Strong Ties, Weak Ties, or No Ties: What Helped Sociology Majors Find Career-Level Jobs?



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JULY 2013



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INTRODUCTION

▲ arts and sciences are concerned about losing out in the competition for undergraduate majors, even though a study of senior sociology majors who graduated in 2012 by the American Sociological Association (ASA) showed that students were excited by sociological concepts and were very satisfied with the major (Senter et al. 2012; Spalter-Roth et al. 2012). Given that today's college students are entering a job market with the highest unemployment in a generation, and are saddled with increasing debt (Baum and McPherson 2010), it is reasonable that students and their parents have been concerned about the prospects of students obtaining professional or "career" jobs. The unemployment rate for sociology baccalaureates was 9.9%, almost twice that of those with degrees in nursing, but slightly less than for graduates in political science and about 3% less than for anthropology graduates (Carnevale and Cheah 2013). A lack of understanding about how sociology majors search for and secure career jobs, and the kind of social capital that helps them in this process, can result in sociology departments losing majors to more vocationally-oriented programs in fields such as health (Brint 2002, 2005, 2010).1

This research brief is based on responses from the first and second waves of ASA's longitudinal survey of senior majors from the class of 2012. In it we asked what type of jobs these majors obtained about seven months after graduation; which of these jobs survey respondents considered to be career-type jobs as opposed to jobs that were not on a career-track; what social capital in the form of social ties and resources students used in their job search; and how effective these sources were for obtaining career-level positions. Knowledge about what kinds of social capital are important for a successful career search will be increasingly important as employment outcomes for graduates become one of the five metrics used for accountability to policymakers (Gardner 2013).

DEFINITIONS

Social capital has been defined as "the various resources embedded in networks that can be accessed by social actors," especially in the job search process (Bourdeiu 1986; Lin 2001 cited in Martin 2009). Although this term is widely used in sociology, Martin (2009) claims that "little research has examined social capital at the post-secondary level"

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¹Sociology faculty might well be concerned about the professional job prospects of their majors because they care about the success of their students and believe that sociologically-trained graduates will contribute to societal well-being.

(p. 187). When research is available, it suggests that resources gained through various networks are beneficial for college students (Pascarella and Terenzini 2005). In contrast, other researchers have suggested that social capital is not directly related to using contacts for job search or the prestige of the job obtained (Mouw 2003). However, in his study, Montgomery (1994) finds that weak ties are related to higher wages and higher rates of employment because these ties provide new information by taking people out of their immediate networks. Other studies posit that strong ties are not useful for most job searches, but that classifications such as strong and weak are too simplistic (Granovetter 1995; Grannis 2010; Rosenbaum, DeLuca, Miller, and Roy 1999; McDonald and Elder 2006; Wegener 1991).

According to the accepted literature in the field, more than half of job seekers find their positions through social capital in the form of personal ties (Fernandez, Castilla, and Moore 2000; Marsden and Gorman 2001; Reskin 1998; McGuire 2007; Neckerman and Fernandez 2003; Neckerman and Kirshenman 1991). However, it is not clear whether these ties are weak, characterized as non-frequent and transitory relations (Montgomery 1994), or strong, characterized by emotional intimacy, intensity, and trust (Krackhardt 1992). A third type of tie can be referred to as absent ties, for which we have no information, or impersonal ties, in which there is no face-to-face interaction.

Students can draw social capital in the form of social relationships, contacts, and resources from a variety of sources, both personal—either strong or weak—and impersonal, in their search for post-baccalaureate employment and graduate education. Parents can provide these sources of social capital for job searches, but previous research suggests that help from this strong tie is more likely when parents (especially white males) themselves have high amounts of human capital including graduate degrees (O'Reagan and Quigley 1993). Relationships with faculty members can result in vocational preparation as well as intellectual development (Kuh and Hu 2001), and extracurricular activities can result in career-relevant skills (Pascarella and Terezini 2005). Frequent interactions with peers can result in commitment to college programs and knowledge and skill acquisition, although not related to GPA (Martin 2009).

This brief examines the social capital that sociology majors called on for help in their post-graduation job

search and the results of the search. We asked whether senior majors had the social capital in the form of relationships and the resources that they needed to guide them in obtaining professional or career-level jobs, and whether these relations were weak or strong. In contrast to strong or weak ties, did they use impersonal resources that may involve no ties? Specifically, which relations and resources led to career-type occupations and which did not? We looked into whether or not the type of institution of higher education attended affected the type of ties and outcomes. We examined further how the demographic characteristics of graduates affected the type of social capital they called on. All students may have used a combination of personal and impersonal relations and resources in their job search, although Martin (2009) notes that black students have fewer relations than whites because individuals tend to pick or have access to people like themselves as contacts (McPherson, Smith-Lovin, and Cook 2001 cited in Mouw 2003).

In addition, using optimal scaling analysis, we examined whether the different types of ties and resources formed clusters that reflected strong, weak, and impersonal or no ties. Finally, using logistic regression analysis, we determined which measures were significantly related to obtaining career-level positions when controlling for other characteristics such as gender, race and ethnicity, type of institution of higher education, and fathers' education.

The survey design for this study is described in Appendix I.

FINDINGS

The first set of findings presented is descriptive, based on frequencies and cross-tabulations, while the second set of findings is based on cluster or multivariate analysis.

Career Jobs vs. Non-career Jobs

In the tough job market for 2012 sociology graduates, 56% of respondents were working at a paid job or paid internship (only), and another 20% were both working and enrolled at a college or university. The remaining 24% were attending graduate school but not working. The analysis of job search included three groups: those who were working (only), those who reported that their primary activity was

Table 1. Number in Job Category and Percentage of Job Holders Who Perceive They Have a Career Job: 2012.

	N in Job Category	Percent
Management-related	28	96.4
Social Science Researcher	33	81.8
IT, PR, Other	60	81.7
Social Services/ Counselors	170	71.8
Teachers	84	67.9
Clerical/Administrative assistant	101	50.5
Sales/Marketing	105	39.0
Service Occupations	82	17.1
Other	56	60.7

Source: American Sociological Association. *Social Capital, Organizational Capital, and the Job Market for New Sociology Graduates Survey*, 2012.

working at a job although they attended graduate school as well, or those who had searched for a position but did not find one. The analysis of careers included the first two groups (with a total of 715 respondents). More than half (58.9%) of these graduates who said that work was their primary activity obtained what they perceived to be careerlevel jobs, with slightly more than 40% failing to do so.² Table 1 ranks the percentage of respondents who agree that the occupational category in which they landed in 2013 was a career-type position. The table shows that close to 100% (96.4%) of those who found management-related positions think that these jobs would lead to a professional career. Yet, the table also shows that this was the smallest category of occupational participation. The second-smallest occupational category was social science researchers, although 81.8% agree that they held a career-type job. Previous research suggests that graduates of sociology terminal master's programs were much more likely to hold research-positions than baccalaureates (30.4% compared to 4.6%, respectively), undoubtedly because they had more methods and statistics training (Van Vooren and Spalter-Roth 2011). The thirdsmallest job category, information technology (IT) and public relations (PR), had a similar percentage of post-baccalaureate sociologists agreeing that they were in a career or professional position. The largest job category in 2013, seven months after graduation, was social service workers and counselors with 71.8% agreeing that these were career-level jobs. In contrast, the next two largest jobs categories, clerical/administrative assistant and sales and marketing, had significantly lower percentages of respondents who agreed that these were career-type jobs. Only about half (50.5%) of clerical workers and 39.0% of sales workers agreed that these were career-level positions. Service occupations were the least likely to be thought of as career positions, with only 17.1% of respondents agreeing that they were.

CHANGES SINCE 2005

The pre-Recession class of 2005 fared somewhat better that the post-Recession class of 2012 in terms of their ability to obtain career-level positions. Table 2 shows that, in general, the percent of sociology baccalaureates in professional level jobs decreased somewhat pre- and post-Recession, while the percentage of graduates in non-professional jobs increased somewhat. Between these years, there was a dip in social service, IT and PR positions, while the percent of graduates in social science research jobs stayed relatively stable. The largest decrease was in management-related positions, thought to be the most career-related of all positions. However, the large drop in management jobs might be an artifact either

Table 2. Job Categories of Sociology Majors, Wave 2, 2005 and 2012: Percentage and Percentage Point Change.

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	2012 (N=759)	2005 (N=621)	Percentage point change
Social Services/ Counselors	23.7	26.5	-2.1
Sales/Marketing	14.2	10.1	4.1
Clerical/ Administrative Assistant	14.0	15.8	-1.8
Teachers	11.9	8.1	3.8
Service Occupations	11.9	8.3	3.6
IT, PR, Other	7.9	10.2	-2.3
Social Science Researcher	4.6	5.7	-1.1
Management-related	3.8	14.4	-10.6
Other	8.0	4.4	3.6

Source: American Sociological Association. *Social Capital*, *Organizational Capital*, and the Job Market for New Sociology Graduates Survey, 2012; and What Can I Do with a Bachelor's Degree in Sociology? (Wave 2), 2007.

The determination of whether a job was career-level or not resulted from responses to the question "Is this a career-type job?"

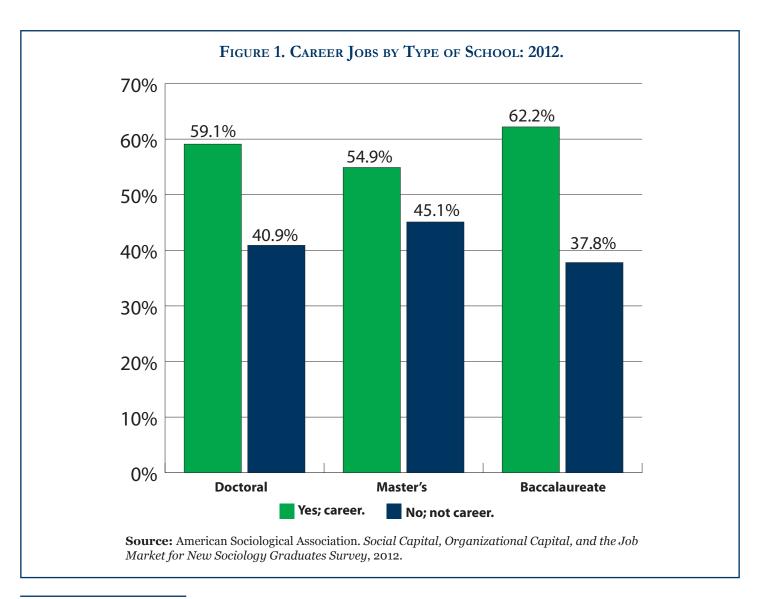
of the timing of the second wave of the survey or of self-coding.³ Teaching was the only career-oriented position (with 60% of respondents so-labeling it) that increased. In contrast to decreases in career-type positions, jobs that respondents agreed were not on a career track increased somewhat. The two-largest increases were sales and marketing jobs and service positions, while the percentage of graduates in clerical/administrative support positions stayed relatively stable (see Table 2).

STUDENT BACKGROUNDS

We look at two characteristics of students' backgrounds—the type of institution of higher edu-

cation that they attended and the educational background of their parents.

Relationship between type of institution of higher education and job type. In a previous research brief we found that senior sociology majors were not very satisfied with the career counseling that they received, although those at Master's comprehensive universities were significantly more satisfied (35% were) with career counseling than seniors at either Research and Doctoral universities or Baccalaureate-only colleges (Senter et al. 2012). Yet, when we examined whether or not the former major obtained a career-type occupation, we found no significant differences by type of school (as measured by Carnegie Codes; see Figure 1).



³The second wave of the 2005 longitudinal survey took place more than one year (rather than seven months) after graduation. Spalter-Roth and Van Vooren (2010) indicate in previous research that graduates tend to receive promotions into management-type positions as the time since graduation increases.

Relationship between parents' education and job type. In our previous research about this cohort we found that more than half of respondents' mothers did not have a college degree, and almost 30% of these mothers had a high school degree or less. Fathers had similar levels of education to mothers (Senter et al. 2012). The parents of students at Baccalaureate institutions were most likely to be highly educated: more than one-third of these students reported that their parents had at least some graduate or professional schooling. By contrast, only about 15% of students at Master's institutions reported mothers or fathers who were this highly educated. These data suggest that, especially at Master's institutions, respondents were first generation college graduates. Overall, Table 3 does not show a relationship between parent's education and whether their children obtained a career-level position. Although the overall relationship is not significant, 64% of the sociology majors whose fathers who attended graduate school or had a graduate degree were likely to have obtained a career-level job, about 10 percentage points higher than the children of fathers with less education.

Job Search

Use and Effectiveness of Job Resources

uring the period that Granovetter (1973, 1983, 1995) and others were writing as to whether strong or weak ties resulted in effective job search, the availability of online search techniques was nonexistent or extremely limited. In contrast, the class of 2012 was most likely to use online job search sites such as Monster.com, Idealist.org, or Craigslist as a job-search strategy. More than half (56.0%) of former sociology majors reported using these online sources, and of all the techniques used, online sources were reported to be the most effective during the job search. The next most commonly used source was a classmate, colleague, or friend, closely followed by a family member, with effectiveness scores hovering about 50% (54.2% and 48.4%, respectively—see Table 4).

Unlike online searches that do not include direct social relations, family and friends were viewed as strong ties by study respondents. Two measures were used to quantify the strength of these ties: the responses to the questions, "how close are you to this

Table 3. Parents' Level of Education by Professional Job (Percent in a Professional Job).

	% In a Professional Job: Father's Education	% In a Professional Job: Mother's Education
High school graduate or less	54.4	54.0
Associate/nursing degree	55.8	60.7
College graduate	56.1	58.0
Graduate degree	64.3	56.8

Source: American Sociological Association. *Social Capital, Organizational Capital, and the Job Market for New Sociology Graduates Survey,* 2012.

Table 4. Use and Effectiveness of Job Search Methods.

	% Using	N Using	% Most Effective	N Most Effective
Online methods	56.0	459	68.0	312
Classmate, colleague, friend	35.9	294	54.2	160
Family member	33.0	271	48.4	132
College career services	22.8	187	40.6	76
Newspaper ads	16.3	134	15.7	21
Employment agency	12.8	105	39.0	41
Former employer	12.1	99	55.6	55
Faculty	11.5	94	13.5	13
Job/Internship supervisor	11.5	94	51.1	48
Unsolicited resume	5.1	42	21.4	9
Workshop in sociology department	2.1	17	35.3	6
Capstone	1.2	10	30.0	3

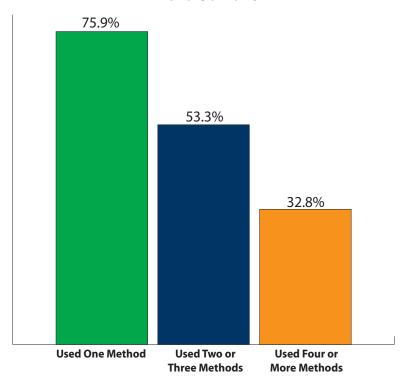
Source: American Sociological Association. *Social Capital, Organizational Capital, and the Job Market for New Sociology Graduates Survey,* 2012.

person?" and "how often do you interact with this person?" The responses ranged from 1-"not at all close" through 5-"very close." Family members received median scores of 5 on both closeness and frequency of interaction—the highest possible score. Friends and classmates received a median closeness score of 4 and an interaction score of 3.

A third social tie was with a faculty member with a median closeness score of 3, neither strong nor weak. However as Table 4 shows, fewer than 12% of students use faculty members for help in their job search and only 13.5% of those who called on faculty members found their help to be effective in searching for jobs. A similar percent of students called on job or internship supervisors, yet these supervisors were viewed as 3.7 times as effective as were faculty members. Likewise, about the same percent of respondents called upon former employers and in this case they were regarded as more than four times as effective in aiding sociology majors' job search as were faculty members.

About half (53.3%) of respondents used two or three job search methods, and about one-third used four or more methods. There were significant differences in the mean number of searches used by those who found career-level positions and those who did not; however, it was those who used one method who were most likely to secure a career-type job (see Figure 2). Possibly, these respondents were more focused and particular in their job search method rather than using a less mindful "scatter-shot" approach. Alternatively, these graduates may have had considerable difficulty finding a job, tried many sources to secure employment, and settled for a non-professional job.

FIGURE 2. CAREER JOBS BY NUMBER OF SEARCH
METHODS USED: 2012



Source: American Sociological Association. *Social Capital, Organizational Capital, and the Job Market for New Sociology Graduates Survey,* 2012.

JOB SEARCH, TIES, AND CAREER-LEVEL EMPLOYMENT

We saw that despite the tough 2012 job market, with an unemployment rate of about 10% for graduating senior sociology majors, more than half of respondents agreed that they had obtained a career-level job about seven months after graduation. In Table 5 we show the type of ties that resulted in career-level positions and those that did not. In general, what would be described as weak ties were more likely than strong ties or no ties to result in career-type jobs.

Weak Ties. Although capstone courses appeared to be the job search method most likely to result in a career-type position (with 87.5% of those who used this method of job search having found a career-type job), fewer than 2% of respondents had used this method (refer back to Table 4). This finding suggested that only a relatively small number of departments offered capstone courses with a career emphasis to graduating seniors; the low N may, therefore, may make this finding unreliable. Other weak ties such as job

or internship supervisors, former employers, college career services, and career workshops in the sociology department (here again relatively few students participated in such workshops) resulted in between 57.9% and 70.6% of respondents obtaining career-type jobs (see Table 5). For those respondents who sought advice from faculty members (who were rated in the middle of the closeness scale), 62.0% found career-level positions. Recall, however, that only 11.5% of respondents used this technique and only 13.5% said it was the most effective job search method. The relatively high percent of respondents that believed they found a career-level job using this search technique suggests that faculty, who collect information about careers or encourage students in job search techniques, may be undervalued as a source of job search information.

Strong Ties. Strong ties with classmates and friends or family members/relatives did not appear to be the most effective techniques for finding career-level or professional positions. Almost half of respondents who relied on classmates and friends (48.8%) and more than half (54.8%) of those who used family or relatives as a major job search resource did not find career-level positions. In fact, those respondents who used a family member as a resource were

Table 5. Career Jobs by Job Search Method: 2012 (Percent that Used Each Method).

Method	In a Career Job (%)
Capstone	87.5
Job/Internship supervisor	70.6
Other	70.6
Former employer	67.0
College career services	57.9
Faculty	62.0
Workshop in sociology department	58.8
Unsolicited offer	54.5

Method	Not in a Career Job (%)
Classmate, colleague, friend	48.8
Family member	54.8
Online methods	55.0
Unsolicited resume	59.4
Employment agency	71.8
Newspaper ads	81.0

Source: American Sociological Association. *Social Capital,* Organizational Capital, and the Job Market for New Sociology Graduates Survey, 2012.

most likely to have found work as a sales or a clerical worker. These findings suggest that strong ties are not necessarily the best resources for those sociology majors looking for a professional-level position.

Impersonal or Non-Ties. Impersonal ties or non-ties were the least likely to result in career-type positions and the most likely to result in non-career-level jobs such as service, clerical, and sales work. Of those who used newspaper ads as a search method, fully 81.0% did not find career-level positions, followed by 71.8% of respondents who used employment agencies. As we saw, the largest number of respondents reported using online search methods and thought of them as effective methods for finding jobs even though 55% ended up in positions that they did not consider professional-level. These findings suggest that sociology graduates (as with others in their age cohort) appeared to overestimate the value of the impersonal job search.

GROUPINGS OF JOB SEARCH STRATEGIES

1 A **7** e have seen that some strategies are more likely to result in what these respondents classified as either career-type or non-career-type jobs, but did any of the strategies form scales or group together? In other words, by using factor analysis could we assign the strategies to groups or categories that fit with the types of ties that we have discussed, i.e., weak, strong, or impersonal or non-ties?⁴ The answer was yes. The first analysis resulted in six clusters that explained 56% of the variance. Two of the groups included weak ties, two included impersonal ties, and one included personal ties. The first of the two clusters used in job searches that represented weak ties included faculty members and capstone courses. The second cluster of weak ties included former employers and internship advisors. Clusters that represented impersonal or non-ties included newspapers and employment agencies for one, and unsolicited resumes and receiving unsolicited offers in the other. The impersonal strategy that was used most by respondents, online job search, stood alone. A cluster of strong ties included friends and classmates, on the one hand, and family members or relatives on the other. A number of variables did not scale, including job workshops, career services, and other methods. The strategies that did cluster suggested that the notion of strong ties, weak ties, and impersonal ties were valid constructs (see Figure 3).

In order to pursue further the issue of whether job search strategies group together, rather than allowing SPSS to automatically determine the number of factors in each grouping, we selected four clusters to be extracted.⁵ The first scale or grouping that emerged included strategies that we have referred to as the use of weak ties, the second included strategies that we have referred to as strong, personal ties, the third includes strategies that are impersonal ties, and a fourth, less strong cluster, that included a weak tie and an impersonal tie (see Figure 4). The "impersonal tie" cluster included newspaper ads, employment agencies, and online searches. (Another impersonal strategy, sending unsolicited resumes, was not part of this or any other cluster.) The second cluster of strategies included what we have labeled as "strong ties,"

⁴We used Principal Components Analysis to develop the scales or groupings in order to discover whether the concept of different types of ties appeared to be valid. First, we did an analysis that included two variables in each set and followed with an analysis that included four variables in each set. The results, as discussed above, did not appear to be very different. All of the strategy variables were included in the scaling procedure, but only those that showed significant differences were included in the scales. The rotation method used for this analysis was Varimax with Kaiser Normalization, and the rotation converged in six iterations.

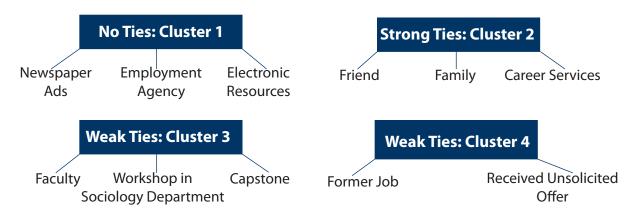
⁵We used the scree plot that is part of the output from the Principle Components Analysis to do the second factor analysis.

FIGURE 3. SIX CLUSTERS OF JOB SEARCH METHODS USED BY SOCIOLOGY MAJORS: 2012.



Source: American Sociological Association. *Social Capital, Organizational Capital, and the Job Market for New Sociology Graduates Survey,* 2012.

FIGURE 4. FOUR CLUSTERS OF JOB SEARCH METHODS USED BY SOCIOLOGY MAJORS: 2012.



Source: American Sociological Association. *Social Capital, Organizational Capital, and the Job Market for New Sociology Graduates Survey*, 2012.

using classmates or friends and family. The use of career services was also in this cluster, although we would have expected it to cluster with weak ties. (In the previous six-cluster scale (Figure 3), career services did not fit into any of the clusters.) The third cluster in this analysis included what we have labeled as weak ties, that is, faculty members, workshops, and the capstone course. (The use of an internship supervisor as a job search strategy did not scale.) The final cluster included former employer and having received an unsolicited offer (see Figure 4). These two strategies did not appear to be of the same type even though they scaled. Perhaps the unsolicited offer came through a former employer. In general, the results of the cluster analysis did suggest that the categorization of job search strategies into types of ties were valid and did make sense, and we go ahead and use the 6-category factor analysis in the

REGRESSION ANALYSIS

regression analysis that follows.

We conducted a logit regression analysis to see what kinds of relationships and other factors, relative to one another, were predictive of gaining career-type positions (see Figure 5). We used a logit model because the dependent variable had only two possible responses: yes or no. Rather than using individual items we used the results of the first cluster analysis as the independent variables, along with a series of control variables that included demographic characteristics: gender, race or ethnicity, type of undergraduate school, and parents' education. The most successful regression model contained the variables listed in Box 1.

The general lack of high correlations among the variables shows that multicolinearity was not a problem, therefore we were able to use all of the selected variables in the regression analysis.

The findings from the regression analysis generally support the descriptive analysis. Strong ties in the form of friends or relatives had a negative and statistically significant impact on the probability of a

Box 1

Independent and Control Variables

- Types of ties used in job search based on the twovariable cluster analysis, i.e. strong ties, weak ties, and impersonal ties.
- 2. Collapsed Carnegie codes for types of institutions of higher education.
- 3. Gender
- 4. Race or ethnicity
- 5. Father's education

Dependent Variable

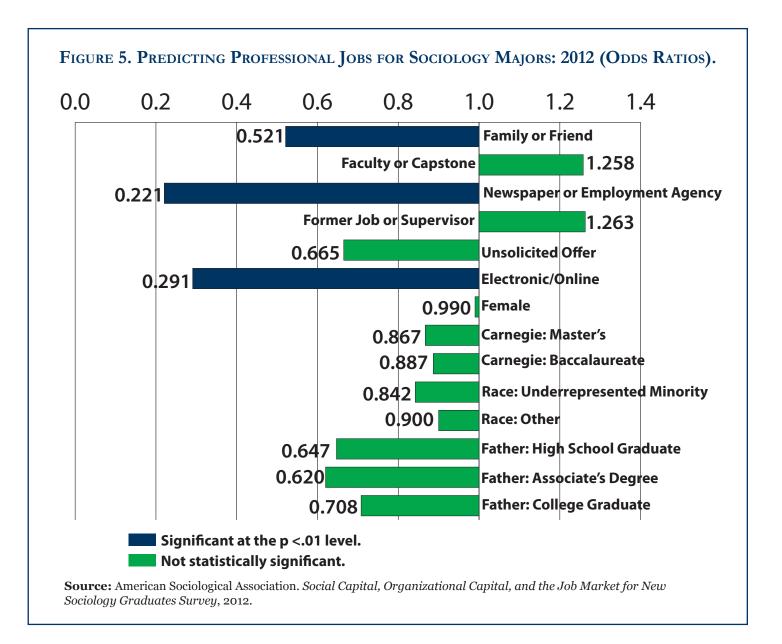
Whether or not respondent obtained a career-type position.

career position for sociology majors seven months after receiving their bachelor's degree, with those who used these ties only half as likely (.521) to have found career positions. As we have seen, those who used friends and family were more likely to find themselves in non-career positions such as clerical and administrative, sales, or service work. A major exception were those who had fathers with graduate education or graduate degrees, who likely had the social capital in the form of contacts and resources to have helped their children obtain professional-level positions. In this analysis, compared to the children of this group of better-educated fathers, the children of those who had less education were less likely to have found careertype jobs.

The use of all types of impersonal ties also had a negative and statistically significant impact on the probability of post-graduation sociology majors having found career-type jobs. These impersonal sources included the use of newspaper advertisements or employment agencies, resulting in respondents who used these strategies being 78% less likely to have found this kind of position. Those who sent unsolicited resumes and received unsolicited offers also had a lower probability of attaining career-type positions, although the use of this set of impersonal strategies was not statistically significant.

It was the use of weak ties that helped sociology

⁶We use the term predictive since the predictor (independent) variables come from the first wave of the study and the dependent variable comes from the second wave.



majors to obtain career-type positions such as social workers and career counselors, managers, IT and PR positions, researchers, and teachers. Two sets of weak relations had a positive impact on the probability of finding this type of position, although neither set was significant. The first set was help from faculty members and from capstone seminars (that increased the probability by 1.3 times), although we have seen that only about 11% of students used faculty members as part of a job search strategy and fewer than 2% of students participated in a capstone seminar. Calling upon internship supervisors or past employers was another set of weak ties that increased the probability of having found a career-type position (also by 1.3 times), although, here again, this finding was not statistically significant. In short, this analysis pointed in

the direction of weak ties as a better method of finding career-type positions compared to strong ties and impersonal ties, since they take people out of their immediate circle of intimate relations and provide a set of social relations that can provide new information (Montgomery 1994).

SUMMARY AND CONCLUSIONS

Sociology majors from the class of 2012, who responded to our survey seven months after receiving their baccalaureate degrees, faced a tight job market and experienced close to a 10% unemployment rate. They were most likely to obtain social service/counseling jobs, although they obtained somewhat

fewer career-level positions than did the class of 2005. This brief examined the use and effectiveness of three types of social ties and resources in their pursuit of career-level jobs, including strong, weak, and impersonal or non-ties.

We found that the largest group of respondents (56%) used impersonal ties in the form of online searches to look for jobs. This type of tie (or non-relation) along with the use of newspaper ads, employment agencies, and sending unsolicited resumes were not effective job search strategies for obtaining positions that the respondents designated as career-type jobs such as social service workers and counselors, managers, IT and PR professions, researchers, and teachers. Instead, impersonal ties were negatively related to these career-type positions, other factors being equal, and those who used these ties were more likely to have obtained clerical, sales, and service jobs.

Sociology majors may turn to these types of search strategies because they are readily available or seem on the face of it to be reasonable. However, this research suggests that graduates need to be mindful of the limitations of these strategies or may need to gain increased sophistication in the use of such strategies if they are to produce the reward of a career-type job as opposed to any job at all.⁷

Prior to the advent of the Internet and job search websites, available research suggested that the majority of job seekers used personal ties in their searches. The research was not always clear as to whether these sources of information were close ties or not. We found that the second-highest type of relation that sociology majors called upon were family members or classmates, colleagues, and friends (36% used them). These strong ties (with median scores of 5 or 4 on a 1-to-5 scale) were negatively related to working in career-type jobs, when other variables were held constant. Perhaps this negative effect was the result of the limitation of using close relatives and friends who did not take them beyond their immediate circle that could provide new information. We know that high percentages of sociology majors are first-generation college students, and majors whose family and friends work in clerical, sales, or service positions may not be able to provide graduates with information about jobs that are different from what they themselves have known. While not a significant difference, we did

find data suggesting that majors with highly educated fathers are advantaged in the professional job market, presumably because of the resources and contacts that they are able to make available to their child.

Following researchers who found that weak ties were a more successful means of job searching than are strong ties, our results showed that weak ties in the form of advice from faculty members, capstone seminars, departmental career workshops, internship advisors, and former employers were positively related to the probability of obtaining a career-level job. However, these results were not statistically significant, perhaps because of the low percentage of sociology majors (only between 1% and 12%) who either had access to or used these resources. The relatively high percentages of respondents who believed they found a career level job who used these types of weak ties suggest that faculty members, sociology department activities, and outside activities such as internships may be undervalued as sources of job search information. Given the importance of sociology majors obtaining jobs that provide career ladders and that allow them to pay off their debts, sociology departments should consider promoting and increasing the kinds of activities and relations that result in weak job search ties.

Faculty meet with students on a regular basis. While they have neither the time nor inclination to become job counselors, faculty may want to use existing office hours and advising time to encourage students to begin to plan their job search strategies early in their undergraduate careers. And departments and faculty should explore ways of increasing knowledge about labor markets without having to expend inordinate amounts of time or resources doing so. For example, departments may want to enhance their ability to stay in touch with their alumni, for they may provide departments with job market information, speakers in capstone seminars, and sites for internships. Departments might also want to help increase the knowledge base of career service professionals so that they have a stronger understanding about the skills and knowledge base that sociology does provide students. Additional suggestions for faculty members can be found in Launching Majors into Satisfying Careers: A Faculty Manual (Spalter-Roth, Senter, and Van Vooren 2010).

 $^{^{7}}$ For example, Vitullo (2009) shows that using online searches with keywords such as "research" or "analysis" may yield more hits that the use of "sociologist."

APPENDIX I

Survey Design

First Wave

In this section we first describe the methodology used for Wave I of the study of the sociology cohort of 2012 that was conducted in the spring of their senior year. We go on to describe the methods used in Wave II of the survey, about seven months after respondents graduated. We review study research methods including sample selection, survey design, and data weighting.

Sample Selection

The 104 departments that participated in the 2005 *Bachelor's and Beyond* study were invited to take part in the 2012 study. Included in the 2005 group of departments was the stratified sample of 80 departments (20 from PhD granting institutions, 20 from MA institutions, and 40 from Baccalaureate institutions), as well as any additional volunteer departments. Along with matched departments, the 2012 invitation was extended to any department that wished to have its students included in the study. Departments were notified of the study via email, ASA's member newsletter *Footnotes*, and *Chairlink*, a listserv used to disseminate information to all depart—ment chairs. The result was an additional 129 interested departments for a total of 233 departments that were expected to participate. Departments were asked to send a list of the names of their senior sociology majors graduating between April and August 2012, along with their email addresses. Departments that did not yet know who of their majors was graduating sent lists of all senior majors, and the response rate was later adjusted. Ultimately, 160 departments sent the ASA research department their lists after obtaining institutional review board (IRB) and/or any institutional approval necessary to disclose this information beyond the IRB approval granted to ASA by the Western Institutional Review Board (WIRB).

Questionnaire and Responses

As's Department of Research on the Discipline and Profession created the student survey, along with the help of the study's Advisory Committee. The 2012 survey replicated many questions from the 2005 questionnaire, with additional questions about the social networks students used or planned to use in pursuing jobs or admission into graduate school. Questions focused on students' experiences as sociology majors, including why they majored, skills and concepts they learned, activities they participated in, their job and graduate school aspirations, and the types of relations used in finding appropriate jobs and graduate schools. Respondents were expected to use an online version of the survey, created by Indiana University's Center for Survey Research. The survey was pre-tested in November 2011 by the Advisory Committee members' students. The final version of the survey was launched with an invitational email to students in March 2012, which was followed up with four reminder emails before the survey closed in early May. By the time it closed, 2,695 students had participated in the survey, for an average departmental response rate of about 40 percent (36.8%).

Weighting

The 2012 Wave I data were weighted so that they are more reliable. We compared demographic and institutional characteristics of respondents with those of recent baccalaureates in sociology, based on the National Center for Educational Statistics Integrated Postsecondary Education Data system (IPEDS). These characteristics included gender, race and ethnicity, and type of institution of higher education. We had weighted the 2005 data by institution type. In 2012, there were only small differences by race or ethnicity and by institution type compared to the IPEDS data. The largest underrepresentation was seen among Black/African American respondents. To adjust for this in the 2012 data only, we coded anyone who selected black into Black/African American, even if they also selected another racial category. In addition, there was a disparity between the

percentage of male graduates and the percentage of male respondents. Therefore, we weighted the responses by gender. However, when we present comparison findings from 2005 with 2012 we use unweighted data since the comparative data are placed in a single dataset in which the 2005 and the 2012 weights cannot both be applied. The differences between the unweighted and the weighted data are relatively small.

SECOND WAVE

Sample Universe, Survey, and Response Rates

In the fall of 2012, the Research Department with the aid of the project's advisory committee⁸ developed the questionnaire for the second wave of the 2012 survey. The 2012 survey replicated many questions from the 2005 questionnaire, was approved by the Western Institutional Review Board (WIRB), and was developed as an online survey by the Indiana University Center for Survey Research. Once the survey was complete and pre-tested, a letter of invitation was sent. All of the 2,695 respondents who participated in the first wave of the study were sent the 15 minute survey that asked questions about their employment and/or graduate school status, after their 2012 graduation. They were asked about the characteristics of their jobs; the ties (that according to our measures could be labeled as strong, weak, or non-personal), sources that were most helpful in their job or graduate school search; and which skills and concepts they used on the job or in graduate school. The survey concluded with a few additional questions about current living and family situations. The survey was sent out at the beginning of December 2012, with reminders sent to what students listed as their primary and secondary email addresses, between mid-December 2012 and the end of January 2013. The survey was closed down in February of 2013. The total response rate was just over 41% (with 1,108 completed surveys). An additional 62 respondents returned partially completed surveys, with 127 "not deliverables" and 15 refusals for a refined response rate of just over 44%—a higher response rate than for the first survey.

Weighting

When we examined the response rates of each of the sub-groups (type of institution of higher education, race and ethnicity, and gender) in the sample of respondents, we did not find significant differences between the response rates to this wave of the survey and their proportion in the sample. Therefore, we did not weight the second wave.

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⁸The Advisory Committee consists of the project co-PI Mary Senter of Central Michigan University, Margaret (Peggy) Nelson of Middlebury College, John Kennedy of Indiana University, Pamela Stone and Michael Wood of Hunter College, City College of New York, and Jeffrey Chin of LeMoyne College.

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