild, L. F. (Eds.). (1991). *Administration as a profession.* San Francisco, CA: Jossey-Bass.

Freeman, S., Jr., Hagedorn, L S., Goodchild, L. F., & Wright, D. A. (Eds.). (2014). *Advancing higher education as a field of study: In quest of doctoral degree guidelines – Commemorating 120 years of excellence.* Sterling, VA: Stylus Publishing.

Goodchild, L. F. (2002). Higher education as a field of study. In J. J. F. Forest & K. Kinser (Eds.), *Higher education in the United States: An Encyclopedia* (pp. 303–309). Santa Barbara, CA: ABC-CLIO.

Hamilton, N. (2006). Faculty professionalism: Failures of socialization and the road to loss of professional autonomy. *Liberal Education, 96*(4), 14-21.

Harris, M. S. (2007). The current status of higher education programs. In D. Wright & M. Miller (Eds.), *Training higher education policymakers and leaders: A graduate perspective*. Charlotte, NC: Information Age Publishing

Henriksen, K., Stambulova, N., & Roessler, K. K. (2010). Successful talent development in track and field: Considering the role of environment. *Scandinavian Journal of Medicine & Science in Sports*, *20*(Suppl 2), 122-132.

Hevenstone, D. (2008). Academic employment networks & departmental prestige. In T. Friemel (Ed.), *Why context matters: Applications of social network analysis* (pp. 119-140). Wiesbaden, Germany: VS-Verlag.

Hutcheson, P. (2011) Goals for United States higher education: From democracy to globalisation, *History of Education, 40*(1), 45–57.

Jackson, J. (2004). The story is not in the numbers: Academic socialization and diversifying the faculty. *National Women's Studies Association Journal, 16*(1)*,* 172-185.

Kienle, A. W., & Lloyd, N. L. (2005). Globalization and the emergence of supranational organizations: Implications for graduate programs in

higher education administration. *College Student Journal, 39*(3), 580–587.

Laudel, G. (2005). Is external research funding a valid indicator for research performance? *Research Evaluation, 14*(1), 27-34.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry.* Beverly Hills, CA: Sage.

Li-Ping, T., & Chamberlain, M. (2003). Effects of rank, tenure, length of service, and institution on faculty attitudes toward research and teaching: The case of regional state universities. *Journal of Education for Business, 79*(2), 103-110.

Lovett, C. M. (2005, January 21). The Perils of pursuing prestige. *The Chronicle of Higher Education, 51*, B20. Retrieved from http://chronicle.com/weekly/v51/i20/20b02001.htm

Manning, K. (2012). *Organizational theory in higher education.* New York, NY: Routledge.

Marshall, A. (2009). *Principles of economics* (8th ed.). New York, NY: Cosimo, Inc., (first published in 1890).

Maxwell, J. A. (2005). *Qualitative research design: An interactive approach.* Thousand Oaks, CA: Sage.

Melguizo, T., & Strober, M. H. (2007). Faculty salaries and the maximization of prestige. *Research in Higher Education, 48*(6), 633–668.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis* (2nd ed.). Thousand Oaks, CA: Sage.

Morse, J. M. (1994). Designing funded qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 220-235). Thousand Oaks, CA: Sage.

Newman, F., Courtier, L., & Scurry, J. (2004).*The future of higher education: Rhetoric, reality, and the risks of the market.* San Francisco, CA: Jossey-Bass.

Polat, S. (2011).The relationship between university students' academic achievement and perceived organizational image. *Educational Sciences: Theory and Practice*, *11*(1), 257-263.

Randall, A. (1983). The problem of market failure. *Natural Resources Journal, 23*(1), 131-148.

Schein, E. (1992). *Organizational culture and leadership* (2nd ed.). San Francisco, CA: Jossey-Bass.

Selingo, J. (2013). *College (un)bound: The future of higher education and what it means for students.* New York, NY: New Harvest.

Slone, D. J. (2009). Visualizing qualitative information. *The Qualitative Report, 14*(3), 489-497.

Spradley, J. (1979). *The ethnographic interview.* New York, NY: Holt, Rinehart, and Winston.

Sweitzer, K., & Volkwein, J. F. (2009). Prestige among graduate and professional schools: Comparing the U.S. News' graduate school reputation ratings between disciplines. *Research in Higher Education, 50,* 812-836.

Svensson, L., & Wihlborg, M. (2010). Internationalising the content of higher education. The need for a curriculum perspective. *Higher Education, 60*(6), 595-613.

Tierney, W. G., & Rhoads, R. A. (1993). Enhancing promotion, tenure and beyond: Faculty socialization as a cultural process. *ASHE-ERIC Higher Education Report, No.6.* Washington, DC: ASHE.

Toma, J. D., Dubrow, G., & Hartley, M. (2005). The uses of institutional culture: Strengthening identification and building brand equity in higher education. *ASHE Higher Education Reports, 31(*3). San Francisco: Jossey-Bass.

U. S. News (2011). America's best graduate schools: Higher education administration. Retrieved from *U.S. News and World Report* website: www.usnews.com/usnews/edu/grad/rankings/rankindex_brief.php

Washburn, J. (2005). *University, Inc.: The corporate corruption of higher education.* New York, NY: Basic Books.

Weakliem, D., Gauchat, G., & Wright, B. (2011). Sociological stratification: Change and continuity in the distribution of departmental prestige, 1965–2007. *The American Sociologist, 18*(42), 1-18.

Wiggins, A. (2007). *Exploring peer prestige in academic hiring networks* (unpublished master's thesis). University of Michigan, Ann Arbor, MI.

Winston, G. C. (1999). Subsidies, hierarchies and peers: The awkward economics of higher education. *Journal of Economic Perspectives, 13*(l), 13-36.

Wright, D. (2007). Progress in the development of higher education as a specialized field of study. In D. Wright & M. Miller (Eds.), *Training higher education policymakers and leaders: A graduate program perspective* (pp. 17-32). Charlotte, NC: Information Age Publishing.

Wright, D., & Miller, M. (Eds.). (2007). *Training higher education policymakers and leaders: A graduate perspective*. Charlotte, NC: Information Age Publishing.

Xuhong, S. (2011). Postdoctoral training, departmental prestige and scientists' research productivity. *The Journal of Technology Transfer, 36*(3), 275-291.