

# Sociological Focus

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Call for Papers: Network Models of Economic  
Embeddedness

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Employment: Disparate Impact and Gender  
Segregation in the Japanese Entry-Level  
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Identity Consequences of Religious Changing:  
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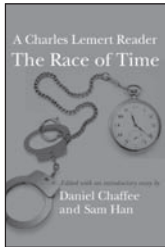
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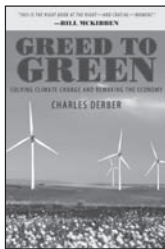
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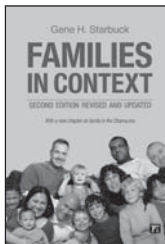
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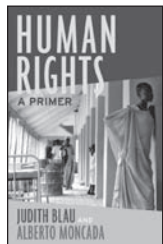
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# The Organizational Practice of Gendered Employment: Disparate Impact and Gender Segregation in the Japanese Entry-Level Labor Market

*Kayo Fujimoto\**  
University of Southern California

*This article discusses the supposedly “gender-neutral” Japanese organizational hiring practice of using a track-based employment system. In this system, prospective employees are required to accept nationwide transfers in residence to obtain career-track positions. Women have difficulty fulfilling this requirement because of cultural expectations to settle down and tend to domestic affairs (day care is often hard to access). Using job placement data on graduates from a Japanese university, I found that women are more likely to be hired into firms without this track system, where they are mostly hired for non-career-track positions. Therefore, seemingly gender-neutral bureaucratic rules actually disparately affect women, maintaining gender inequality in the corporate-centered economy of Japan.*

Many gender and labor market studies note that sex segregation is a major cause of the male-female wage gap (Jacobs 1999; Kilbourne et al. 1994; Petersen and Morgan 1995; Reskin 1993, 2003; Reskin and Bielby 2005). Research on sex segregation in the labor market usually tries to explain how men and women are differently distributed into jobs, occupations, and industries, either from the supply side of the labor market (e.g., Hakim 2002; Polachek 1981), or from the demand side of the labor market (e.g., Aigner and Cain 1977; Blum, Fields, and Goodman 1994).

Japan provides an interesting case of sex segregation within occupations<sup>1</sup> (Shirahase and Ishida 1994) despite the passage of the Equal Employment Opportunity Law more than two decades ago. Feminist literature on the Japanese employment system using institutional approaches has increased (e.g., Gottfried and O’Reilly 2002; Shire and Imai 2000). In particular, studies of sex segregation in the Japanese labor market

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\*The author may be reached at 1000 S. Fremont Avenue, Building A, Room 4219, Alhambra, CA 91803. E-mail: fujimoto@holocron.org, kayofuji@usc.edu. I want to acknowledge the willingness of Z University to allow me to access their data, and I wish to thank those who facilitated this process—especially the job placement staff—for some very fruitful discussions. The data were collected through a governmental research grant as part of a fellowship of the Japan Society for the Promotion of Sciences.

usually take a demand-side approach in explaining gender stratification patterns (Aiba and Wharton 2001; Brinton 1989, 1991; Brown, et al. 1997; Nakata and Takehiro 2002). These studies usually link sex stratification to organizational structures and practices. They emphasize the role of the Japanese internal labor market in primary-sector jobs and view it as an institutional barrier to women's career development. Missing is an examination of gender differences in hiring patterns of entry-level workers, which drive strong sex-segregation in the Japanese labor market.

There have been a growing number of U.S. sociological studies that document gender differences in recruiting and screening practices in the external labor market (Fernandez and Sosa 2005; Mencken and Winfield 1999; Petersen and Saporta 2004; Torres and Huffman 2002). These studies pay particular attention to prehiring mechanisms that influence the process of job sex-segregation by examining how the applicant pool gets created through informal recruiting methods (such as employee referrals and personal networks) and formal recruiting methods (such as newspaper advertisements and employment agencies). Similarly, studies on the Japanese labor market document the prehiring mechanism that reinforces gender stratification in the market: personal networks are extended to include institutional networks between women's colleges and large Japanese firms, whereby schools recommend young women for secondary, clerical types of jobs at large firms (Fujimoto 2004, 2005). These studies imply that both the U.S. and the Japanese entry-level labor markets have recruitment mechanisms that affect gender segregation, but they are different in the timing of recruiting and screening practices. In the U.S. labor market, applicants are recruited at irregular times. In the Japanese labor market, the majority of job applicants are recruited immediately after college graduation for entry-level positions en masse, generating unique gender-sorting mechanisms during organizational screening practices.

My study examines a hiring mechanism that channels women through a portal of intrafirm discrimination between the primary and the secondary internal labor markets. Certain firms recruit employees using a two-tiered hiring track system (*kōsubetsu koyōkanri seido*); to enter the upper "career track," applicants must agree to a nationwide transfer of residence. This requirement is the key mechanism in a system of intrafirm gender discrimination. This article takes a mechanism-based account of gender inequality in the Japanese labor market by paying particular attention to gendered organizational hiring practices. The aim of this study is to "understand the role of mechanisms that operate indirectly through organizational-level mechanisms" (Reskin 2003:8) by presenting evidence of the significant effect of such gender-neutral bureaucratic rules on gender differences in employment using the concept of "disparate impact." Disparate impact occurs when different outcomes for ascriptive groups arise from a "neutral" mechanism based on position, experience, or credentials. The concept of "disparate impact" helps demonstrate how Japanese firms—through their organizational hiring practices of the track-based employment system—allow themselves to favor one gender over another. Before examining the data, however, I will review relevant literature identifying organizational practices as mechanisms of gender inequality in the labor market.

## GENDERED ORGANIZATIONS

A large body of studies on gender and organization has documented organizational practices of gender-based selection decisions, offering various theoretical accounts of gender inequality (Calás and Smircich 1996). These studies have examined how gender is embedded in organizational assumptions and practices. For instance, Kmec (2005) argues that organizational practices in terms of staffing, which link workers to sex-traditional jobs, is a major determinant of sex-traditional employment (i.e., the employment of women in female-dominated occupations and men in male-dominant occupations), which is a fundamental cause of economic sex inequality. Other sociologists (e.g., Bielby and Baron 1984; Kanter 1977; Petersen and Saporta 2004) have identified employment practices that link workers' sexes with the jobs they hold, while emphasizing the importance of organizational context for producing varying levels of gender equality.

From a feminist perspective, Acker (1990) argues that organizational structure is not gender-neutral and that hierarchies are gendered. She observed that, due to the dissemination of gendered values and beliefs throughout the organization, higher-ranking jobs go to men, while positions in the lower ranks are filled with women. Other scholars (Baron, Davis-Blake, and Bielby 1986; Petersen and Saporta 2004) have observed an association between the gender composition of the jobs and the characteristics of job ladders in terms of career-track length. They have found that jobs with longer ladders are reserved for men and those with fewer mobility prospects are available to women. In this way, literature on gendered organizations emphasizes organizational practices filled with rules that ultimately send men and women onto different career paths. However, these studies do not focus on bureaucratic rules, which are supposed to enforce gender neutrality. Primarily due to certain characteristics of the Japanese economy and its internal labor market, Japan is an excellent study-site to demonstrate empirically that these organizational practices do, in fact, result in gender disparities in employment.

## THE GENDER-STRATIFIED LABOR MARKET IN JAPAN

Research on the Japanese labor market provides theoretical accounts that show that gender-stratified patterns in the Japanese labor market originate in Japanese corporations' unique economic structure, which includes, notably, the seniority wage system. Corporate economy is polarized largely by firm size, with the core consisting of large-scale, capital-intensive firms that interlock, via a hierarchical subcontracting system, with a periphery characterized by many small-to-medium scale, labor-intensive firms (Cheng and Kalleberg 1996). The Japanese pattern of labor market stratification corresponds to this economic dualism, resulting in a dual labor market between large/core and small-medium/peripheral firms. Primary sector jobs are those in large/core firms that have many branches nationwide or worldwide. Employees in primary sector jobs are mostly men; they receive extensive intrafirm training, and their

wages are determined by length of service and age rather than on performance. This is the seniority wage system.<sup>2</sup>

Nakata and Takehiro (2002) suggest that the seniority wage system explains the pay gap between genders. They argue that the principle of this seniority wage system (long service and hard work should be rewarded) is applied “only to male regular workers who start their service at a young age, but not to female employees even if they are in regular status jobs” (Nakata and Takehiro 2002:536). They argue that the seniority wage system is based on gender roles within the family,<sup>3</sup> where the “husband is the primary wage earner for a family and a wife is at home in charge of domestic affairs” (Nakata and Takehiro 2002:537).

Brinton (1991) illustrates that gender differences in opportunities of on-the-job training in Japanese firms contribute to the pay gap between sexes. She argues that since job training is limited to male employees whom Japanese firms expect to work over a long period of time, “employers thus have a ‘rational’ reason for practicing statistical discrimination against women: it is a shorthand way of sorting out long-term from short-term employees” (p. 21). In relation to the seniority system, male workers are more likely than their female counterparts to receive a salary increase, since intrafirm training directly affects the development of workers’ careers and, consequently, the length of service.

Studies on gender and the Japanese labor market have identified gender discriminatory practices that are based on the “demand-side” assumption of gender roles within the family, which is built on the argument of statistical discrimination, that is, women as a group are less committed and less productive. Few studies have paid attention to the organizational mechanisms that indirectly discriminate against women due to bureaucratic rules. Instead of assuming the seniority wage system is based on a family system, the current study proposes that it operates only on a personal management system that assigns workers into career or non-career tracks according to a requirement of nationwide transfer in the primary-sector jobs. This ostensibly “gender-neutral” bureaucratic rule, which is unique to the Japanese labor market, is the key to sorting men and women into promotional- or non-promotional-track jobs, and thus determines who enjoys the benefits of primary sector jobs. More specifically, male workers (who are more likely to accept this requirement) are more likely to be assigned to the career-track jobs that provide salary increases according to their years of service and various opportunities for on-the-job training. Hence, the Japanese labor market, characterized by the track-based employment system, provides a case study showing that the proposed mechanism of apparently gender-neutral bureaucratic organizational practices does, in fact, influence gendered employment outcomes.

### *Track-Based Employment System*

The track-based employment system is one of the characteristics of the Japanese personnel management system. In this system, most positions are basically classified as “career track” or “non-career track,” where the prerequisite of nationwide job transfer is the key to a particular job assignment. The career track, which puts an employee

on a vertical promotional ladder, consists of responsibilities including decision-making regarding overall planning and external negotiation. As a prerequisite, employees in this track must be willing to accept a nationwide job transfer involving a change in residence. Many large Japanese firms require frequent job rotations for workers in career-track positions in order to acquire firm-specific human capital. These job rotations usually involve nationwide transfer, since most large firms own a number of branches throughout the country. In this case, it is typical for a married male worker to live separately from his wife and children, because it is hard for his children to change their schools every time he transfers to another branch. When accepting the nationwide transfer prerequisite, a job applicant is typically not asked to sign a formal contract; instead, the employer makes a verbal agreement.

On the other hand, non-career-track jobs do not require the nationwide job transfer. These jobs normally involve routine work and usually do not provide promotional opportunities. Additionally, there are “semi-career-track” positions, which combine work found in career-track positions and non-career-track positions. Semi-career-track jobs are not considered to be on a long promotional ladder, and, in most cases, are targeted toward female university graduates. Jobs in semi-career-track positions are limited to regional work and do not require a nationwide job transfer. Real-world examples of semi-career-track jobs are entry-level sales positions in finance, insurance, and retailing industries; non-career-track jobs would be unskilled secretarial jobs in the office or simple service jobs, such as window tellers at banks. The prevalence of the semi-career-track position has served as an enticing alternative for those not willing or able to accept a nationwide transfer. However, those who take these semi-career-track positions are also taking a cut in their potential wages, usually at a reduction of 20 to 30 percent (Kiyoyama 2005). Thus, even with the addition of this semi-career track, women are still being sorted into lower paying jobs. Therefore, I treat the semi-career track as a non-career track and group it with the non-career-track clerical jobs throughout this article.

### *Equal Employment Opportunity Law (EEOL)*

The organizational practice of job assignment in the system of track-based employment approximately dates back to the Equal Employment Opportunity Law (EEOL) enacted in 1985. Prior to the passage of the EEOL, there was an informal two-track system channeling men onto a career track and women onto a non-career track. The EEOL obligated employers to strive for sex equality at the time of recruitment. However, the law sanctioned the practice of recruiting one gender exclusively for certain types of jobs. Furthermore, equality standards did not apply across organizational positions, and the law allowed unequal treatment by gender across different employment categories. Therefore, if pay standards were disproportionately low for clerical positions compared to management positions, and only women were hired into clerical positions while mostly men were hired into management, the law did not protect those women's ability to get a comparatively fair salary.

Noting the EEOL's allowances, many large firms formally introduced the track-based employment system,<sup>4</sup> since any gender discriminatory practices that fell

through the aforementioned loophole were not regarded as illegal. In this way, the 1985 EEOL encouraged firms to introduce and even formalize the track-based employment system that had been informally present in Japanese firms. Ironically, this formalization has itself given strength to the intermediate semi-career track, and thus increases the obstructions that keep women from obtaining better-paying jobs. Historically, such discriminatory practices have been actively institutionalized (or formalized) by firms in the finance industries. Given the historical background, some would argue that the track system is actually a deliberate exclusion of women and that the track system is fundamentally gender based, rather than a gender neutral organizational practice. However, it is difficult to empirically test employers' motives to account for variation across ascriptive groups in employment outcome (Reskin 2003). Instead of exploring the track system as a function of employer motives, my study takes a mechanism-based approach and focuses on organizational practices to examine gender differences in the Japanese labor market.

## DISPARATE IMPACT

The concept of disparate impact first appeared in a Supreme Court of the United States case, *Griggs v. Duke Power Co.*, in 1971; subsequently, the legislation of this notion was established in 1991 (Aizawa 2004). In the original case, the employer required job applicants to have a high school diploma. However, this requirement screened out more African Americans than whites, and, therefore, was considered a case of disparate impact based on race. To determine a case of disparate impact, an employer must prove that a requirement is necessary for the performance of a certain job. Generally, "disparate impact" refers to the different effects that some superficially neutral organizational practices have on members of different ascriptive groups. Here, "ascriptive groups" are defined on the basis of an ascriptive characteristic (such as gender, race, and ethnicity), and inequality is generated by specific processes that link individuals' ascriptive characteristics to workplace outcomes (Reskin 2003:2).

In the context of the Japanese labor market, the notion of disparate impact and its regulations have been frequently discussed in contemporary Japanese labor issues (see Aizawa 2004; Hayashi 2004; Kiyoyama 2005). Owing to the various feminist movements both inside and outside of Japan (such as CEDAW of the United Nations), the latest revised EEOL, which came into effect in 2007, prohibits indirect discrimination at the time of recruiting and hiring employees based on the requirement of transfer or by using the transfer experience as requirement for promotion. However, we are not sure to what extent this prevents the sorting of genders into transfer-requirement-based jobs. Although the requisite of nationwide transfer appears to be gender-neutral at first glance, the track-based employment system disadvantages the majority of Japanese women. More specifically, women are often culturally obligated to remain in charge of domestic affairs; therefore, accepting a position that may require a change in residence can be difficult. One of the major problems contributing to women's difficulty in meeting the transfer requirement comes from a shortage of sufficient childcare services

to make their careers compatible with their domestic obligations. Getting children into publicly certified daycare is very competitive, especially in urban areas, yielding a problem known as “waiting-list children” (*taikijido*). Under such a situation, it is less likely for a mother on the career track to be able to fulfill the transfer requirement because of her inability to locate appropriate daycare immediately after moving to a new residence. Hence, as the track-based employment system implicitly links gender to positions on the promotional track through the transfer requirement, it is a major cause of disparate impact upon women in the labor market.<sup>5</sup>

### *Organizational Context*

In Japan, indirect discrimination against women varies to some extent depending upon organizational-level factors. Governmental statistics (Ministry of Health, Labor, and Welfare 2004) show that a majority of firms (88.3 percent) uses the transfer prerequisite in deciding who enters career-track positions, and nearly all large firms (with 1,000 or more employees) use the transfer prerequisite in deciding who enters career-track positions, though this trend declines for smaller firms. Empirical research also supports the effect of organizational size on assigning women to dead-end jobs. For instance, Brinton (1989) reports gender differences in entering career-track positions in large firms. She found that very few women were placed in career-track positions when they started working, and the majority of women were placed in low-level clerical positions. This study considers organizational characteristics to be proxies for indirect discrimination, and takes organizational size into account when examining gender differences in hiring via the track-based employment system. As for the size of firms, it is presumed that larger firms are more likely than smaller firms to have a larger number of nationwide or international branches. Thus, larger firms are more likely to institutionalize the transfer requirement than smaller ones.

On the other hand, smaller firms are less likely to institutionalize the transfer requirement, since they have fewer branches. However, this does not mean that there are no transfer requirements at smaller firms. Since branches at smaller firms tend to be clustered in specific regions (not spread nationwide or internationally), it is easier for women to fulfill the transfer requirement because it may not necessarily involve a change in their residence.

As for industry type, this study considers the importance of institutional environments from an institutionalist's perspective (Meyer and Rowan 1977). Organizations that originally introduced the gender-based track system were primarily financial institutions. When hiring for career-track jobs, financial institutions, more than any other industry, are more likely to use the transfer requirement in order to indirectly discriminate against women.

The direct way to test my argument—that the track system is the major mechanism contributing to gender segregation—is to see if there are any gender differences in positional outcomes (the probability of hiring into non-career tracks versus career tracks) between firms with the track system and those without. However, non-career-track system firms do not have variations in positional outcome (i.e., no distinctions between

what would otherwise be considered career-track and non-career-track positions), since they hire four-year college graduates only for positions equivalent to the career track for track firms. Because of the presence of structural zero (because it is not possible to obtain observations) in the intersection between non-track-based firms and non-career-track positions, this study first will examine if there are gender differences in employment outcomes regarding being hired by track-system firms versus non-track-system-based firms, controlling for organizational and individual-level characteristics. I hypothesize that women are more likely than men to be hired by non-track-system-based firms for career-track-equivalent positions than by track-system-based firms, because they do not require a nationwide transfer for employees to be able to climb the career ladder. Next, limiting my analysis to the firms with the track system, I look to see if there are gender differences in positional outcome (i.e., being hired for non-career-track positions versus career-track positions). Here, I hypothesize that women are less likely than men to get career-track jobs at the track-system-based firms. From these sets of analyses, my study will try to determine if the track system is linked to gendered employment outcomes or not, and, if so, if there are any variations in organizational characteristics contributing to these outcomes.

## DATA AND METHODS

### *Data*

This study uses job-placement data taken from the graduating class<sup>6</sup> of 2003 (a total of 2,257 cases: 1,338 men and 919 women). Z University is coeducational and located in the middle west of Japan's main island. Academically, Z University is evaluated as one of the top private universities in that area, and it is also ranked highly among universities nationwide. The job-placement data at Z University contain individual graduates' information, such as gender, major, and hometown; they also include information on the hiring firms, such as the number of employees at the firm, market capitalization, location of headquarters, industry, status in the stock market, and the positions that the students were recruited for. These data were originally collected from a job-placement office at Z University, and I was allowed to use their data set for my research purposes. Consequently, the data were not complete, in that several predictor variables that we often see in employment models such as age, family income, etc. were not collected. However, this data set is still useful for examining the supposed mechanism that channels women and men into different tracks. Among the graduates who desired to get a job, 95.8 percent actually got their jobs, which was slightly higher than the national average of 92.1 percent in 2003.

One of the major advantages of using this data set is that the degree of school prestige or social reputation of Z University is held constant for women and men, which makes comparing labor market outcomes by gender much easier. Job-placement data from Z University may be considered a special case among Japanese colleges and universities because of its high academic ranking nationwide; its graduates will have a high-

placement rate in large Japanese firms. Therefore, the study's results can be applied only to generalizations concerning similar universities. My study limits its scope to job-placement outcomes of private Japanese firms.<sup>7</sup> My study does not deal with governmental organizations, since they have a different hiring mechanism that employs a standardized civil servant examination to help screen applicants, and more important, only a small minority of students (6 percent in my data set) got their first job at governmental organizations.<sup>8</sup>

This study uses a pool of hires as its data set, which has a two-level hierarchical structure, with job applicants (the level 1 unit) being nested within the firms (the level 2 unit). The unit of analysis is the graduate's first job placement. These data sets document the type of firms (one that did or did not use the track system) where applicants were hired and the positions (career track vs. non-career track) to which they were assigned within the track-system-based firms. Hence, the data actually show the gender-sorting mechanism that certain firms use, as well as gender differences in positional outcomes. The current study uses statistical methods to examine gendered organizational practices. I used the following variables and measurements in my analysis.

*Tracks.* As the first outcome variable, I created the dummy variable of *tracks*, which represents "firms using the track-based employment system" ("1") versus "firms without the track-based system" ("0").

*Positions.* As the second outcome variable, I created the dummy variable of *positions*, which represents being hired for a position within a career track versus outside the career track (including the semi-career track). For ease of interpretation, I coded "non-career-track positions" as "1," and "career-track positions" as "0."

*Firm size.* As noted earlier, the importance of the nationwide transfer requirement is based upon how many nationwide branches a firm has. Thus, when talking about the track-based employment system, including a nationwide transfer requirement, it is necessary to include a variable to account for nationwide branches. Because such branch information is difficult for outsiders to obtain, I have chosen to use the size of the firm instead as an indirect measurement of a firm's current and future plans regarding nationwide branches. I created a categorical variable representing the scale of firm as measured by the number of employees. I defined "small-medium firms" as those employing fewer than 1,000 employees, "large firms" as those employing from 1,000 to 5,000 employees, and "giant firms" as those employing more than 5,000 employees; these definitions are based on Japanese governmental statistics.

*Industry type.* I created the following dummy variables based on standard industrial classifications in Japanese governmental statistics. These are "manufacturing," "wholesale," "finance" (including insurance), "retail," and "others" (which includes construction, transportation, communication, real estate, education, and mass communication).

*Gender.* The dummy variable of gender was used as an explanatory variable. A female applicant is coded as 1, and a male applicant is coded as a reference category.

*Major.* In order to measure the applicants' human capital, this study used college majors rather than academic grade point average (GPA). Unlike the practice in the U.S., Japan rarely checks an applicant's GPA when making hiring decisions.<sup>9</sup> Most Japanese employers tend to value individuals' self-initiated voluntarism far more, and they are concerned with what applicants did during their college years besides studying, such as experience on the student council, membership in intramural sports clubs, and volunteer activities. College major signals a supply-side preference for particular kinds of jobs. More specifically, Japanese firms appear to prefer hiring majors in economics, law, commerce, and public policy rather than those in literature and sociology, because the former disciplines are assumed to have more marketable knowledge than the latter. Additionally, the level of competition of the entrance exam for the former disciplines is more rigorous than in the latter ones, so employers assume that applicants from the former disciplines are more easily trainable in their firms than the latter group. College major was used as the basis for a series of dummy variables to operationalize the types of human capital that the applicants have. To avoid confounding the effect of gender with the effect of major, I used "major" as a control variable, creating a series of dummy variables for the respondents' majors. These dummy variables include literature, sociology, law, economics, commerce, and general policy.<sup>10</sup> The baseline category used was literature major.

*Job-search method.* It is important to control the effect of personal social contacts on the placement outcome for women (Torres and Huffman 2002). My study considered two recruiting methods through which applicants got access to hiring information. The first method employed "informal" social contacts by which applicants use their personal connections through family members or relatives to get access to employers (regardless of the employers' reliance on such connections to recruit applicants). The second method employed "formal" job-searching techniques that applicants use to contact employers directly via the Internet. Starting in the early 2000s, increasing numbers of Japanese firms have introduced an Internet-based application process called the "open-entry system." Such systems enable interested applicants to access employers easily, resulting in the enlargement of the applicant pool. In the open-entry system, the first step is to submit an "entry-sheet" to employers. The entry-sheet is usually composed of an applicant's basic information such as name, address, age, major, name of university; it also includes statements of purpose, allows applicants to introduce themselves and describe their desired position, or request application-related materials, such as the firm's brochure. The reality is that many popular firms (usually large firms) use this as an initial screening process to decide which applicants to invite to their information sessions or seminars. Only those who are screened at this stage can move on to the next stages of taking a written examination and being interviewed. I created a dummy variable of "method," coding "using informal recruitment methods" as "1," and "using formal recruitment method" as "0." My study did not include an internship experience due to its small relevance to entry-level employment outcomes.<sup>11</sup>

### *Statistical Methods*

My statistical analyses used logistic regression analyses that consist mainly of two models. The first model examines the probability of being hired for career-track positions in track-system-based firms versus non-track-system-based firms as a function of gender, controlling for organizational and other applicants' characteristics. As a reminder, I assume that firms with a track system impose a nationwide transfer requirement for filling career-track positions. The second model is limited to the firms with the track system and examines the probability of being hired into career-track positions versus non-career-track positions<sup>12</sup> as a function of gender, controlling for organizational and other applicants' characteristics. Since female applicants are those whose employment outcome varies (either in career-track or non-career-track jobs), my study deals only with female applicants who were hired by firms with the track system.

## RESULTS AND DISCUSSION

### *Descriptive Statistics*

My data yielded a total of 2,561 graduates who obtained job offers from 1,418 private firms. Table 1 shows the proportion of graduates who were employed by gender and each control variable, and the corresponding results of a Wald test on the null hypothesis that the proportion of males is the same as for the proportion of females for each level of the control variables.

For both male and female graduates, the proportion of getting employed by firms with the track-based employment system is greater than those without the track system. Additionally, more males got jobs in firms with the track system. For positions, there is a clear tendency that almost all males (99 percent) got their first job for career-track positions, while only 57 percent of females did. As for firm size, more males (39 percent) were hired in large firms than females (31 percent), while more females (42 percent) were hired in small-medium firms than males (37 percent). Regarding industry, more males got jobs in manufacturing and wholesale industries than females. As for majors, more males majored in law, economics, and commerce, while more females majored in literature, sociology, and public policy. Almost all males and females used formal methods of job searching (such as public advertisement) instead of using personal connections.

### *Logistic Regression Analyses*

I used robust standard errors to adjust standard errors for intragroup correlations (applicants who got hired by the same firm) to avoid underestimating the standard errors of the regression coefficient throughout my analyses. Table 2 shows the adjusted odds ratio and robust standard errors of logit models predicting the probability of employment outcomes as a function of the applicants' and organizational-level characteristics.

Table 1. Proportion of Graduates Hired by Gender, by Control Variable, Using a Wald Test of Difference in Proportions

		<b>Male</b>	<b>Female</b>	<b>Difference</b>
Tracks	No tracks	.06 (80)	.09 (89)	-.03** (169)
	Tracks	.94 (1,275)	.91 (895)	.03** (2,170)
Positions	Career	.99 (1,342)	.57 (559)	.42*** (1,901)
	Noncareer	.01 (13)	.43 (425)	-.42*** (438)
Firm size	Small-medium (<1,000)	.37 (521)	.42 (481)	-.05 (1,002)
	Large (1,000–5,000)	.39 (545)	.31 (353)	.08*** (898)
	Giant (≥5,000)	.23 (327)	.27 (309)	-.04* (636)
Industry	Manufacturing	.33 (460)	.17 (202)	.16*** (662)
	Wholesale	.13 (178)	.08 (97)	.05*** (275)
	Finance	.15 (216)	.15 (171)	0.00 (387)
	Retail	.06 (78)	.06 (73)	0.00 (151)
	Others	.33 (468)	.53 (618)	-.20*** (1,086)
Major	Literature	.09 (128)	.26 (302)	-.17*** (430)
	Sociology	.13 (180)	.28 (323)	-.15*** (503)
	Law	.18 (246)	.10 (112)	.08*** (358)
	Economics	.26 (365)	.09 (106)	.17*** (471)
	Commerce	.24 (333)	.15 (174)	.09*** (507)
	Public policy	.10 (146)	.12 (141)	-.02*** (287)
Job-search method	Formal (public advertisement)	.99 (1,385)	.98 (1,131)	.01*** (2,516)
	Informal (personal contacts)	.01 (12)	.02 (28)	-.01*** (40)

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ 

Note: ( ) indicates frequencies.

Table 2. Adjusted Odds Ratio for Logistic Regression Models Predicting the Probabilities Based on the Existence Versus Absence of the Track System in Model 1 (N = 1895), and Receiving Non-Career-Track Versus Career-Track Positions Within Track-System Firms for Female Applicants in Model 2 (N = 892)

Variable names	Category	Model 1	Model 2
		Tracks (yes)	(only females) Positions (noncareer)
Gender	Female	.42*** (.09)	—
Major	Sociology	1.10 (.30)	.76 (.16)
	Economics	1.48 (.51)	1.02 (.28)
	Law	1.28 (.38)	.69 (.21)
	Commerce	1.91* (.61)	.79 (.19)
	General policy	.83 (.25)	.39** (.12)
	Firm size	Large (1,000–5,000)	.65* (.14)
Giant ( $\geq 5,000$ )		1.66 (.65)	3.55** (1.45)
Industry	Manufacturing	1.60 (.41)	.25*** (.09)
	Wholesale	1.21 (.36)	.83 (.32)
	Finance	.56 (.20)	3.36** (1.34)
	Retail	.62 (.19)	.20*** (.09)
Job-search method	Personal contact	.19*** (.09)	5.02** (2.76)
Log pseudolikelihood		-518.56	-501.35

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ; standard errors in parentheses

Note: ( ) indicates frequencies. Omitted categories were “male” for gender, “literature” for major, “public advertisement” for job-search method, “small-medium” (<1,000) for firm size, and “others” for industry.

The result of the first logit model (Model 1) showed that gender had a significant effect on being employed by track-system-based firms, controlling for major, organizational characteristics, and job-search methods. The odds of being hired by track-system-based firms were .42 ( $p < .001$ ) for female applicants relative to male applicants. Since the odds ratio is less than 1, this result implies that female applicants are less likely to be

hired by track-system-based firms than their male counterparts, supporting my first hypothesis that women are more likely to be hired by non-track-system-based firms for career-track-equivalent positions than by track-system-based firms.

In terms of organizational characteristics, the results showed that firm size had a significant effect on the presence or absence of the track system.<sup>13</sup> The odds of the existence of a track system were .65 ( $p < .05$ ) for large firms relative to small-medium firms, controlling for industry, which indicates that large firms are less likely to be track-system-based firms than small-medium ones. These results provide evidence against my earlier argument regarding the association between the number of branch sites and the institutionalization of the track system, where accepting a job transfer becomes requisite for filling career-track positions. However, this result might indicate that the distinction of “small-medium” (<1,000) from “large” (1,000–5,000) in terms of firm size did not differ so much in predicting firms’ usage of the track system, considering that the odds ratio for giant firms was 1.66 (it did not reach the significant level of  $\alpha = .05$  due to a large clustered standard error).

Note that the effect of job-search methods also had a significant effect on the presence or absence of the track system. The odds of being employed by firms with the track system was .19 for applicants who used informal personal contacts relative to those who used formal job-searching methods (the “open-entry system”), indicating that applicants who used personal contacts are more likely to be hired by non-track firms than those who used formal methods. Conversely, applicants who used formal methods tended to be hired by track-system-based firms, which could be explained by the prevalence of Internet technology in business. Since large/giant firms initially introduced the open-entry system, and such firms tend to use the track system, it makes sense that applicants who were hired by these firms had a high probability of applying via formal methods.

So far, the results have shown that when recruiting for career-track positions, firms without track system are more likely to hire females than males. The next analysis delves into the hiring practices for firms with the track system to examine organizational sex segregation. First, I examine the effect of gender on positional outcome (hiring into non-career-track versus career-track positions). However, the odds ratio and clustered standard error of gender were huge (results not shown), due primarily to the few cases of males who were actually hired for non-career-track positions. Even though this result alone supports my second hypothesis that women are less likely than men to get career-track positions, considering the limitations of the data, it would be more informative to use only the female graduates to examine the variations in positions (non-career-track versus career-track) for which they were hired as a function of majors, organizational characteristics, and job-search methods.

Model 2 (only females) shows the results of the logistic regression model for female graduates who were hired into firms with the track system. General policy majors, compared to literature majors, were less likely to be hired into non-career-track positions (adjusted odds ratio = .39;  $p < .01$ ). Such results can be explained by the idiosyncratic characteristics of the general policy major offered by Z University. General

policy is a relatively new academic field in Japan that usually covers studies on environmental issues, international affairs, and policy analyses. Its curriculum offers not only conventional classes but also opportunities for international exchange activities. Therefore, general policy majors are considered to have high human capital and are more appropriate for career tracks than literature majors. In terms of organizational characteristics, female graduates who were hired by giant firms rather than small-medium ones were more likely to get non-career-track positions (adjusted odds ratio = 3.55;  $p < .01$ ), controlling for industry type and applicants' characteristics. This indicates that when female graduates try to get jobs at giant firms, they have greater difficulty receiving career-track positions, regardless of industry type.

Female graduates who were hired by firms in the manufacturing industry (adjusted odds ratio = .25;  $p < .001$ ) and in the retail industry (adjusted odds ratio = .20;  $p < .001$ ) were less likely to be hired into non-career-track positions. Additionally, female applicants who were hired by firms in the finance industry (adjusted odds ratio = 3.36;  $p < .01$ ) were more likely to get non-career-track positions compared to other industries. Such differences in employment outcomes may stem from differences in the level of implementing gendered cultural rules in organizational environments, reflecting demand-side attitudes toward using women as a core labor force. For instance, manufacturing corporations in the household appliance industry actively hire women for career-track positions since their customers are mainly women; these corporations believe female employees may have better skills developing marketing strategies toward their own gender. Likewise, supermarkets or department stores in the retail industry also actively hire women for career tracks for similar reasons. On the other hand, firms in the financial industry are less likely to hire female applicants for career-track positions, considering they comprise the organizational field that originally introduced the track systems after the EEOL. We cannot ignore the influence of organizational environment when considering gendered hiring practices. As for the effect of job-search methods on positional outcome, the results showed that female graduates who used personal connections were more likely to be hired for non-career tracks compared to those who used formal methods (adjusted odds ratio = 5.02;  $p < .01$ ). This result is consistent with the U.S. literature that shows women are at a disadvantage when using personal contacts to secure jobs (Drentea 1998; Torres and Huffman 2002).

In summary, I found gender differences in employment outcomes depending upon the presence of the track system. My data also show a difference in positional outcomes at track-system-based firms. For the former, females are more likely to be hired by firms that do not use the track system. For the latter, females are more likely to be hired into non-career-track positions at firms with the track system. In that case, females tend to get jobs at giant firms, at firms in the finance industry, and to use personal connections as a job-searching method. Graduates who were hired by employers in manufacturing and retail industries were usually hired for career-track positions (recall that this result controls for size). This indicates the importance of organizational environment in examining gendered employment outcomes in Japanese corporations.

## CONCLUSION

This study is the first empirical research investigating the disparate impact that universalized bureaucratic rules have on women, in the context of the Japanese entry-level labor market. My study introduces the track-based employment system, which indirectly discriminates against women through organizational hiring practices. Using data on the pool of hires, this article showed that the ostensibly “gender-neutral” criterion of nationwide job transfer is the supposed mechanism that channels men and women into different employment tracks, which leads to gender segregation in the Japanese labor market.

My study has shown that women tend to get either career-track jobs at firms without the track system, or non-career-track jobs at firms with the track system. On the other hand, men tend to get career-track jobs at firms with the track system. Presumably, the “gender-neutral” rules in the two-tiered hiring system underlie such gender differences and serve to perpetuate gender inequality within firms in particular and in the labor market more generally.

However, these conclusions are restricted by some limitations in my study. I used “graduate’s first job,” as the unit of analysis, not “job offers received by a graduate.” Therefore, my data set does not contain any information on the applicant pool, which excludes information about graduates who applied for jobs and firms but were not hired, from the target population.<sup>14</sup> For instance, if a female applicant applied for both career-track and non-career-track positions at a given company but was hired only for a non-career-track position (which is the usual pattern for many female applicants who apply to prestigious Japanese firms), I do not have any information about her first employment attempt outcome. Similarly, if a female applicant who wanted to get a career-track job was not hired by several firms with the track system, but then ended up with getting a career-track-type job at a firm without the track system, this sort of outcome is not included in the data set. In both cases, not having the applicant pool data has the possibility of understating the effect of the track system on women’s employment outcome, ignoring the cases of failure of preceding employment outcomes mostly for female applicants. Not having applicant data also makes it harder to separate the organizational mechanism (track system) from the mechanism of self-selection; that is, women simply may not have applied for career-track jobs at the same rate as men, or women may have applied less often to the track-system-based firms.<sup>15</sup> Unfortunately, the present data cannot address this issue, but such self-selection mechanisms are likely to stem from women’s belief that either the career-track jobs are not suited for them, or they anticipate they have little chance of being hired into the career track, so they don’t bother applying. If so, this demonstrates that the track system has a disparate impact on women. Further study may better verify this point.

My study has also shown that larger Japanese firms tend to hire women for non-career-track positions, implying a positive association between organizational size and the level of formalization of organizational practices of the track system. The U.S. empirical research has shown that formalization in recruitment and job screening

influence employment outcomes by preventing employers from being affected by sex bias when they make hiring decisions and discouraging discretion in job assignments (e.g., Glick, Zion, and Nelson 1988; Kmec 2005). This line of research has found that generally, the more bureaucratized personnel practices are, the less freedom employers have to act upon their own biases and stereotypes, and the association between workers' sex and their jobs becomes weaker (Reskin 2003; Reskin and Bielby 2005; Reskin and McBrier 2000). Although formalization is usually believed to be helpful in equalizing the workplace, my study has shown that in the case of Japanese hiring practices, it has an adverse effect on women's employment outcome, because the gender disparity stems not from individual beliefs, per se, but precisely from formal organizational hiring practices, that is, the track-based employment system.

Coupled with the track system, the idiosyncrasies in Japanese recruitment of the young labor force contribute to the high level of sex segregation in the internal labor market. Most Japanese firms, regardless of size, still hire new employees at fixed times within the framework of the lifetime employment system. In this situation, many Japanese firms continue to make efforts to secure male employees who are more likely to commit themselves to work for the rest of their working lives, rather than women who are (culturally speaking) expected to hurdle major life events such as marriage and childbirth.

The findings in this article are consistent with empirical research found in the U.S. sociological literature describing organizational employment practices that are gender-based (e.g., Acker 1990; Kanter 1977) and the structure for discrimination in terms of differential allocation of men and women to positions at the point of hire (Petersen and Saporta 2004). However, what is unique in my study is the focus on Japanese hiring practices that indirectly exclude women from promotional jobs by using a hiring system based on seemingly gender-*neutral* criteria. My study has focused on using organizational mechanisms to examine gender segregation in the labor market, but there can be other unobserved mechanisms that contribute to the level of gender inequality in a work setting. Future research can also focus on other levels of analysis such as intrapsychic, interpersonal, or societal-level analysis (Reskin 2003).

Even though the recent decrease in the use of Japan's unique personnel management system (with such aspects as permanent employment in a single firm) may have had an effect on other, lesser gender stratification patterns in the internal labor market structure, as long as a hiring system exists that tacitly prevents women from entering career-track positions, the gender stratification patterns will probably remain unchanged in the Japanese labor market for some time to come.

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University of Southern California, applying social network analysis and statistical methods to health behavior and prevention research in the United States.

## NOTES

1. Research indicates that the degree of sex segregation in Japan is not so high (e.g., Charles and Grusky 2004). According to Shirahase and Ishida (1994), the low degree of sex segregation can be explained by two factors: (1) relatively smaller shares of managerial and service occupations where both genders are overrepresented, and (2) more equal sex composition in clerical, blue-collar production process, and agricultural occupations. They expect that gender inequality in the Japanese labor market is noticeable in the forms of employment status, career prospects, and full-time/part-time distinctions within occupations.

2. There have been changes in the wage system, mostly in the manufacturing industry and individual enterprises (Watanabe 2000).

3. The seniority wage system in itself is outside of the Japanese Equal Employment Opportunity Law.

4. Data by the Ministry of Health, Labor, and Welfare show that the track-based employment system became widespread immediately before and just after the enactment of the 1985 EEOL. The track-based employment system was especially prevalent among the large Japanese firms, and by 2000, 51.9 percent of those with more than 5,000 employees used this system (Hayashi 2004).

5. One of the other possible cases of disparate impact in Japanese employment is the prerequisite for being a head of a household in the residence registry to receive benefit packages such as a dependent family allowance and a housing allowance. Since the majority of women are not a head of household in the residence registry due to the traditional view of women as the "second sex," the prerequisite for being a household head works against the majority of women and is one reason for the large pay gap between men and women.

6. The significance of the year of my study is that Japan has almost recovered from a long-term economic recession; it will reflect the selection mechanisms in the entry-level labor market and should not be confounded with a dearth of available positions and a surplus of applicants.

7. My data set contained mainly Japanese firms; although U.S.-based multinational firms operating in Japan have more "enlightened gender policies" than their Japanese counterparts, my study does not differentiate this, and I appreciate the reviewer's pointing this out.

8. There was no distinction in hiring positions for governmental organizations recorded in my data.

9. This is reinforced by the fact that according to my interviews with job-placement personnel at Z University, the placement office looked for a correlation between GPA and employment outcome, but their results showed no significant correlation between these variables.

10. No hard science or math majors are offered at Z University. Additionally, my study excluded graduates from engineering majors because of the small number (21 for males and 7 for females), and, more important, the part of the job market they are hired into is usually quite different from nonengineers.

11. The internship system in Japan is somewhat different from that of the U.S. Recent college graduates in Japan do not have similar work experiences from their internships compared to those in the United States. In addition, getting internship experience in prestigious firms is

usually much more difficult than securing actual employment in that firm. For these reasons, my study does not consider the effect of internship as a control variable.

12. One could argue that I should instead use a multinomial regression to examine employment outcome classified among three categories of career track, semi-career track, and non-career track. I did conduct a multinomial analysis, and found that there was no significant difference in results between semi-career track and non-career track using the multinomial logit models. Therefore, I chose the simpler model, which used only a dichotomous dependent variable.

13. The global Wald test shows that the effect of firm size on existence of track systems was significant ( $\chi^2 = 11.03$ ;  $p < .01$ ).

14. Yakubovich (2005) addresses the issue of a potential sample selection bias and shows what kinds of data should be used to deal with this problem.

15. In this case, the pool of applicants does not differ so much from the pool of hires, since whether a graduate is going to be hired or not is often decided beforehand, prior to her formally submitted application (Yakubovich 2005).

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# Explaining the Gender Gap in Professors' Intentions to Leave

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*We examine gender differences in faculty members' intentions to leave their jobs and explanations for these differences. Using data from the National Survey of Postsecondary Faculty 1999 (NSOPF 99), we examine family, social control, and work explanations for intentions to leave. Findings show that gender is significantly related to intentions to leave, and women are more likely than men to intend to leave their jobs. Perceptions of ill-treatment based on gender are related to female professors' higher rate of intentions to leave, as is the fact that more women than men occupy part-time positions in academia.*

Despite the increasing number of women receiving undergraduate degrees, graduate degrees, and the increasing number of women in faculty positions, numerous gender inequalities remain in academia. Although the number of female professors has increased in past years, academia remains male-dominated, with men comprising approximately 65 percent of all professor positions (National Center for Education Statistics 2002a). As academic rank increases, the number of women declines (Mason and Goulden 2002; Sandler and Hall 1986). Gender imbalances in salary, rank, and tenure have declined to some degree, but vast inequities remain (Massachusetts Institute of Technology 1999). Female faculty still have lower salaries, are less likely to be at prestigious institutions, are at lower ranks, and are less likely than men to achieve tenure (Mason and Ekman 2007; Mason and Goulden 2002, 2004; Mason, Goulden, and Wolfinger 2006; Valian 1998). They also are more likely than men to struggle with a number of other issues including sexual harassment, parental leave/eldercare leave, childcare, and mentoring. In addition, women are more likely than men to voluntarily leave academic positions (Bellas, Ritchey, and Parmer 2001; Brown and Woodbury 1995; McElrath 1992; Rausch et al. 1989; Rosenfeld and Jones 1986; Rothblum 1988). In this paper, we contend that these are not unrelated phenomena. In particular, we explore (1) to what extent intentions to leave among university

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faculty are related to work factors, and (2) to what extent work factors explain gender differences in faculty intentions to leave.

Gender differences in employment departures have been noted and explored in fields such as accounting, engineering, and law (Baband and Lentz 1998; Reed, Kratchman and Strawser 1994; Yates 2001). Gender differences in intentions to leave among faculty have been found in some studies but not in others (Ehrenberg, Kasper and Rees 1991; Rosser 2004; Zhou and Volkwein 2004). Many studies have focused on explaining general turnover, so the gender “effect” is not prioritized, which inhibits exploration of gender differences in turnover. In contrast, we prioritize the relationship between gender and intentions to leave. In this investigation we are less interested in identifying factors related to intentions to leave and more interested in explaining the relationship between gender and these intentions.

## BACKGROUND

Studies of actual “leave behavior” consistently show women leaving academic institutions at higher rates than men. Such differences have been documented in all phases of the academic career, including prior to and after first reappointment and prior to tenure in general (Drago et al. 2001; Rothblum 1988). For example, in 1981 to 1982 at Michigan State University, 21.8 percent of women faculty left, compared to 13.2 percent of men (Brown and Woodbury 1995). In 1989 to 1990, 17.7 percent of women left, and only 11.1 percent of men faculty left (Brown and Woodbury 1995). A University of Cincinnati study, including professors of all ranks, found that over a ten-year period (1985–1995), 42 percent of women resigned, while only 30 percent of men did (Bellas et al. 2001).

These findings center on actual intentions to leave. Studies examining intentions to leave have been less clear with regard to the relationship between gender and these intentions. An examination of faculty turnover intentions in the 1984 Carnegie Foundation for the Advancement of Teaching national survey of faculty found that among tenured faculty, men had stronger turnover intentions than women; among untenured faculty, however, there was no gender difference (Smart 1990). Another investigation drawing on the 1989 National Survey of the American Professorate, showed that men were more likely than women to intend to leave academia (Barnes, Agage, and Coombs 1998). In contrast, in an analysis of full-time faculty drawn from the 1999 National Study of Postsecondary Faculty, gender was not a significant predictor of intentions to leave (Rosser 2004).

Institution-specific investigations are limited because they are nonrepresentative, so findings may not be generalizable to the faculty population. But findings from the representative studies are unclear and sometimes contradict institutional findings. One could read these differing findings for actual leave behavior and intentions to leave as evidence that intentions are not good predictors of behavior. Yet several scholars have found intentions to be the best predictor of actual leave behavior (Hellman 1997; Lee and Mowday 1987; Mobley, Horner, and Hollingsworth 1978; Parasuraman 1982;

Price and Mueller 1981). Further, the gender gap in intentions to leave in the data we use are comparable to those found in investigations of actual leave among faculty (Bellas et al. 2001; Brown and Woodbury 1995; Drago et al. 2001; McElrath 1992). We think the lack of findings about gender in the representative studies is due to the fact that, in these studies, the simple relationship between gender and intentions to leave was not investigated. Instead, gender was included with a host of other variables as a predictor of intentions to leave. Thus, prior studies leave us unable to ascertain the extent to which gender is related to faculty intentions to leave. More important, prior studies do not allow us to understand which gender-related factors drive the association between gender and intentions to leave. In this investigation, we use nationally representative data to overcome previous limitations examining gender differences in intentions to leave among faculty and explanations for these gender differences.

### *Theoretical Perspectives*

There are three main explanations for gender differences in job leaving. The work versus family explanation posits that family responsibilities interfere with traditional career paths (Norrell and Norrell 1996; Williams 2000). To the extent that women bear a disproportionate responsibility for family life, women will be more likely to leave their jobs than men. The social control explanation holds that women are treated differently than men in the workplace (i.e., not as well), with consequences for workplace attainment and job-leaving behavior (Bagilhole 1993; Jacobs 1989; Kanter 1977). Finally, the “work,” or “job factors” argument holds that in comparison to men, women have fewer of the workplace resources that predict job continuity. We explain each of these perspectives in detail below.

*Family model.* The “ideal worker” norm assumes that employees do not have responsibilities outside of the workplace and their primary commitment is to the workplace (Williams 2000). This idea comes from the traditional breadwinner/homemaker division of family roles in which men’s commitment is to the workplace and women’s is to the home (Marsden, Kalleberg, and Cook 1993). Those who incorporate family factors into their research have found family responsibility to be associated with intentions to leave, but more so for women than men. For instance, an investigation of men and women employed at an insurance agency found that men and women cited different reasons for leaving, with women being more likely than men to cite reasons such as household responsibilities, illness in the family, pregnancy, and wanting to have a job closer to home, whereas men rarely cited family reasons (Sicherman 1996).

There are reasons to expect similar relationships in academia between family factors and intentions to leave. Many scholars argue that the occupational structure of academia does not accommodate individuals with significant family demands (see, for instance, Mason and Ekman 2007; Mason and Goulden 2002, 2004; Mason et al. 2006; Monroe et al. 2008). Given the mismatch between the ideal worker norm, which characterizes academia, and the fact that women are still likely to shoulder a larger share of family responsibilities than men, it may be that having children leads

women to seek other positions or even other occupations that are more family friendly (Bianchi et al. 2000; Duxbury and Higgins 1994; Reskin and Hartman 1986). Gender differences in the effect of children on intentions to leave may then account for gender differences in intentions to leave.

Yet because children represent a financial burden as well as a time burden, the relationship between children and employment is not necessarily clear cut (Silver and Goldscheider 1994). The financial responsibility that children represent may solidify attachment to one's job (especially for individuals in professional occupations, such as those in academia), making job leaving less likely. An investigation of turnover intentions in a sample of managers showed that the number of children was negatively related to turnover intentions for both women and men (Stroh, Brett, and Reilly 1996). Thus, although we investigate how family factors are related to intentions to leave for female and male faculty, we do not offer a hypothesis with respect to this relationship.

*Social control and the chilly climate.* The social control model considers informal processes that may lead to gender differences in individuals' connections to the workplace. Social control theory asserts that women are restricted from male-dominated fields through messages of disapproval (Jacobs 1989). One aspect of social control argues that women in male-dominated fields, educated women, or women with higher occupational ranks are a threat to male authority (Jacobs 1989). From this theoretical perspective, sex segregation continues because women who enter male-dominated fields, such as academia, are labeled deviant and subsequently treated to both subtle and overt discrimination, which pressures them to leave male-dominated positions (Jacobs 1989).

In academia, this chilly professional climate refers to the subtle discrimination that women faculty encounter (Sandler and Hall 1986). These subtle treatment differences communicate messages of inferiority to women (Sandler and Hall 1986). Indeed, many female faculty feel that they are directly or indirectly discriminated against with respect to career activities and work-family balance (Bagilhole 1993). A recent study of 80 female faculty at a large research university showed women were subject to individual- and institutional-level discrimination (Monroe et al. 2008). Subtle and indirect discriminatory treatment—such as covertly treating women differently from men or the lack of social support—is one explanation for the concentration of female faculty in lower ranks and the limited number of female faculty at higher ranks (Menges and Exum 1983). A study of women who left faculty positions showed that a significant percentage of these women cited a lack of social support as a factor in their departure (Aisenberg and Harrington 1988).

Kanter (1977) asserts that the smaller the number of women in an organization, the more likely they are to face discrimination. Similarly, the smaller the number of female faculty on campus, the chillier the environment is likely to feel (Sandler and Hall 1986). In traditionally male fields, such as the sciences, law, and medicine, the likelihood of facing a chilly climate is even greater for women (Sandler and Hall 1986). Indeed, one study found that the proportion of women in academic departments was

related to how female faculty perceived workplace hospitality. Female faculty in departments with fewer women reported less hospitable environments than did female faculty in departments with more women (Riger et al. 1997). As such, a social control perspective predicts higher attrition rates among women in male-dominated fields (Jacobs 1989; Kanter 1977). We expect that social control factors, such as sex composition of discipline and treatment of women, will mediate the relationship between gender and job leaving.

*Work model.* The work model considers gender differences in structural-level factors that may consequently result in gender differences in employment behaviors (Feldberg and Glenn 1979). Gender differences in many work factors have been documented in academia, including employment type (full-time vs. part-time employment), rank, tenure, and salary (Brown and Woodbury 1995; Harper et al. 2001; Mason and Ekman 2007; Mason and Goulden 2002, 2004; Mason et al. 2006; Valian 1998). In comparison to men, women are more likely to be in part-time positions, are less likely to have tenure, and are generally concentrated in lower ranks (Brown and Woodbury 1995; Mason et al. 2006; Valian 1998). Previous research has shown that these factors are significantly associated with turnover intentions more than actual turnover (Cohen 1999; Felmlee 1984; Lambert, Hogan, and Barton 2001; Price and Mueller 1981; Weisberg and Kirschenbaum 1991). Since women are likely to have a lower standing on all of these work-related measures than men, we expect these factors to mediate gender differences in intentions to leave.

We expect gender will be associated with intentions to leave in this nationally representative sample in which we include all faculty. We will take into account the factors we think are associated with this relationship (family, social control, and work explanations), expecting that by controlling for these factors the relationship between gender and intentions to leave will be mediated.

## METHODS

Data for this analysis come from the National Survey of Postsecondary Faculty 1999 (NSOPF 99), sponsored by the National Center for Education Statistics (NCES 2002b). Approval for use of the data was received prior to initiation of the study and assigned study license control #021112686 from the NCES. The survey was designed and conducted by the Gallup Organization. Data collection began on February 4, 1999, and extended through March 24, 2000. Because the National Survey of Postsecondary Faculty 2004 does not include information on faculty intentions to leave, we use the 1999 data, with confidence in its enduring relevance regarding gender differences in faculty placements, responsibilities, and rewards (see Mason and Ekman 2007; Mason and Goulden 2004; Mason et al. 2006; Monroe et al. 2008; Rosser 2004).

A stratified sample of 819 institutions provided a list of faculty, of which 69 percent completed questionnaires (N = 19,813). The data used in this investigation are

weighted with the National Center for Education Statistics weights to adjust for the probability of being selected into the sample. Minority groups were oversampled so the data must be weighted to more appropriately estimate the true faculty population parameters. The weighted response rate to the survey was 83 percent, resulting in a sample size of 18,043 faculty and instructional staff. We restricted this sample to a subset of prime age workers—those under 55—which results in a final sample size of 12,713 faculty and instructional staff. Descriptive results, reported in Table 1, show that the sample used in this analysis includes 6,441 men and 6,272 women.

Statistical analyses were performed using Stata version 7.0 (StataCorp. 2001) and the following commands were employed: (1) “svy” and “robust” commands for adjusting standard errors in complex survey designs; (2) the “pweight” command was used with the full-sample faculty weight provided by NCES; and (3) the “fitstat” command was used to calculate postestimation statistics and compare regression models.

### *Dependent Variable*

We computed one dependent variable, *intention to leave*, constructed from questions in which respondents were asked: “During the next three years, how likely is it that you will leave this job to (a) accept a part-time job at a different postsecondary institution, (b) accept a full-time job at a different postsecondary institution, (c) accept a part-time job not at a postsecondary institution, (d) accept a full-time job not at a postsecondary institution, (e) retire from the labor force?” Response categories for these questions included (a) not at all likely, (b) somewhat likely, and (c) very likely. The intention to leave variable is coded “1” for individuals who said they were “very likely” to accept a part-time or full-time job at another postsecondary institution or to accept a part-time or full-time job outside of academia and coded “0” otherwise.

Initially, we constructed two variables, *turnover* and *attrition*. Yet, in examining the results for turnover and attrition, the results were identical, so we created the *intention to leave* variable described above. Approximately 6 percent of respondents reported they were very or somewhat likely to retire. Because retirement was not a variable of interest, we limited our sample to those under 55 in constructing the dependent variable, thereby eliminating respondents with retirement interests.

### *Independent Variables*

Independent variables in this analysis, including constructs measuring family factors, social control, and work, are described below. We nest several models to assess which variables account for the association between gender and intentions to leave. Gender, the primary variable of interest in the analyses, is a dummy variable in which women are coded “1” and men are coded “0.”

*Demographic variables.* Demographic variables such as age, race, and education are related to intentions to leave, and, because they may mediate the relationship between gender and intentions to leave in this instance, we have controlled for these variables (Hellman 1997; Marsden et al. 1993; Sicherman 1996). Demographic variables in the model include age, education, and race. The age variable is composed of three cat-

Table 1. Percent Distribution for Variables in Analysis (Weighted)

	Entire Sample	Men	Women	$\chi^2/df$
	%	%	%	
<i>Baseline</i>				
Gender				
Female	45.9	•	•	
Male	54.1	•	•	
<i>Demographic Variables</i>				
Age**				29.432/2
under 35	13.6	12.1	15.4	
35–44	36.6	36.9	36.3	
45–54	49.7	50.9	48.3	
Highest degree***				730.714/1
PhD or first professional	46.3	55.5	35.4	
Master's or less	53.7	44.5	64.6	
Race				.440/1
White	87.6	87.7	87.4	
Other	12.4	12.3	12.6	
<i>Family Variables</i>				
Number of children***				755.055/5
0	43.6	35.6	53.0	
1	16.9	17.1	16.6	
2	20.5	22.1	18.5	
3	12.3	16.1	7.8	
4	5.2	7.1	2.9	
5–10	1.6	2.0	1.3	
<i>Social Control Variables</i>				
Female faculty treated well***				1691.450/3
Strongly disagree	3.2	1.5	5.3	
Disagree	16.1	8.8	24.6	
Agree	56.8	56.4	57.3	
Strongly agree	23.9	33.3	12.8	
Discipline gender balanced***	55.6	47.9	64.6	503.595/1
Discipline gender balance missing*	15.1	16.0	14.0	14.645/1
<i>Work Variables</i>				
Employment type***				182.557/1
Part-time	43.8	39.2	49.2	
Full-time	56.2	60.8	50.8	

\*\*\*  $p < .001$ ; \*\*  $p < .05$  based on chi-square test of association

continues

Table 1. Percent Distribution for Variables in Analysis (Weighted) Cont.

	Entire Sample	Men	Women	$\chi^2/df$
	%	%	%	
<i>Work Variables Cont.</i>				
Rank***				689.589/4
Full professor	12.8	17.1	7.6	
Associate professor	15.5	18.5	11.9	
Assistant professor	18.8	19.2	18.5	
Other	53.0	45.2	62.1	
Salary***				629.626/10
\$0	1.3	1.6	1.0	
\$1–\$9,999	27.5	24.7	30.7	
\$10,000–\$24,999	14.3	12.2	16.8	
\$25,000–\$39,999	17.5	15.2	20.2	
\$40,000–\$54,999	18.9	19.8	17.9	
\$55,000–\$69,999	9.2	10.9	7.2	
\$70,000–\$84,999	5.0	6.5	3.1	
\$85,000–\$99,999	2.1	2.9	1.2	
\$100,000–\$114,999	1.6	2.4	0.7	
\$115,000–\$129,999	1.0	1.4	0.6	
\$130,000+	1.6	2.3	0.8	
Advancement opportunity***				226.023/3
Very dissatisfied	18.3	15.7	21.5	
Dissatisfied	22.2	20.9	23.8	
Satisfied	34.3	34.4	34.3	
Very satisfied	25.1	29.0	20.5	
Job overall				18.538/3
Very dissatisfied	3.8	3.6	4.1	
Dissatisfied	12.5	11.7	13.4	
Satisfied	47.1	47.2	47.0	
Very satisfied	36.6	37.5	35.5	
<i>Job Leave Variables</i>				
Turnover intention*	11.9	10.9	13.1	21.232/1
Attrition intention***	12.9	11.4	14.7	41.429/1
Job leave***				71.4383/1
Intention to leave	24.8	22.3	27.8	
No intention to leave	75.2	77.7	72.2	

\*\*\*  $p < .001$ ; \*\*  $p < .01$ ; \*  $p < .05$  based on chi-square test of association

egories: including under 35, coded “1,” 35–44, coded “2” and 45–54 coded “3.” Education is a dummy variable coded “1” for doctorate or first professional degree and “0” for all other degrees. The NSOPF 99 education variable combined first professional degree and PhD into one category. First professional degree includes an MD, DO, DDS, JD, or equivalent, and these are terminal degrees or the highest degree an individual can reach in a field of study. Race is a dichotomous variable with white coded “1” and all other racial categories coded “0.”

*Family variables.* To assess contributions of family responsibilities in intention to leave, we include number of children in the model. We measure number of children with a question asking respondents how many dependents they have. Because dependents might include spouses who were unemployed, we subtracted “1” from the number of dependents for those respondents who were married to unemployed spouses. The number of children variable includes six categories “0,” “1,” “2,” “3,” “4,” and “5–10.”

*Social control variables.* The social control constructs include treatment of female faculty and gender-balanced discipline. The first construct, treatment of female faculty, is operationalized with responses to this statement, “Female faculty members are treated fairly at this institution.” Response categories ranged from (1) strongly disagree to (4) strongly agree, with high scores reflecting fair treatment. To measure the second social control construct, gender balance of departments, we used the discipline indicated by departments to infer sex composition, using data from a report by the National Center for Education Statistics on gender composition of academic programs for full-time faculty in 1998 (NCES 2002a). We define gender-balanced disciplines as being between 30 and 70 percent male or female (see Tomaskovic-Devey and Skaggs 1999). There are no female-dominated disciplines in academia (none of the broadly defined disciplines, including agriculture/home economics, business, education, engineering, fine arts, health sciences, humanities, natural sciences, and social sciences consist of 71 percent or more women), so the omitted category is male-dominated discipline. Although gender composition—percentage male versus female—of departments might be more proximal to actual social control processes, composition of disciplines is likely to reflect the composition of academic departments overall.

*Work variables.* Three measures tap aspects of the work model. Measures for this model include full- vs. part-time hours, academic rank, and salary. Full-time hours is a dummy variable coded “1” if respondents were employed full-time by their institution and “0” otherwise. Rank is captured by a series of dummy variables, including a full professor, an associate professor, and an assistant professor variable coded “1” if the respondent was in this rank, and “0” otherwise. Respondents who indicated that they were instructors or lecturers comprise the omitted variable in the analysis. We use an eleven-item salary measure ranging from \$0 coded “1” to \$130,000+ coded “11” in which respondents were asked to report their pretax compensation from several sources.

Finally, we also control for two constructs that have been repeatedly shown to predict turnover across many different occupational contexts. These variables include satisfaction with advancement opportunity and general job satisfaction (see Rosser 2004; Smart 1990). The first variable is measured on a four-point scale, with high scores indicating greater satisfaction with advancement opportunity. Job satisfaction is measured with an item asking respondents to rank, on a four-point scale, their overall job satisfaction, with high scores reflecting high levels of satisfaction. Because women tend to have higher levels of job satisfaction than men—referred to as the gender satisfaction paradox—we do not posit that satisfaction variables will mediate the relationship between gender and intentions to leave (Phelan 1994). Rather, we include these factors to see whether they attenuate any of the variables related to gender differences in intentions to leave.

*Plan of analysis.* We first investigate bivariate gender differences in turnover and in attrition intentions. Using logistic regression, we nest regression models to examine the utility of various explanations for gender differences in intentions to leave among college and university faculty. The baseline model shows the effect of gender and demographic variables on intentions to leave. In subsequent models we add the family, social control, and work variables. Nesting the regression models allows us to see which theoretical explanation accounts for the relationship between gender and intentions to leave. We expect family, social control, and work variables to act as intervening, or mediating, variables in the relationship between gender and intentions to leave (Aneshensel 2002). In other words, we expect that these variables will reduce to insignificance the relationship between gender and intentions to leave.

## RESULTS

Descriptive statistics in Table 1 show that there are significant differences between men and women on all variables except job satisfaction (demonstrating that academia is another arena in which there is a gender paradox in job satisfaction).

Approximately 6 percent more women than men intend to leave their positions, a statistically significant difference, and one that is consistent with findings from institution-specific studies. Moreover, findings show that gender is significantly related both to turnover and attrition intentions. Indeed, 13.1 percent of women and 10.9 percent of men have a turnover intention, while approximately 15 percent of women and only 11.4 percent of men have attrition intentions. This finding is important, since it offers further confirmation of previous findings related to gender and intentions to leave. As in previous studies, we find that women are more likely to intend to leave institutions, but our analysis also shows women are more likely than men to intend to leave academia entirely (Bellas et al. 2001; Brown and Woodbury 1995; McElrath 1992; Rausch et al. 1989; Rothblum 1988). We now turn to the question of what factors are related to these gender differences and investigate whether gender differences persist after taking relevant factors into account.

### Multivariate Analysis

To investigate explanations for gender differences in intentions to leave, we use logistic regression to predict a dichotomous dependent variable we call “intention to leave.” As stated above, we collapse the turnover and attrition intention categories into one overall dichotomous leave variable, because supplemental analyses (not shown) indicated that the pattern of effects does not differ across different kinds of intentions to leave. The odds-ratios presented in Table 2 show how each variable is related to the odds of having an intention to leave.

Model 1 shows that women are more likely to have intentions to leave than men, even with demographic variables controlled (see Table 2). In Model 2 of Table 2, family variables are added to the baseline model, and the association between gender and intentions to leave is not attenuated with the addition of number of children but number of children is associated with lower odds of intentions to leave. Subsequent

Table 2. Models Predicting Odds Ratios of Intention to Leave versus No Intention to Leave

	Model 1	Model 2	Model 3
<i>Baseline + Demographic</i>			
Gender (1 = female)	1.33**	1.15*	0.95
Age	0.67***	0.69***	0.69***
Highest degree (1 = PhD or first prof.)	0.68***	0.68***	1.00
Race (1 = white)	0.75**	0.75**	0.72**
<i>Family Variables</i>			
Number of children		0.89***	0.91***
<i>Social Control + Work Variables</i>			
Female faculty treated well (1 = strongly disagree)			0.91*
Discipline gender balanced (1 = gender balanced)			1.02
Discipline gender balance missing (1 = missing)			0.68***
Employment type (1 = full-time)			0.67***
Rank			
Full professor (1 = full professor)			0.60***
Associate professor (1 = associate professor)			0.48***
Assistant professor (1 = assistant professor)			0.81*
Other (1 = other) (excluded)			
Salary			0.93**
Advancement opportunity (1 = very dissatisfied)			0.77***
Satisfaction with job (1 = very dissatisfied)			0.50***
$\Delta$ -2LL/df		26.45/1	513.31/2
Wald test		136.87***	380.84***
R <sup>2</sup>	0.00***	0.03***	0.15***

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  for two-tailed z test of parameter estimate

analyses (not shown) indicated that relationships between family variables and intentions to leave do not differ by gender. In model 3 of Table 2, social control and work variables are added to the model and the relationship between gender and intentions to leave is mediated. We include social control and work variables in the same model, because earlier investigations (available upon request) showed that both the social control and the work variables independently mediated the relationship between gender and intention to leave. Particularly, treatment of female faculty fully mediates the relationship between gender and intentions to leave, indicating that women are more likely to have intentions to leave than men because they perceive adverse treatment. Sex composition of discipline is not related to intentions to leave, or to the gender gap in intentions to leave, although the dummy variable controlling for those who were missing information with which to compute a gender balance is significant in this model. The people in this category are in technical fields (e.g., car repair, computer repair) and are much less likely to follow the career paths traditionally associated with academia.

Results for the work variables show that full-time faculty are less likely to intend to leave their jobs than part-time faculty, and faculty in each of the traditional ranks of assistant, associate, and full professor, are less likely to intend to leave than faculty who are not in one of these ranks. Finally, higher salaries are associated with lower odds of intentions to leave. As expected, the work variables also mediate the relationship between gender and intentions to leave. Within the work variables, the variable responsible for fully mediating the relationship between gender and intentions to leave is part-time versus full-time employment status. Analyses run separately for men and women (not shown) show that work factors operate similarly for men and women. The fact that women are more likely than men to be in part-time rather than full-time academic positions explains the gender difference in intentions to leave among faculty. Analyses (not shown) show there is no interaction between gender and institutional type. Specifically, institutional type does not have any impact on the gender coefficient or other coefficients in the model.

Both satisfaction variables—overall job satisfaction and satisfaction with promotional opportunities—are significantly associated with lower odds of intentions to leave. Together, they do not mediate the relationships of the work variables or the social control variables that are associated with gender differences in intentions to leave.

When social control and work factors are controlled in the multivariate analyses, gender differences in intentions to leave disappear. Put another way, when gender differences in work factors such as rank, full- versus part-time employment, and salary are accounted for, men and women are similar in their intentions to leave. Similarly, when perceptions of treatment of female faculty are taken into account, the gender difference in intentions to leave is explained. Therefore, these analyses support theoretical perspectives holding that gender differences in both work factors and in treatment at work account for gender differences in intentions to leave among faculty.

Yet by simply controlling for important work factors such as employment type and rank, our analysis may obscure gender differences in intentions to leave *when important work factors are equalized* for men and women. Although Rosser (2004) has

shown that among full-time faculty, gender is not a significant predictor of intentions to leave, institutional studies suggest that similarly ranked women and men have different leave patterns. A 1983 study of Smith College faculty found that voluntary leave from the university before first reappointment was 9 percent for women and only 2.5 percent for men. After first reappointment, 10 percent of women left voluntarily while only 5 percent of men did (Rothblum 1988). More recently, the Pennsylvania State report on faculty and families (2001) found that 32.9 percent of women left the institution before tenure compared to 27.2 percent of men (Drago et al. 2001). Differences by rank in turnover patterns have also been found in nationally representative studies. Smart (1990) found that among tenured faculty, men had stronger turnover intentions than women, but among untenured faculty, no difference existed. Ultimately, subsample analyses among men and women of similar standing in rank, employment type (i.e., full-time or part-time), and tenure can show whether there are gender differences in intentions to leave within ranks, and to what extent family, social control, and work explanations account for such differences.

#### *Gender Differences in Job Leaving by Rank*

Results in Table 3 demonstrate no significant gender difference in turnover between full-time tenured faculty (once demographic factors are taken into account), or between full-time tenure track faculty (i.e., nontenured, but eligible for tenure). Yet as results in Table 3 show, among part-time faculty, women are more likely to intend to leave their jobs than men are.

Table 3. Subpopulation Models Predicting Odds Ratios of Intention to Leave versus No Intention to Leave

	<b>Full-Time Tenured Professors</b>	<b>Full-Time Tenure-Track Professors</b>	<b>Part-Time Adjuncts and Lecturers</b>
<i>Baseline</i>			
Gender	1.36*	1.03	1.27*
<i>Demographic Variables</i>			
Gender	1.32	1.02	1.26*
<i>Family Variables</i>			
Gender	1.29	0.99	1.21
<i>Social Control Variables</i>			
Gender	1.02	0.86	1.00
<i>Work Variables</i>			
Gender	1.00	0.85	1.00
(n)	3,544	1,591	2,967

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  for two-tailed z test of parameter estimate

Note: Gender (1 = female)

This relationship persists when demographic variables are added to the model (see model 2), but is mediated with the inclusion of family variables in model 3. After controlling for the number of children, female part-time faculty are no more likely than their male counterparts to intend to leave their jobs.

## DISCUSSION AND CONCLUSION

Findings from this investigation showed that women were more likely than men to intend to leave their academic job. The fact that gender differences in intentions to leave appear in a nationally representative sample shows that these differences are not institution-specific. Thus, to the degree that gender differences in intentions to leave are constructed as a problem, this problem appears to be pertinent to academia as a whole. Moreover, findings indicate that women were more likely than men to intend both to turn over (i.e., to try to find another job in academia) and to leave academia altogether. Finally, relationships between gender differences in intentions to leave and family, social control, and work factors met our theoretical expectations. In general, women's stronger intentions to leave were influenced by how they perceived female faculty were treated and by their smaller share of workplace rewards.

We began this investigation without any particular hypothesis about how children would be related to the gender gap in intentions to leave. On the one hand, academia has not historically accommodated individuals with significant caregiving responsibilities. Since, on average, women still bear a disproportionate responsibility for family life, this might increase women's intentions to leave relative to men's. On the other hand, children represent an economic responsibility, which might keep those who have invested much time and money into obtaining advanced degrees committed to jobs in academia. Indeed, the fact that number of children did not mediate the gender gap in intentions to leave suggests the second postulation is more accurate. However, our additional analyses showed that among part-time faculty, number of children did mediate the gender gap in intentions to leave, showing that when connections to employment are more tenuous, children do have a differential effect on men's and women's intentions to leave.

We were more certain about how social control and work factors would affect the gender difference in intentions to leave. We expected that perceptions of poor treatment of women faculty would account for women's higher intentions to leave and this is what we found. Similarly, we expected that gender differences in work factors might result in different intentions to leave for women and men. We found the fact that women were more likely to be in part-time faculty positions than men also accounts for the gender gap in intentions to leave.

The present study explains little of the variance in intentions to leave, which might be seen as a limitation of the study. Indeed, few salient variables that are known to explain turnover are included in the statistical models. Yet we deliberately chose not to include all the variables that are known to explain turnover, since our primary goal is to better understand the relationship between gender and intentions to leave.

General intentions to leave have received more systematic attention in other studies, which tend to obscure gender differences. In fact, these studies show that gender is not a strong predictor of intentions to leave. Yet other research shows there are gender differences in patterns of leaving. We wanted to know what factors account for these gender differences in leave intentions. In other words, we wanted to find out which factors render gender an insignificant predictor of turnover, so that policies aimed at reducing turnover might more specifically address the factors associated with turnover for women in academia.

Overall, these findings suggest that informal level processes as well as structural level factors create gender differences in men's and women's connections to employment (Feldberg and Glenn 1979). Thus, they have implications for institutions interested in retaining female faculty. One major factor behind the gender difference in intentions to leave is that female faculty are more likely than men to believe they are treated unfairly. Institutions interested in retaining talented women should work to change this perception.

Institutions may have a harder time addressing the structural explanation for women's higher intentions to leave—that women are more likely to be in part-time academic positions—as contingent employment becomes more common in academia. Women's disproportionate representation in part-time positions accounts for the gender differences we observed in intentions to leave. This finding suggests that as the ranks of contingent academic employees continue to grow, the gender difference in intentions to leave is also likely to grow (Benjamin 1998).

The fact that the association between gender and intention to leave among part-time employees is accounted for by number of children suggests that for women in academia, children may mean a “double jeopardy” of sorts. As reported in one study, women who have children are almost 30 percent less likely than those who do not to hold a tenure-track job (Mason and Goulden 2002; see also Wilson 2003). Here, we find that children account for the fact that women who do not find (or take) tenure-track jobs are more likely to intend to leave their jobs than are comparable men. In combination with research showing children predict part-time academic employment for women, our results show that children further contribute to women's marginalization in academia by making them less likely to stay in these part-time jobs. Alternatively, it may be that women with part-time jobs who have children are more likely to have a spouse with a secure job and good income than are part-time men with children. Thus, perhaps part-time women with children are better equipped to “opt-out” of the growing contingent academic workforce than are part-time men. We encourage future researchers to investigate these explanations for stronger intentions to leave among part-time women faculty.

A limitation of the present study is that it does not account for potential differences in productivity between men and women who remain in academia versus those who intend to leave. Although traditional measures of productivity, such as number of peer-reviewed publications or courses taught, have been argued to be faulty, as they prioritize quantity over quality, there are gender differences in these measures and these may well have contributed to gender differences in turnover intentions (Monroe

et al. 2008). However, we suspect that to the degree that there are gender differences in productivity, the theoretical explanations we reviewed here—family, social control, and work—might well account for these differences. But future research should address this supposition.

Finally, our analyses demonstrate that women with intentions to leave academia are concentrated in part-time positions. Yet the differences between female academicians who are promoted through the ranks and those in part-time positions who may have intentions to leave are poorly understood. Recent research has shown that women in other professional occupations are more likely than men to want to find part-time employment, but most professional occupations do not offer standard part-time positions. Academia is different in this regard, in that there are opportunities for non-full-time employment. But the kinds of part-time options in academia are typically completely contingent and low paid. Mason's work gives us some purchase on postgraduate women's differential location on the tenure track (Mason and Ekman 2007; Mason and Goulden 2002; Mason and Goulden 2004; Mason, Goulden and Wolfinger 2006). Future research should focus more specifically on how women are sorted into tenure- versus non-tenure-track positions in academia.

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# Diversity, Macrosociology, and Religious Belonging: Using Mixed-Level Models in Examining Spatial Variation and the Closed Community Thesis

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*In the past decade, a number of researchers have been interested in both the predictors and causal effects of civic involvement (Blanchard 2007; Funk 1998; Putnam 1993; Putnam 2000; Tolbert, Lyson, and Irwin 1998). Considerable attention has been paid to the effect that religious involvement has on the development of closed and tight-knit communities (Blanchard 2007; Iannacone 1988, 1994; Porter and Brown 2008; Putnam 1993; Wuthnow 2002). The diversity of friendships gives us a good proxy for the degree of closeness created by existing in-group dynamics formed as a consequence of closed social communities. Data from the 2000 Social Capital Benchmark Survey, concerning individuals from 41 localities across the United States, was used in this analysis (Roper 2000). Furthermore, local-level variables concerning the rate of religious adherence were introduced as a way of better understanding potential multilevel effects. My findings support a number of these, showing that religious group membership significantly lowers an individual's diversity of friendships when compared to the effect of belonging to other groups.*

Researchers have long been interested in the effects of belonging to groups and organizations on a number of individual-level outcomes (for a brief review see Tolbert et al. 1998). Pertinent to this study is its effect on the perceived tolerance of individuals as reflected by the diversity of their social network. Some research has examined the causes (or lack) of civic engagement based on self-interest versus collective-interest behaviors (Funk 1998). Others have suggested that the lack of civic engagement is more likely a perception associated with the perceived decline in political efficacy and the capacity of citizens to organize them (Dudley and Gitelson 2003). The current state of the literature concerning civic engagement is somewhat mixed. Furthermore, a bulk of the existing literature is concerned with the predictors of individual-level propensity to develop associations through memberships or an overall theory of membership's ability to predict. This leaves an interesting hole in the literature concerning the effects of membership in organizations based on the types of associations that those memberships produce.

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Understanding the effect of organizations on individuals allows for the better understanding of the underlying dynamics associated with the attractiveness of membership. Again, it may be that individuals choose certain categories of organizations as a way of withdrawal from society, while others are simply looking to broaden their own life experience. Whatever the case, there are a number of individual-level characteristics, which, when compared to the types of organizations that they are associated with, allow for the further understanding of the role of organization type on its members. For instance, religious organizations often create tight in-group networks. Conservative Protestants, for example, have received considerable attention for their strong in-group ties and lack of openness to others unlike themselves (Blanchard 2007; Porter and Brown 2008). There is also consistent evidence suggesting an increased lack of tolerance among southerners, when compared to other regions of the country (Abrahamson and Carter 1986; Ellison and Musick 1993; Nunn, Crockett, and Williams 1978; Wilson 1986), and researchers have repeatedly attributed this intolerance to “the prevalence of fundamentalist Protestantism in the South” (Ellison and Musick 1993:380; Jelen 1982).

It is evident that both the penchant to belong to formal organizations and the religious context in which individuals find themselves can have a direct effect on the diversity of network ties and friendships. This analysis examines the effects of belonging while controlling for potential effects of religious affiliation. Furthermore, it is expected that specific contextual situations will affect some of these relationships, so mixed-level interactions will be introduced to examine such associations.

## LITERATURE REVIEW

Previous literature has shown somewhat complex results on the effects of membership in voluntary associations on a number of socially related outcomes (Paxton 2002; Putnam 2000; Schofer and Fourcade-Gourinchas 2001; Uslaner 1999; Warren 2001). Some research has suggested the various and complex results may be due to differences in the type of association an individual belongs to (Newton 1999; Paxton 2004). Individuals join groups for a multitude of reasons, such as diversifying his/her experiences or sharing company with individuals similar to themselves. Literature has shown that the former may foster “trust and civic embeddedness,” while the latter tends to “decrease civic engagement” (Putnam 1993). Literature has also shown the latter to be prevalent among some religious affiliations, often resulting in strong in-group and weak out-group ties (Greenberg 1999; Iannacone 1988, 1994; Putnam 1993; Uslaner 2002; Wuthnow 2002). As a result, there may be differences in the effect an association has, as well as who a group attracts.

### *The Role of Religion in Group Formation*

According to Lichterman (2008:83–84), “Public groups commonly use religious language to understand who they are and how they relate to insiders and outsiders, as well as to help ‘map’ their place in the civic arena.” There are conflicting views within

the sociological literature regarding the effect of religion on civic participation. Some researchers suggest that actively participating in a church group increases levels of volunteerism and civic participation (Ozark 2003; Smidt 1999; Uslaner 2001; Uslaner 2002; Welch et al. 2005; Wuthnow 1998). On the other hand, some suggest that religion may actually “diminish generalized trust” and lead people away from civic engagement by encouraging its members to engage in their own faith communities but not in larger society, limiting their interactions only to those of “their own kind” (Putnam 1993; Uslaner 2002). For example, Wuthnow (1998) observes that a group that shares a “common framework” of values may be able to establish trust with one another, but not with those outside of the group. Religion, then, has a very complex relationship with civic engagement (Uslaner 2002) and variations can be seen across denominations.

Research on membership group dynamics has yielded interesting findings concerning the long-term effects. For instance, the closeness of the group, degree of in-group positivity, degree of out-group negativity and out-group contact, quality of preexisting cross-group friendships, surface/deep-level similarities among group members, and a simple feeling of belonging, all significantly affected the members associated with an organization or group (Carpenter, Zarate, and Garza 2007; Lansford et al. 2006; Lipponen and Leskinen 2006; Vonofakou, Hewstone, and Voci 2007). One prime candidate for the development of strong in-group ties are religious institutions (Blanchard 2007; Lichterman 2008; Porter and Brown 2008; Putnam 2000).

This development of strong in-group ties has been documented by a number of researchers; conservative Protestants have consistently been noted for their strong internal values and lack of external engagement (Blanchard 2007; Greenberg 1999; Iannacone 1988; 1994; Lichterman 2008; Nunn et al. 1978; Smidt and Penning 1982; Uslaner 2002; Wilson and Janowski 1995; Wuthnow 2002). Anderson (1969:67) found that “persons in communally cohesive groups seek out their own ethnic counterparts as close friends and associates, as club members, as marriage partners and occasionally as neighbors and work colleagues. Among white Protestants, the unit of communal belonging may be a particular congregation, a particular denomination or Protestantism as such.” Anderson compared the strength of communality among persons of religiously conservative and religiously liberal Protestant denominations and found that “conservative denominations were decidedly more communal than liberal [denominations]” (66). Blanchard (2007) also documented this trend of network closure while proposing a “closed community thesis” as a way of examining a community’s level of inequality with the presence of a conservative Protestant congregation. He argued that “the theological and value orientation of white conservative Protestant congregations undermines the creation of bridging group ties” (416).

Often these closed group organizations, like conservative Protestants and other evangelical or fundamentalist groups, are hierarchically structured in an authoritarian model and are thought to be intellectually dependent on rigid ideologies (Altemeyer 2003). They are fearful of out-groups who are often perceived to threaten their ideology and authority structure (Altemeyer 2003) and are, as a result, often attractive to

individuals who are characterized by low openness to experience (Butler 2000). This is internalized by their fear of anything unlike them and the “in-group” to which they belong.

### *Spatial Variation in the Role of Religion*

Since the central ideologies of closed communities are based on the existence of specific religious congregations, it is logical to assume that the role of religion in the development of group dynamics will vary greatly with geographic space. Such spatial variations have been found among a number of variables, such as political and social attitudes, education level, level of economic and social development, divorce rates, fertility and mortality rates, crime rates, racial diversity, and many others. (Abrahamson and Carter 1986; Dillon and Savage 2006; Glenn and Shelton 1985; Glenn and Simmons 1967; Morrill 1993; Smith and Parker 1980; Vandello and Cohen 1999). For example, the degree of political and social tolerance has consistently been shown to vary in geographic space, and some researchers have pointed to distinctive spatial cultures to explain such variations. For example, the West has been described as being “associated with freedom and individuality” (Abrahamson and Carter 1986:289), while southerners have been described as having “an insularity of mind that is slow to change, actively belligerent toward the new and openly intolerant” (Nunn, Crockett, and Williams 1978:105).

Interestingly, cultural variations by regions can be closely linked to variations in religious ideology. For instance, Hunter (1991, 1994) suggests that Americans fight over social issues, often using polarizing religious language as they engage in culture wars. Similarly, Shortridge (1976) writes, “Students of culture rank religion as one of the most important molders of human values and customs, so it has frequently been used to define culture regions.” Religious groups, like cultures, share certain beliefs, values, and behavior, which are acquired through being a member of a society (or group) and are shared by the members of that society or group.

An understanding of religion in American society has increased over the last several decades (Chaves 1994; Wallace et al. 2003) and most sociologists today agree that religion is an extremely important influence in the daily lives of Americans (Smidt 1999; Uslaner 2002), significantly affecting people’s values, attitudes, and behavior. However, it is important to note that pluralism and secularization of religion have only increased according to the *American Religious Identification Survey* (Kosmin, Mayer, and Keysar 2001). As a result, the importance of religion and the religious landscape in the United States is now particularly diverse (Greely 2007; Shortridge 1976). Therefore, spatial variations in religion must also be considered when examining spatial variations in network diversity.

There are distinct religious variations by geographic location within the United States. According to Dillon and Savage (2006), the Midwest is religiously mixed with a sizeable number of Protestants (Lutherans, Methodists, and Baptists) and Catholics. Catholics dominate the East, while the West has the largest percentage of religious “nones” (no affiliation) in the country. Protestantism, however, by far dominates the South’s religious culture, with 77 percent of the population (mostly Southern Baptist)

identifying as such (Dillon and Savage 2006). The conservative ideology of Southern Baptists “has long made a mark on Southern culture and everyday life” (Dillon and Savage 2006:2), so much so that, according to Shorridge (1976), “Any discussion of conservative Protestantism brings to mind . . . the ‘Bible Belt’” (427). So, as the literature clearly shows, space matters and one region of the country that seems to be particularly distinctive, displaying especially conservative attitudes, values, and behaviors, is the South. Therefore, it has received a great deal of sociological attention.

The South is distinctive from other parts of the country in a number of ways. Demographically, the South exhibits a higher proportion of blacks, lower levels of educational attainment (Bogue 1985), and higher levels of sex and racial segregation (Abrahamson and Sigelman 1987). Indeed, according to Ellison and Musick (1993), studies show that southerners are less likely “to extend civil liberties to unpopular groups” than are people from other regions (Abrahamson and Carter 1986; Middleton 1976; Nunn et al. 1978; Stouffer 1955; Tuch 1987; Wilson 1986). The church and family are also “more potent” in the South and tend to be “culturally conservative” (Parcel and Geschwender 1995; Reed 1980). All of these things attribute to the perpetuation of a southern subculture (Parcel and Geschwender 1995). The research, then, clearly suggests a connection between religion, particularly fundamentalist religion, and its role in the development of out-group tolerance, which is expected to vary notably by geographic location.

Research shows that in all regions of the country people in rural areas tend to be more religious, more traditional, more intolerant, and the population less diverse than those in urban areas (Abrahamson and Carter 1986; Dillon and Savage 2006; Dougherty 2003). Therefore, researchers suggest that regions with a large number of metropolitan centers, such as the East, are considered to be less religiously oriented, more tolerant, and less conservative than those in regions with very few metropolitan centers like the South (Abrahamson and Carter 1986; Dillon and Savage 2006). The presence of a conservative Protestant ideology, higher levels of personal religiousness, and rural residence have been associated with outsider distrust (Altemeyer 2003; Butler 2000; Uslaner 2002), political and social intolerance (Abrahamson and Carter 1986; Nunn, Crockett, and Williams 1978), and lower levels of civic participation (Putnam 1993; Uslaner 2002). Building on Blanchard’s (2007) work on the “closed community thesis,” it is suggested that, due to the overrepresentation of fundamentalist groups and a “southern subculture” of conservatism, people in the South will be more likely than those in other regions to demonstrate attitudes and behaviors associated with the development of low levels of out-group tolerance.

### *Theoretical Framework and Hypotheses*

Christian Smith’s (1998) subcultural identity theory is used as a theoretical framework for the development and maintenance of religious subcultures. However, in addition, and possibly more appropriate for this article, I turn to Peter Blau’s (1977) macrosociological theory of social structure; I use a combination of these in order to establish a fitting theoretical framework. Both Blau and Smith focus on “intergroup” or “subcultural” associations within society—the idea being that people belonging to

specific groups are more likely to limit their associations to only those similar to themselves.

According to Smith, humans identify and separate themselves from others based on the various social groups to which they belong. From these groups, individuals define their norms and values in relation to other dissimilar groups that “may serve as negative reference groups” (Smith 1998:104). Smith also suggests that those groups that are most distinctive will be the strongest and most dominant. Smith developed this theory in response to rapid social changes in the modern world and, in the process, highlighted the profound cultural complexities that have emerged within conservative Protestantism. Smith suggests that in a pluralistic society, such as the U.S., various religious organizations can survive and thrive by the coupling of distinction (i.e., separating themselves from other groups) and engagement (i.e., adapting to the changing sociocultural environment). According to Smith, various religious organizations can obtain their respective subcultural identities by distinguishing themselves from others and by strengthening their intragroup solidarity, resource mobilization, and membership retention. Smith contends that, in a pluralistic society, religious groups can distinguish themselves by creating distinctive norms and values that fit into their belief system, including, as I suggest here, their beliefs regarding the open-minded acceptance of individuals unlike themselves.

Blau, on the other hand, focuses on societal integration and asks whether some groups have higher rates of intergroup associations than others and why. He attributes differences in level of intergroup relations to group size, heterogeneity, and inequality. From these propositions he develops a set of theorems to explain the effect of these structural patterns on intergroup associations. For example, it has been suggested that Jews have higher rates of premarital sexual relations with those outside of their group than Christians. However, it is not because Jews are less religious, as has been suggested, but simply that there are fewer of them (Blau 1977). According to Blau, when a majority heavily outnumbers the minority, the likelihood of the majority coming in contact with the minority greatly decreases. Therefore, “in the relation between two groups, the intergroup involvement of the smaller exceeds that of the larger group and these intergroup relations decrease with increasing group size” (Blau 1977:52).

Heterogeneity is another factor, according to Blau, that can affect the frequency of intergroup associations. Blau suggests that increasing heterogeneity promotes intergroup relations. “Increasing heterogeneity weakens barriers to social intercourse, promoting intergroup relations and since the degree of heterogeneity is defined by the probability that two randomly selected persons belong to different groups, increasing heterogeneity makes it more likely that fortuitous contact will involve members of different groups, thereby increasing the opportunities for and hence the probability of intergroup associations” (Blau 1977:43–44). Therefore, Blau believes that intergroup relations, or friendship diversity, as I am suggesting, can be dramatically influenced by group size and degree of heterogeneity in an area.

Using Smith’s theory of religious subcultures and Blau’s intergroup relations argument, this study explores spatial variations in established friendship networks, via

group membership, specifically religious vs. nonreligious group membership. Considering the distinctive nature of some religious traditions (i.e., conservative Protestants and other evangelical groups) coupled with the effects of group size and heterogeneity on intergroup relations (i.e., overrepresentation of conservative Protestants in the South or the large percentage of Catholics in the East), we believe that there will be dramatic spatial variations in religious heterogeneity and, consequently, similar spatial variations in the diversity of friendship networks.

It is hypothesized that there will be significant differences between religious affiliations concerning the likelihood of creating an exclusionary in-group/out-group system, thus resulting in the lower adoption of diverse friendship networks. In relation, it is hypothesized that the degree of religious salience, membership, and service attendance will all have a negative effect on the diversity of one's social network. Lastly, as the literature points out, there is potential for significant spatial/community-level variation in the effects of religion, thus it is hypothesized that the effect of the larger community will significantly impact the effects of religious belonging on tolerance. This final point is particularly important in regard to the hypothesized effect of higher Protestant adherence rates directly limiting the diversity of networks via the closed community thesis.

## METHODOLOGY

### *Data*

The data used in this project were obtained from the Social Capital Benchmark Survey 2000, a survey conducted by the Roper Public Opinion Research Center via telephone; it is hierarchically structured with a clustered community-level sample of 41 selected communities across the U.S. consisting of 26,230 respondents. As a "benchmark" survey it is the first attempt at a large-scale measurement of social capital (Roper 2000).

### *Dependent Variable*

The dependent variable of concern in this study is the diversity of the friendship/social networks of the respondents. It is measured as the number of friendships the respondent has across a number of diverse categories including race, sexual orientation, and socioeconomic status (Roper 2000). The initial data set asks a series of questions concerning the type of friendships one may have as simple dichotomous variables, 11 different types in all. These 11 types include questions asking the respondent if they are friends with someone of different race, sexual orientation, socioeconomic status, and religious affiliation. This is an extension of the original scale put together by Roper (2000), in which there were three measures of befriending someone rich and two measures of befriending someone poor. The variable ranges from zero, which is the lowest level of diversity, to 11, the highest level of diversity concerning the respondent's friendships. The descriptives in Table 1 show that there is a

mean score of 6.28 across the sample, representing the average respondent's friendship diversity score.

### *Independent Variables*

The primary independent variables are associated with membership in both religious and nonreligious contexts. Religious preference was coded into the following categories: Catholic, Conservative Protestant (Baptist/Southern Baptist, Church of Christ, and fundamentalist Protestant), Mainline Protestant (Methodist, Lutheran, Presbyterian, and Episcopal), Unaffiliated, and Other Faith Traditions. These categories were ultimately chosen due to the available community-level data available on Catholic, Conservative Protestant, Mainline Protestant, and unaffiliated adherence in the larger community, which will allow for control over access to "like-minded" individuals for three of the five categories. This variable was further dummy-coded into five dummy variables with "other religious groups" as the reference category to serve as the mean from which to examine denominational variations in the subsequent multivariate analytic techniques.

Religious salience was measured by how important religion was to the individual via a Likert Scale (ranging from 1 to 6), and worship service attendance was measured by how often a person attended services (ranging from 1 to 5). In both cases, higher scores indicate higher salience and attendance, respectively. Religious membership was determined simply by whether the individual was a self-reported church or synagogue member (1 = yes). Last, for group type comparison, a variable representing the number of organizations the person belonged to, not including religious organizations, was used. It is measured via an ordinal scale (from 1 to 11) representing the number of formal, nonreligious, organizations the individual belonged to. It is important to note at this time that the relationship between religious and nonreligious group membership is not exclusive as a cross-tabulation reported that 30 percent of individuals belonged to a religious institution and more than the average number of nonreligious organizations.

Furthermore, based on previous studies, a number of sociodemographic characteristics such as respondent's sex (dummy/1 = male), race (3 dummies/reference white), employment status (dummy/1 = employed), south (dummy/1 = yes), political orientation is measured via a five-category limited discrete variable, ranging from very conservative to very liberal, in which a higher score represents a higher degree of liberalism. Total family income is measured via an eight-category discrete variable in which a higher score indicates belonging to a higher income category (roughly \$10,000–\$15,000 increments), and educational attainment, which is measured via a seven category discrete variable reflecting the highest year of school completed, was statistically controlled for across all models. Again, all descriptives can be found in Table 1.

Finally, a series of variables concerned with the percentage of religious-specific adherents within the larger community was obtained via the American Religious Data Archives (ARDA 2010). These variables pertain directly to the proportion of

Catholic, Mainline Protestant, Conservative Protestant, and Nonadherents as a percentage of the total population. These variables were linked to the individual-level data via a community code that allowed for the identification of the larger county in which the respondent resided. This linkage allows for the direct testing of Blau's macrosociological theory by allowing the effects of individuals' religious preference on the diversity and belonging to be situated within the context of their larger community and the degree to which individuals are surrounded by others like themselves.

### *Analytic Procedures*

This study adopted a two-phase analytic approach. In the first phase, bivariate analysis was conducted to compare the diversity of the individual's friendship network with a number of independent variables, including denominational affiliation, religious salience, and worship service attendance. The statistical methods for the bivariate analysis include mean differences of friendship diversity across denominations and correlation among friendship diversity, religious salience, and attendance. The mean differences will be examined via a statistical significance test implementing the one-way ANOVA. These bivariate analyses are expected to yield exploratory results allowing for a predictive examination of friendship diversity differences across denominations and in its possible relationship to religious salience and attendance.

The second, and explanatory, phase of the analytical approach involves multiple regression analysis. The models were developed and estimated resulting in a total of seven nested models to examine the explanatory effects of the independent variables on the diversity of one's networks. The first three models explore the net effects of regional variations (South dummy), denominational affiliation (individual and community level), religiosity, and nonreligious group belonging on the propensity to develop diverse friendship networks, with all sociodemographic variables controlled for.

Model 1 is the baseline model that examines the effects of all sociodemographic control variables, including age, race, education, employment status, total family income, and political orientation to test the effects of these variables on the propensity to have a diverse friendship network. All subsequent models include these control variables in order to test any isolated and independent effects. Model 2 includes four dummy variables for denominational affiliation, while ancillary analyses testing the isolated effects of religious membership, religious attendance, and religious salience, respectively and without the denomination dummy variables, were run in order to gain a better understanding of the effects of the religiosity and belonging variables.

Model 3 includes all variables in the study, minus the interactions, allowing for the examination of the dependent variable across religious denominations while controlling for the religious membership, religious salience, worship service attendance, nonreligious group membership, all sociodemographic variables, and the community-level adherence of each of the four religious affiliations included in the analysis.

The next series of models (4–7) allow for the examination of the effects of religious affiliation within a given context in which the community-level, affiliation-specific,

adherence rates are taken into account via a set of interaction terms. This set of interaction terms (for example, the individual affiliation “Catholic” multiplied by the centered percentage “Catholic” in the community) will help to address Blau’s macrosociological theory by answering the question of whether being in a community inundated with individuals like oneself limits or promotes diversifying one’s friendship network as outlined in the literature and as explicitly stated in the hypothesis above. If the resulting coefficients are significant and negative, then being in a community that is inundated with a given religious affiliation will drive down one’s diversity score; likewise, if the coefficients are positive, the larger presence in the community drives up the diversity score. Ultimately, the community-level variable was centered in order to avoid violating regression assumption associated with multicollinearity (Tabachnik and Fidell 2006).

Within the models including the interaction terms, Model 4 will examine the interactive effect both of being Catholic and of the Catholic adherence rate in the community on the diversity of one’s networks, via the introduction of a Catholic specific interaction term (Catholic \* Catholic adherence percentage *centered*). Models 5, 6, and 7 will, respectively, examine the effects of Conservative Protestant, Mainline Protestant, and Unaffiliated individuals in a rotating manner. This nested and rotating modeling strategy is advantageous because (1) it tests the independent effects of religious variables individually, (2) it tests the nonspurious effects of religious variables collectively and holistically, and (3) it allows for the introduction of community-level covariates concerning the adherence rate by religious affiliation.

## RESULTS

### *Bivariate Analysis*

As mentioned above, the initial descriptive results of all variables involved in this analysis are in Table 1. From the table, one can see that the overall diversity of friendship networks is 6.28 (out of eleven). Demographically, it is important to note the sample characteristics prior to any analysis. The sample seems to overrepresent whites and females, while Asians and Hispanics are underrepresented. Ultimately, the sample is 12 percent black, 9 percent Hispanic, 2 percent Asian, and 73 percent white. Also, the sample is 59 percent female, with an average age around 45. In terms of religious affiliations, the sample is 26 percent Catholic, 17 percent Conservative Protestant, 18 percent Mainline Protestant, 13 percent claiming no affiliation, and about 26 percent left over and classified as all other affiliations. Also, 56 percent of individuals claim to be a member of a church or synagogue, which leads to the point that all affiliated individuals are not necessarily associated with a church or synagogue. Thus, there is a difference between those claiming a given affiliation (all but the unaffiliated [about 87 percent]) and those actually belonging to a religious organization (about 56 percent).

Table 2 examines the diversity of friendship networks by denominational mean. The difference in means is significant at the .000 level with an observed F-statistic of

Table 1. Dependent and Independent Variables

	Descriptives			
	Percent <sup>a</sup>	N	Mean	Standard Deviation
Diversity of friendships	—	—	6.28	2.649
Black	12	3,502	—	—
Hispanic	9	2,554	—	—
Asian	2	680	—	—
White	73	20,877	—	—
Unemployed	34	9,886	—	—
Employed	66	19,347	—	—
Total family income	—	—	2.81	1.859
Married	51	14,949	—	—
Not married	49	14,284	—	—
Male	41	12,037	—	—
Female	59	17,196	—	—
Age	—	—	44.76	16.703
Education	—	—	3.61	1.873
Political ideology (liberalism)	—	—	2.739	1.215
Catholic	26	7,211	—	—
Conservative Protestant	18	5,012	—	—
Mainline Protestant	18	5,106	—	—
Other affiliation	25	6,998	—	—
No affiliation	13	3,947	—	—
Religious membership	56	16,109	—	—
Religious salience	—	—	4.12	1.341
Religious attendance	—	—	3.40	1.490
Non-religious group membership	—	—	3.14	2.750

<sup>a</sup> Must allow for rounding error in comparison to the number of cases (N).

40.041, meaning that there are statistically significant denominational differences in the average member's diversity of friendships. However, these differences are substantively minimal, as the range of differences is 0.48 on an 11-point scale. Furthermore, it is theoretically possible that some of these minimal differences may be attributed to small group sizes within the larger community. Subsequent analyses in this article will control for such disparities by modeling the community-level adherence rates.

Table 3 examines the correlations of the dependent variable, diversity of the individual's friendship network, with the religious variables concerning membership, attendance, and salience. The findings show significant correlations between the dependent variable and all three of the religiously centered independent variables. However, it is important to note that these relationships are again substantively min-

Table 2. Mean Difference of Friendship Diversity by Religious Affiliation

<b>Current denomination</b>	<b>Mean</b>	<b>N</b>	<b>Standard Deviation</b>
Catholic	6.17	7,211	2.680
Conservative Protestant	6.09	5,081	2.600
Mainline Protestant	6.40	5,106	2.559
No religious affiliation	6.36	3,947	2.710
Other religious denominations	6.57	6,998	2.647

F = 40.041

Sig. .000

imal as the correlation coefficients are .101 or below in each case. If, in fact, Blau's macrosociological theory is correct, then the percentage of adherents within the larger community will help to control for such an effect in the final explanatory models. All subsequent explanatory modeling will test for multicollinearity in order to ensure that neither these, nor any other, associations between predictor variables violate any regression assumptions.

The magnitude and direction of all significant relationships are similar in that religious salience, membership, and attendance have a small but significant correlation in the positive direction. This means that individuals who are church or synagogue members are, on average, more likely to have diverse friendship networks than those who are not members. Also, as the individual's reported attendance and salience increases, the corresponding diversity of friendships score increases. Again, upon initial inspection this is not consistent with the idea that religion leads to the development of closed in-groups. However, it is consistent with the findings that those involved in group membership tend to be more open to the adoption of others. The following multivariate analysis will allow for a comparison and control via the propensity to participate in nonreligious groups. These findings should uncover any difference in the magnitude of openness and the type of organization one belongs to.

Table 3. Bivariate Correlations Between Friendship Diversity with Religious Salience and Worship Service Attendance

	<b>Friendship Diversity</b>	<b>Religious Membership</b>	<b>Worship Service Attendance</b>	<b>Religious Salience</b>
Friendship diversity	1	—	—	—
Religious membership	0.101*	1	—	—
Worship service attendance	0.050*	0.580*	1	—
Religious salience	0.020*	0.350*	0.441*	1

\* $p < .001$

### *Multivariate Analysis*

The multivariate analysis is reported in Table 4. The findings are set up to represent nested models examining both independent and controlled effects for all of the variables mentioned above. Within the first set of models reported in Table 4, Model 1 examines the effect of the sociodemographic control variables found to be of import in the existing literature. The findings from Model 1 suggest that all races tend to be less likely to have a diverse friendship network when compared to whites. Also, employed individuals, married individuals, older individuals, more liberal individuals, more highly educated individuals, and those with higher household income are, on average, more diverse in terms of their friendship networks. Gender was the only sociodemographic variable that is reported as insignificant in terms of predicting the dependent variable of interest.

The remaining findings show that the same relative patterns exist for all sociodemographic control variables throughout all models. Model 2 examines the effect of each religious denomination and nonaffiliates dummy coded in reference to individuals categorized as other religious affiliations. All denominations were shown to have lower diversity in terms of their friendship networks when compared to those in the reference category and controlling for all sociodemographic factors. However, somewhat surprisingly, these results are quite different from the bivariate results presented in Table 2, as nonaffiliated individuals have gone from having the highest diversity score, in terms of friendship network, to having the lowest diversity score. Further analyses aimed at uncovering this change found that unaffiliated individuals tended to be more educated, younger, less likely to be married, and more liberal than the rest of the sample. Thus, when these attributes were held constant in the multivariate analysis, the association of the variables washed out the initial "causal" relationship.

In further analyses not shown here, measures of religious membership, attendance, salience, and nonreligious group membership were entered independently with the controls from Model 1. The results report that being a member of a church or synagogue increases the individual's score on the diversity of friendship scale by .457 units. Similarly, as an individual's reported religious attendance increases, their corresponding diversity of friendships increases by .124 units. Next, the importance of religion (salience) in the individual's life was significantly positive (.149). Finally, for comparative purposes, the individual's involvement in nonreligious organizations is based on the number of reported groups the individual belongs to, ranging from 1 to 11. The findings show that for each increment increase in the number of organizations belonged to there was a significant .328-unit increase in the diversity of the individual's friendship networks. These results suggest that while some variation exists in the belonging patterns of individuals to both religious and nonreligious organizations, individuals that belong have a greater diversity of friendships and network ties.

Model 3 introduces the series of variables measuring religiosity, community-level adherence rates by denominational affiliation, regional controls, and all variables from Model 2. In ancillary analyses, controlling for the number of nonreligious group memberships significantly reduced the effect of religious membership. Also, controlling for

Table 4. Unstandardized OLS Regression Coefficients Explaining Friendship Diversity

Independent variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Black (reference white)	-0.184***	-0.223***	-0.165	-0.154**	-0.171***	-0.173**	-0.154**
Asian	-1.252***	-1.260***	-1.088***	-1.227***	-1.234***	-1.268***	-1.227***
Hispanic	-0.550***	-0.535***	-0.517***	-0.544***	-0.571***	-0.596***	-0.554***
Gender	-0.057	-0.029	-0.135**	-0.031	-0.030	-0.031	-0.031
Age	-0.004***	-0.004***	-0.010***	-0.005***	-0.005***	-0.005***	-0.005***
Married	0.131***	0.105**	-0.043	0.118***	0.123***	0.128***	0.118***
Employed	0.442***	0.442***	0.400***	0.433***	0.432***	0.435***	0.433***
Political ideology	0.149***	0.168***	0.184***	0.157***	0.157***	0.156***	0.157***
Education	0.255***	0.258***	0.117***	0.256***	0.254***	0.253***	0.256***
Total family income	0.158***	0.161***	0.103***	0.150***	0.149***	0.148***	0.150***
South	—	—	-0.081	-0.150**	-0.031	-0.136	-0.150**
Catholic (reference other religions)	—	-0.314***	-0.201**	0.004	—	—	—
Conservative Protestant	—	-0.289***	-0.106	—	0.029	—	—
Mainline Protestant	—	-0.298***	-0.262**	—	—	0.039	—
No religious affiliation	—	-0.726***	-0.587***	—	—	—	.004
Catholic adherence	—	—	-0.047**	-0.003	—	—	—
Conservative Protestant adherence	—	—	-0.043**	—	0.001	—	—
Mainline Protestant adherence	—	—	-0.044**	—	—	-0.007	—
Nonadherence	—	—	-0.038*	—	—	—	-0.003
Religious membership	—	—	0.148*	—	—	—	—
Religious attendance	—	—	-0.073**	—	—	—	—
Religious salience	—	—	-0.001	—	—	—	—
Non-religious group membership	—	—	0.335***	—	—	—	—
Catholic* % Catholic adherence	—	—	—	-0.009*	—	—	—
Con-Prot* % Con-Prot adherence	—	—	—	—	-0.012**	—	—
Main-Prot* % Main-Prot adherence	—	—	—	—	—	-0.018**	—
Nonaffiliated* % Nonadherence	—	—	—	—	—	—	-0.002
Constant	4.433***	4.667***	8.560***	4.573***	4.485***	4.576***	4.573***
R-squared	0.100	0.106	0.199	0.100	0.100	0.101	0.100

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ 

both membership and salience flipped the effect of the religious attendance variable, while a similar result occurred in regard to religious salience when controlling for membership and attendance. Based on these interrelationships, the religious salience variable becomes insignificant as a predictor, while attendance flips directions but remains a significant predictor. It is important to note that due to these substantial

changes in magnitude and direction, multicollinearity diagnostics were examined and proved to be insignificant, in spite of the significant correlations identified in Table 3. Finally, all affiliations decrease slightly in the magnitude of their effect of the diversity measure, with the Conservative Protestant dummy no longer being significantly different from the reference category.

Models 4–7, in Table 4, report the effects of the affiliation-specific interaction terms in a rotated fashion on the diversity of one's friendship network. The results show that, for all religious affiliation categories, the individual-level indicator of friendship diversity reverses and becomes positive when each is entered into its religious-specific model. Model 4 tests the effects of being Catholic in relation to the percentage of Catholics in the community. The results show that being Catholic reverses and becomes positive as a predictor of friendship diversity while the community adherence remains negative; however, both are insignificant. In terms of the interaction between being Catholic and the rate of Catholic adherence in the community, the interaction effect in Model 4 reports that as the adherence rate within a community rises, the effect of being Catholic actually decreases one's friendship network diversity.

For comparative purposes, the Catholic indicator and Catholic adherence variables were examined separately with the control variables from Model 1. The results showed that when examining the isolated effect of being Catholic, without the community adherence variable and interaction term, it significantly decreased the diversity of friendship score by .314 units compared to those who were not Catholic. Also, when the community adherence rate was isolated from the indicator and interaction term, the results show that as the adherence rate increases by 1 percent, the diversity score will significantly decrease by .047 units. However, as reported in Model 4, when including all three simultaneously, only the interaction term remains significant as a negative effect for Catholics, which intensifies as the community adherence of Catholics increases.

Likewise, similar patterns exist in Models 5 and 6, where again, as the level of Conservative and Mainline Protestant adherence rates rise, the effect of being affiliated with either religion significantly decreases the respondent's friendship network diversity. Interestingly, the same is not true for the unaffiliated respondents. Again, the Conservative and Mainline Protestant indicator and adherence variables were isolated with controls to better understand their effect on friendship diversity. In all cases the slope coefficients were negative and insignificant; however, as shown in Models 5 and 6, when the interaction term was entered simultaneously with the indicator and adherence variables, both affiliation types reported a significant decreasing effect of being associated with the religion as the adherence of each increased.

In Model 7, the slope coefficient for nonaffiliated represents a negative interaction effect between the respondent's affiliation and the community adherence rate but is not significant. When the indicator for being nonaffiliated was isolated from the community-level nonadherence and interaction term, it resulted in a negative slope coefficient showing that not being affiliated significantly decreases one's network diversity by .726 units. On the other hand, the isolated effect of nonadherence in the community shows that the higher the nonadherence, the higher the network diver-

sity. When all three were entered simultaneously, the interaction reported an insignificant negative slope.

## CONCLUSION AND DISCUSSION

These effects lend credence to the hypothesis that belonging to groups in general increases one's exposure to others. Although some belong to groups and some do not, the simple act of becoming involved in formal organizations has a positive impact on the development and maintenance of a more diverse social network. However, the results suggest that other mediums for the development of diversity lie within social networks. For instance, the results from Model 3 show that being employed full-time is one of the strongest explanatory variables concerning increased diversity. It could be hypothesized that this relationship would work the same way as becoming civically engaged as it places the individual in a new social network with others unlike themselves. In fact, and in relation to the relative size of the coefficient, being employed full-time has a larger effect than either religious membership or nonreligious-group membership and may be thought of in the same way relating to group belonging.

Although the results show that the religious-group membership has the most inhibiting effect, consistent with the closed community thesis, those joining nonreligious groups also seem to be affiliated with a slightly more homogenous group than do those in the work environment. This indicates a selection effect, where individuals who are more likely to become involved with diverse social networks are also the same individuals that are more likely to join formal groups in the first place. In that case, the closed community thesis would be of less import, as more emphasis may be related to social-psychological elements, such as those related to general tolerance issues (authoritarianism, for example). However, in communities inundated by a particular religious affiliation, it seems likely that this effect is retarded by the cross-level interaction of the closed community.

There is some support for the closed community thesis that appears in two primary places. First, in line with Smith's subcultural theory of religion, individuals who report being members of a church or synagogue report having a higher diversity of friendships than those that do not; however, on average, this positive effect is smaller in comparison to the involvement in memberships in nonreligious groups. Also, when examining the larger community in which the individual lives, there is evidence of a community-level effect on the openness of individuals to others unlike themselves. The closed community thesis itself is concerned with the creation of an in-group/out-group dynamic in which the "us versus them" mentality does not allow for the openness needed in the acceptance of others unlike themselves and the subsequent creation of a diverse friendship network.

Furthermore, findings show that those of Conservative Protestant affiliation have, on average, the least diverse friendship networks. The Conservative Protestant affiliated individuals would be expected, via both theoretical frameworks, to be lower in

diversity of networks based on the fact that, first, they are part of an organized religious closed community, and, second, they are apt to outnumber other groups within many communities, which, in turn, allows them to interact with others like themselves in a more frequent manner compared to many of the other groups.

This result suggests that while the effects of being affiliated with Catholic, Conservative Protestant, or Mainline Protestant groups are consistent with other religious categories in their effect on diversity of network ties, living in an area inundated with Protestant adherents helps to drive down that effect. In fact, it should be explicitly stated here that as the percentage of people like oneself in the community rises, the diversity of one's friendship network decreases. Perhaps this effect is related to some form of peer-pressure, whereby individuals are more likely to adhere to closed-community tenets by not interacting with outsiders for fear of incurring potential social sanctions. Or perhaps it is related to the ability of the individual to be able to satisfy their "social appetite" via individuals like themselves due to the large supply, making outside social networking unnecessary.

Furthermore, the effects of racial background are also interesting in the context of subcultural identity theory. All minority groups in this analysis have a lower network diversity score in reference to whites. Given the macrosociology point of view, this is surprising as one would expect that blacks, Hispanics, and Asians would all have higher diversity scores due to their relatively smaller population sizes in the U.S. However, the results show that they have lower diversity scores; they actually explain some of the largest decreases in the network diversity scale. For a possible explanation of this phenomenon we should look to Smith's theory of subcultural identity, which provides a good framework from which to better understand the role of racial identity and diversity. In this case the individual belongs to an ascribed group with which it develops its subcultural identity. Although not an ascribed characteristic, it is worth noting that a similar relationship takes place when examining the effect concerning those with no religious affiliation. Although these individuals do choose to take this status, it is important to remember that within the highly Christian/religious context of the U.S., these individuals may also develop a subcultural identity as *religious minorities*.

Such findings suggest a couple of interesting points. First, the closed community thesis and subcultural identity theory, while being directed at religious group belonging, are applicable to a number of social indicators and the exclusionary biases that often result. Also, the topics of religion and race are much more intertwined than this analysis has time to uncover. Recently a few excellent attempts to better untangle the subject have been published. These include: *Against all Odds* (Christerson, Edwards, and Emerson 2005), *United by Faith* (DeYoung, Emerson, Yancey, and Kim 2003), *The Elusive Dream* (Edwards 2008), *Divided by Faith* (Emerson and Smith 2000), *People of the Dream* (Emerson and Woo 2006), and *A Mosaic of Believers* (Marti 2005, 2009.)

In conclusion, it seems the most important predictor concerns simply being a member of a group. It is assumed here that individuals who join groups are more open to social networking in general, which includes networking with individuals

outside of one's own demographic identification. This holds both for the act of belonging to a religious organization or to a nonreligious organization. Community-level interactions were uncovered via a set of interaction techniques and cannot be ignored. These relationships must be further examined via more sophisticated hierarchical methods, explicitly tying individual-level effects to larger community-level effects. Furthermore, this paper suffers from a potential weakness in that the data did not allow for the most efficient measurement of religious affiliation, and, therefore, may misclassify some affiliated members as "others." On that point, future analyses should make use of data better suited to be categorized, using existing definitional rubrics, such as those provided by Steensland et al. (2000).

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# Identity Consequences of Religious Changing: Effects of Motivation for Change on Identity Outcomes

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*Comparisons of religious identity are made between two types of religious changers: (1) converts, those individuals who have changed their religious group affiliation due to change of religious belief, and (2) alternators, who have changed their religious group affiliation for some motive other than a change of belief. The religious changers are drawn from a variety of religious affiliations using a convenience sample. Analysis is quantitative, using logistic regression analysis and difference of means testing.*

*Predictions based in identity theory (Stryker 1980, 1987) argue that converts will show higher levels of salience and commitment to the religious identity as well as behave in ways more appropriate to the religion. Results indicate no postconversion difference between the two types. The project is a first attempt to use identity theory to address the consequences of identity change based on differing motivations. The literature is advanced through the application of quantitative methodology to a traditionally qualitative question (the conversion experience) and by shifting the focus from the process of religious conversion to its identity consequences.*

A 68-year-old, lifelong agnostic near the end of his life discovers Catholicism. He attends Rite of Christian Initiation of Adults classes, takes his first communion, is confirmed, and spends his last years happy in his new faith, the same faith his family and most of his friends have held their entire lives. A 19-year-old college student who often feels alone and anonymous in a campus of thousands hears a group of young people speak of the “good news.” Feeling accepted for the first time since leaving home, the student leaves college and joins this group of traveling missionaries. A 24-year-old man meets and falls in love with a Jewish woman. In order to alleviate growing issues with his in-laws and to prevent problems with marriage, family acceptance, and child rearing, he leaves the Protestant faith of his parents and begins instruction to become Jewish.

In a formal sense, each of these people is a religious convert. They have all joined one religious group, faith, or organization after either leaving a previous group or

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adopting an ideology they had not held previously. However, it is clear that each of these people faced different situations, environments, and motivations that led to his/her decision to undertake a religious change. This leads to a rather obvious question: Has each of these people experienced his or her religious change in the same way?

The study of religious conversion has been a very popular, yet theoretically diverse, area for the last several decades (Bainbridge 1992; Rambo 1999). Conversion literature is filled with various specialized theories regarding how an individual arrives at the decision to change his/her religious group affiliation (Lofland and Skonovd 1981; Lofland and Stark 1965). Theories range from the structural, involving a passive individual being “chosen” for inclusion in a faith by some group or entity with little conscious decision being made to make a change (Clark 1979; Dawson 1990; Downton 1973, 1980; Heinrich 1977; Singer 1979), to more recent theories that portray the individual as an active seeker, looking for the right religious fit to complete his/her life (Balch 1980; Balch and Taylor 1978; Bromley 1997; Cavalcanti and Chalfant 1994; Long and Hadden 1983; Richardson 1985).

The vast majority of these works share at least two common themes: (1) they are designed to explain how religious conversion occurs; and (2) most don't address the impact of the conversion on the individual once the process of conversion is complete. Intuitively, it would seem that a person who “hears a call from God” would have a markedly different outcome from their conversion experience than one who changes for family harmony, convenience, or for the sake of another identity. This project attempts to better understand the relationship between religious identity change and the motivation for that change.

## CONVERSION VERSUS ALTERNATION

I will attempt to measure differences in religious identity between those individuals who have changed their religious group affiliation for reasons associated with revising his/her religious belief (in this work termed “conversion”) and those who have changed their religious group affiliation for some motive other than a change of religious belief (here termed “alternation”—Travisano 1970). The alternator is, therefore, seen as a convert in name only, as s/he has fulfilled all the requirements for acceptance as part of the group. However, the alternator has done so primarily to satisfy another goal, which is tangentially related to the religious group s/he is attempting to join (Gordon 1967; Travisano 1970), such as marriage (Donelson 1999), social class (Alston, Alston, and Warrick 1971; Hunt 1996), geographical relocation (Yang 1998), “uniting” the family under a single religious banner, or attempting to reduce tuition payments at a parochial school. The convert follows the same path to group initiation as the alternator, only the motivation for the change is the expected one: to join a group that espouses the same religious beliefs and moral tenets as the convert. The convert changes intrinsic religious beliefs and does so with no ulterior motive for the change (Gordon 1967; Travisano 1970).

### *Changing Self-Concept*

In his discussion of what is and is not to be considered a religious conversion, Trivisono (1970) outlines criteria for understanding a conversion experience: a conversion should be a radical revisiting of one's self-image, including a change in one's pervasive identity; changes in many aspects of one's personality; and an increase in the number of situations in which the conversion experience should inform how a person should relate to others. Similarly, Snow and Machalek (1983, 1984) discuss how the conversion experience causes a change in the "root reality" of the religious changer—including biographical reconstruction; adoption of a master attribution scheme, which informs all aspects of the convert's new life; and embracing the new role, which will then take precedence in nearly all interactive situations (Snow and Machalek 1984).

Other works conceptualize the conversion process as the unification of the self with the sacred, so that religion occupies the central place in the life of the convert and becomes the core purpose for his/her living (Heinrich 1977; Pargament 1996; Trivisono 1970). Still other research discusses a convert's experience as convergence of religious group and individual involvement into a single entity (Bromley 1997; Bromley and Shupe 1979). Several of these works echo Turner's (1978) study of roles in which Turner theorizes that an individual may become so involved in playing a given role that s/he will fail to limit the use of that identity to socially appropriate venues, what Turner would call the role-person merger. For the religious convert, one would assume these changes in the root or core reality during the changing process would result in the religious identity taking a place of primacy in the self-concept and, therefore, in the life of the changer.

For Trivisono (1970) though, the alternator has changed his/her religious identity for a primarily secular motive. Therefore, the religious change would not result in the reorganization of the "root reality," a change in the "universe of discourse," the merging of the individual to the sacred group, or any of the other modifications of the self-concept noticed in the previous works. If the self-concept is modified at all for those in this group, the "root-reality" will be defined around the motive that caused the religious change to begin with (e.g., occupation, spouse, family, or status gain).

### *Changing Social Relationships*

In concert with the changing self-concept is a shift in the convert's social relationships. Social bonds and the understanding of social relationships are often fundamentally altered by the convert's change in religious affiliation. So not only will the way the convert understands reality change, but the way others view and understand the convert will be altered as well (Rambo 1993).

Even if the desire to change the religious identity is very strong, the strength of that desire would have to exceed the fear that the change would violate bonds that the convert wants to maintain (Rambo 1992). In order to cause such an upheaval, commitment to the new religious identity would probably need to increase in strength, unless the changer has simply "gone through the motions" in order to satisfy some other goal. The alternators probably do not risk previous identities in the same way con-

verts will, since they are not engaging in a radical reorganization of self-concept, nor, therefore, are they jeopardizing relationships by “changing who they are.”

## IDENTITY THEORY

Stryker's identity theory (1980, 1987) hypothesizes a self that consists of a hierarchical ordering of identities based on the salience of and commitment to the various identities within an individual's hierarchy. The identities are linked to roles and groups, and, by extension, the larger society. The tighter this linkage, the more likely one's view of self will be influenced by the definitions and meanings attached to those roles and groups. The collections of meanings that are closely bound to important roles that people play form the basis of an important identity for that person. The more important or salient an identity, the more likely a person is to behave and to define reality in ways that are consonant with that identity, and the more committed the individual will be to that identity (Stryker 1980). Therefore, higher levels of commitment to an identity will increase the salience of the identity in the hierarchy. The more salient identities will then produce greater levels of influence over behavioral decisions in any given situation.

Previous research using identity theory has addressed social, emotional, and psychological causes and effects of identity salience focusing on self-definition, self-esteem, social relationships, self-efficacy, and behavior, establishing accepted methods and measures for identity salience in the process (Benson and Trew 1995; Burke and Cast 1997; Burke and Stets 1999; Callero 1985, 1992; Stets 1997; Stryker and Serpe 1982, 1994; Thoits 1991). Additionally, identity theory has been empirically applied to a wide variety of subject matter including gender roles (e.g., Stets and Burke 1996), deviant behavior (e.g., Reid, Epstein, and Benson 1994), family interaction (e.g., Burke and Stets 1999), social movements (e.g., Stryker 2000), and mental health (e.g., Large and Marcussen 2000). Identity theory will be used here to differentiate types of religious changers based on alterations in the postchange religious identity.

The methodology associated with the works listed above has been conceived of and executed to provide quantitative measurements of often abstract concepts related to identity theory (e.g., commitment, importance, and identity). By focusing on the way in which role-based identities are altered by an individual decision to switch religious groups, both social and personal elements of the change are captured. The identity theory process also addresses the call to standardize and quantify this often anecdotal area of scientific inquiry (Rambo 1993; Shinn 1992). These instruments can determine what changes, if any, have occurred to the religious identity of the changers as a result of their religious movement.

## METHODOLOGY

### *Hypotheses*

Three predictions will be tested by comparing responses given by changers classified as converts with those classified as alternators. (1) Converts will experience stronger levels

of commitment to the religious identity than will alternators. (2) Converts will experience higher religious identity salience than will alternators. (3) Converts will spend more time than alternators in religious activities.

### *Sample and Data Collection*

Data collection was completed over the span of several months in 2003. The sample is a convenience sample, although some consideration was given to contacting a variety of religious communities to expand the study beyond a few, common religious backgrounds or belief systems. Since this is an initial attempt to assess both the impact of motivation on conversion outcomes and the viability of identity theory in addressing this question, the generalizability of the sample was not a primary concern. Data were collected in two waves in order to maximize the size of the sample as well as to ensure that both converts and alternators were being accessed.

*Wave one.* In wave one, an introductory letter was sent to leaders of various religious communities located in three counties in northeastern Ohio. Through the leaders, contact was made with community members who, at some point in the past, had changed their religious group affiliation from another faith or from no faith at all.

Wave one included contact with 12 different religious communities, 7 of which agreed to encourage their membership to be part of the project comprising 2 Baptist communities, 2 Methodist communities, 2 Catholic churches, and a Reform Jewish Temple. This wave of data collection resulted in 52 responses, with an approximately equal split between alternators and converts.

*Wave two.* Wave two was undertaken in order to increase both the size and diversity of the sample beyond the traditions accessed in wave one. There was also some concern that the sampling style used in wave one may have underrepresented changers who do not regularly attend services. Wave two employed a snowball sample in which colleagues, friends, acquaintances, and previously identified changers were asked to identify religious changers they knew. In each of these cases, the survey instrument was delivered directly to participants either by mail or fax. The instrument itself was not changed in any way. Wave two resulted in an additional 27 responses, which included respondents who have entered Buddhism, Society of Friends, Islam, and several smaller evangelical communities that would have been missed using only the initial methodology. From the two waves, the total number of responses increased to 79 altogether.

### *Measurement Instruments and Scales*

In order to test the stated hypotheses, several measurement scales were adapted from identity theory research.

*Religious identity.* "Religious identity" refers to the self-definition of the individual as a member of a specific religious group. Here the religious identity stems from membership in the religious group to which the individual has converted. Both past

and present religious identities are assessed, each with a single item requesting the individual to declare his/her religious group association.

*Convert versus alternator.* The difference between these two “types” of conversion is fundamental to the research and revolves around the reason for the change in group affiliation. The method for categorization used in the past involved qualitative methodologies designed to describe, in detail, the reasons for subjects’ religious changes. Since the focus of this work is the consequences on the religious identity of these types of conversion and not on the process by which these conversions occur, the required information is obtained using a single closed-ended question in which respondents are asked to indicate their most important reasons for changing (see Appendix A). In this measure, several potential “ulterior motives” for change are presented along with four conversion motives. Any primary motivation other than the conversion options are coded as alternation. In addition to the checklist of motivations, a single open-ended item was added to the end of the survey asking respondents to describe their decision to change.

This categorization instrument was used in a qualitative study exploring Snow and Machalek’s (1983, 1984) claims that converts would engage in biographical reconstruction as a part of the religious change. Those respondents who, using the instrument, were identified as converts provided religious-change narratives that were consistent with the hypothesized change in the root reality and reconstructed biographies expected from a convert (Snow and Machalek 1984). The convert narratives were also quite different from those who identified as alternators using the instrument. The alternator narratives indicated little fundamental change in their ways of understanding the world or their lives as a result of the change in their religious identity.

*Commitment to a religious identity.* Commitment to a religious identity is measured by ascertaining the degree to which an individual’s relationships with others are premised upon the individual occupying a particular social position or claiming a particular identity (Callero 1985; Thoits 1991). The scale assesses general expectations of others regarding behavior of the individual using an eight-item, six-point Likert scale (Callero 1985) with a higher score indicating stronger commitment to the identity. The scale has a high level of reliability ( $\alpha = .9243$ ).

*Salience of religious identity.* A six-point continuum using a five-item Likert scale is used to assess the salience of the religious identity. The items ask respondents to indicate their level of agreement with statements about the extent to which religion is an integral part of their lives, with a higher score indicating increased identity salience for the religious role (Callero 1985). Reliability for the salience scale was also high ( $\alpha = .8977$ ).

*Time spent enacting religious identity.* The respondents were asked to indicate, in hours per week, how frequently they engage in various religious activities using a five-item scale with categories ranging from “0 hours” through “10 or more hours” at

Table 1. Zero-Order Correlation of Independent Variables (N = 68)\*

	Commitment	Salience
Salience	.576 (.000)	
Time	.265 (.029)	.389 (.001)

\*2-tailed significance in parentheses.

3-hour intervals (Myers 1996). The reliability for the scale is acceptable ( $\alpha = .7044$ ).

Zero-order correlations were performed among the three independent variables (see Table 1). The scales for commitment, salience, and time in religious identity are all significantly correlated with one another at the .05 level.

## RESULTS

Each of the hypotheses has been tested using a logistic regression model designed to predict the odds of correctly identifying a given religious changer as either a convert or an alternator based on knowing information related to their religious identity. As the sample is relatively small, independent sample t-tests were performed to provide a simple comparison of the two groups on both demographic and identity-related variables in addition to the regression model.

### *Demographics*

There were 79 completed questionnaires. Using the coding scheme reported in the previous section, 68 of the 79 provided information that classified the respondents as either an alternator or a convert. Of these 68, 55.0 percent ( $n = 38$ ) of the respon-

Table 2. Current Religious Group by Type of Convert

Religious Group	Converts	Alternators	Total
Catholic	12	15	27
Methodist	5	8	13
Baptist	9	3	12
"Christian"	4	0	4
Jewish	2	1	3
Nondenominational	1	2	3
Buddhist	2	0	2
Greek Orthodox	0	1	1
Muslim	1	0	1
Reform Protestant	1	0	1
Vineyard	1	0	1
Total (N)	38	30	68

dents are classified as converts, while 44.1 percent ( $n = 30$ ) are alternators. By far the most represented groups are Catholic ( $n = 27$ ; 39.7 percent), Methodist ( $n = 13$ ; 19.1 percent), and Baptist ( $n = 12$ ; 17.6 percent).

As indicated by Table 3, nearly 56 percent ( $n = 38$ ) of the respondents have belonged to their current faith for more than 10 years, with nearly three-fourths ( $n = 54$ ) of the respondents having been in the same religious group for 7 years or more.

The distribution of ages among the respondents is relatively normal, when the ages are collapsed into 10-year intervals, with the same number of respondents under the age of 40 ( $n = 9$ ) as over the age of 70 ( $n = 9$ ) and most respondents in their 50s ( $n = 21$ ).

Difference of means tests were performed to gauge the differences between alternators and converts on some demographic indicators as well as on the independent variables. These results are presented in Tables 3 and 4. No statistically significant differences were found between alternators and converts when comparing the groups on these demographic variables.

Table 3. Time (in years) since Conversion by Type of Convert

<b>Length of Time in Current Group</b>	<b>Convert (N = 38)</b>	<b>Alternator (N = 30)</b>	<b>Total</b>
Less than 1 year	2	4	6
1–3 years	8	4	12
4–6 years	3	3	6
7–9 years	4	2	6
10 or more years	21	17	38
Total (N)	38	30	68
Mean years	3.9	3.8	$t = .259$

Table 4. Cross-Tabulation of Age of Respondent by Type of Convert

<b>Age</b>	<b>Convert (N = 38)</b>	<b>Alternator (N = 29)</b>	<b>Total</b>
20–29	1	0	1
30–39	5	3	8
40–49	9	4	13
50–59	11	10	21
60–69	6	9	15
70–79	4	1	5
80 and older	2	2	4
Total (N)	38	29	67
Mean years	44.8	44.8	$t = .764$

*Note:* One respondent did not answer.

### Hypotheses

Both comparison of means tests and binary logistic regression analyses were performed to compare converts (0) to alternators (1) on the three hypotheses outlined earlier. Again, a simple difference of means test is included in the analysis of each hypothesis as a check. Comparison of means test results are shown in Table 5, while the logistic regression results appear in Table 6.

No significant differences were found between alternators and converts on any of the assessed aspects of religious identity. Both the logistic regression model and the t-tests showed no differences between the groups.

## DISCUSSION

Based on the above analysis, it may appear that Stryker's theory translates poorly to the study of changing religious identities. However, Stryker's theory and, indeed, most symbolic interactionism focuses on the *process* by which something occurs. If in this case the motivations serve as the start of the process and the reported outcomes

Table 5. T-Test Analysis: Comparing the Means of the Independent Variables

<b>Independent Variable</b>	<b>Converts (N = 38)</b>	<b>Alternators (N = 30)</b>	<b>T-Value (significance, 2-tailed)</b>
Commitment to religious identity	36.26	35.07	.687 (.495)
Salience of religious identity	27.61	27.03	.819 (.416)
Time spent in religious activities	5.58 hours	4.80 hours	1.289 (.202)

Table 6. Binary Logistic Regression Analysis Predicting Type of Religious Changer Using Independent Variables (N = 68)

<b>Predictor</b>	<b>Beta</b>	<b>SE</b>	<b>Wald</b>	<b>Odds Ratio (significance)</b>
Commitment to religious identity	-.009	.043	.047	.991 (.828)
Salience of religious identity	-.018	.110	.026	.982 (.871)
Time spent in religious activities	-.122	.116	1.103	.885 (.294)
Constant	1.219	2.393	.259	3.384 (.610)

as a less deterministic endpoint, identity theory is more supported than refuted. The results may indicate that because both types of changers enter the same community, are exposed to the same formal education and adult socialization processes, must pass through the same rituals, and eventually become members of the same group (i.e., encounter the same process of conversion), then it could be expected that they would *not* be fundamentally different in any way. Some work has indicated that religious group membership may precede a change in ideology (Aho 1995), which would be a conversion that on the surface appears to be an alternation. It is also possible that having a sample that is comprised largely of “long-time converts” could have impacted the outcome of the study. The “long-timers” will have become more acculturated through, if nothing more, consistent exposure to the faith, causing respondents classified as alternators and those as converts to respond similarly.

In addition to the aforementioned sampling issue regarding the length of time since conversion, the convenience nature of the sampling design could have led to a selection bias. It is possible that the research design resulted in a situation where only those who have strong feelings about their change experience desired to recount their experiences. In a similar vein, some changers may have been partially selected out of wave one of the data collection in religious communities. Logically, if some alternators simply converted to fulfill the needs of another identity, they may be less likely to attend services regularly and would have been missed by wave one of data collection.

Although the sample in this case is certainly not readily generalizable, it is appropriate for an introductory application of identity theory to a previously underdeveloped question. Also, since Stryker argues for commonality of identity process, one would not necessarily require a generalizable sample to accurately assess such changes.

Although this study provided no support for the specific predictions made regarding identity outcomes of converts and alternators, it did seem to point toward circumstantial support for the workings of the identity process with regard to religious identity. A natural direction for future research would be to formally study the process of conversion from the structural symbolic interactionist model. Such research would specifically assess change in religious identity with the hierarchy and the relative impact of the initial motivation throughout the conversion and postconversion process. A project of this nature would also be able to assess variables outside the scope of this process, such as the prechange religious identity of respondents and potential difficulties with exit from the previous religious identity (Ebaugh 1988). Similarly, a general comparison of changers could be made with “stayers” (those who have been life-long members of a religious group) from the same groups. If the changers are different at all from those who have never changed, the proposal that the change itself has an impact would be supported (Barker and Currie 1985).

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## APPENDIX A

### *Convert/Alternator Assessment*

Listed below are a series of reasons for religious conversion typically given by people who have changed their religious group. Please rank the top three (3) reasons that were a factor in your decision to change your religious group/faith. Mark the most important reason a "1," the second most important reason as "2," and the third most important reason as "3."

- \_\_\_\_\_ Dissatisfaction with previous religious group/faith\*
- \_\_\_\_\_ Desire to meet new people/make new friends
- \_\_\_\_\_ Search for "the truth" about the meaning of life\*
- \_\_\_\_\_ Search for the one true faith\*
- \_\_\_\_\_ Plans to marry a member of the group to which you converted
- \_\_\_\_\_ Desire to raise your children with a single faith
- \_\_\_\_\_ Belief that conversion would help your standing in the workplace
- \_\_\_\_\_ Belief that conversion would help your social standing
- \_\_\_\_\_ Desire to find the best moral code \*
- \_\_\_\_\_ Desire to please your family
- \_\_\_\_\_ Desire to send children to a faith-based school
- \_\_\_\_\_ Other (please use the space below to briefly explain)

\*The four conversion motives.

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