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ACCESS TO OCCUPATIONS THROUGH SOCIAL TIES *

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Previous studies which examine the theory linking social resources to instrumental action have focused on a particular activated set of social ties in order to assess the effects of social resources on a specific action (finding a job or finding a stranger). However, the theory also implies that an individual's access to such social resources is contingent upon his/her social position as well as the nature of the social ties used. Assuming positions in the occupational structure represent resources, this paper reports a study designed to examine access to occupations through social ties.

Data tend to support two major propositions in the theory. The strength of positions (as indicated by father's occupation) as well as the strength of ties (as indicated by the nature of the tie being a relative, friend or acquaintance) affect one's access to high-prestige occupations and affect the range of occupations accessed. Higher original positions and weaker ties (friends and acquaintances rather than relatives) provide better access to white-collar or more prestigious occupations, and, as a consequence, provide access to a wider range of occupations. Weaker ties provide better access to social resources than stronger ties, especially for those whose original positions are relatively low. There is also some evidence that friends, as opposed to relatives and acquaintances, may provide the widest access to different positions in the occupational structure. However, this finding is tentative since access through acquaintances may have been underestimated due to the particular measure used and to the possibility of a recall problem.

Recently, a theory has been advanced specifying the relationship between social resources and instrumental action (Lin 1982). Instrumental action is defined as action taken for the purpose of gaining valued resources such as wealth, status, and power. Social resources are resources accessible to ego through his/her social relations. Consequently, social resources can be viewed as being embedded in one's social network. The theory posits that access to and use of social resources affect the success of instrumental action. The theory also predicts that individuals with certain structural and personal characteristics have greater access to social resources and, therefore, have greater

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success in their use of social resources for instrumental purposes. It should be pointed out that the theory focuses on both access to social resources as well as the actual use of social resources for instrumental purposes. It postulates that both elements, the actual use of social resources and access to social resources are affected by structural and personal characteristics of the individual and his or her resource network. Past research on the theory has examined hypotheses concerning the causal and effectual processes regarding the actual use of social resources. This paper will examine several hypotheses concerning access to social resources. Before we proceed, it is important to review the theory of social resources in more detail and to present empirical studies which have tested its hypotheses.

Theory and previous studies

The theory begins with an image of social structure. Social structure is defined as a network of persons whose positions are rank-ordered according to certain normatively valued resources such as wealth, status, and power. Thus social structure can be envisioned as a pyramidal and hierarchical structure in which resources and access to resources are embedded. It follows that the higher the position in the structure, the fewer the occupants. In addition, not only are more valued resources intrinsically attached to these positions, but the position itself affords greater accessibility to positions at other rankings. Therefore in terms of the number of occupants, accessibility to other positions in the structure, and access to and control of valued resources, its pyramidal nature suggests advantages accruing to positions nearer the top. Accordingly, an individual who occupies a higher position has a greater command of social resources.

This image and definition of social structure leads to three propositions pertaining to social resources and instrumental action. First, the success of instrumental action is positively associated with the social resources accessed. The higher the position one is able to reach, the greater the chances that the position's resources and command of social resources will help to achieve the goal of ego's instrumental action. For example, in seeking a job, an individual who uses a contact of higher socioeconomic status should find a better job than someone else whose contact has lower status. This is the social resources proposition.

Second, the higher a person's initial position, whether inherited or achieved, the better the social resources reached through a contact. For example, persons with high-status family backgrounds should have a greater probability of reaching a contact in a high position in the social structure than persons with low-status family backgrounds. This is called the strength of positions proposition and is consistent with the homophily or "like-me" principle (Homans 1950).

Further, for two individuals at the same or similar initial positions, it is hypothesized that the one who uses weak ties rather than strong ties will tend to reach better social resources. This is called the strength of ties proposition. It follows from Granovetter's work (1973, 1974) demonstrating that weak ties rather than strong ties permit wider reaches to other parts of the social structure. This proposition specifically suggests that the strength of weak ties for instrumental action lies in the extent to which weak ties are a bridge to social resources, enabling an individual to reach levels in the social structure which are different from his own.

Finally, the theory predicts an interaction between the strength of positions and the strength of ties. Due to the possibility of a ceiling effect, a high status person's strong ties should provide social resources which are as good as (or better than) the resources available through weak ties. On the other hand, a low-status person's weak ties should provide better social resources than his/her strong ties provide. Consequently, the lower the initial position, the greater the effect of weak ties over strong ties on the action.

The theory has received empirical support from four studies. In a small-world study, successfully forwarding packets to a target person (a stranger) was positively associated with the social resources provided by the contact used (Lin et al. 1977, 1978). Data indicated that reaching the target person was more likely if the packets were transmitted from male toward female targets rather than from female toward male targets. Also, reaching the target person was more likely if packets were transmitted from persons with higher occupational status, rather than from persons with moderate or low occupational status. The fact that the prevailing valued resources in American society (gender and occupational status) clearly influenced the likelihood of a packet reaching its target, was confirmation of the social resources proposition.

Further analysis revealed that the participants in the successful

chains (chains in which the packets successfully reached the target) and the unsuccessful chains were quite clearly distinguishable. The former tended to forward the packets not only to others higher in occupational prestige than themselves, but also much higher in prestige than the targets. In contrast, the latter tended to forward the packets to persons occupying prestige statuses similar to their own. Thus, the strength of positions proposition received support with this evidence that the likelihood of eventually locating the target at a relatively low position increased.

In addition, the study examined the recency of the last contact between each participant and the person next in the chain in order to index the strength of ties. The data indicated that participants in the successful chains, unlike those in unsuccessful chains, tended to forward the packets to persons of less recent contact. The strategy which was most successful involved reaching persons who were not strong ties to the senders. To further verify that weak ties rather than strong ties are instrumentally more useful, the relations between each pair of sender and receiver was examined. The results showed that the participants in the successful chains tended to utilize fewer strong ties in their forwarding effort. The fact that the successful terminals (those who forwarded the packets to the target) had weak ties with the targets was evidence supporting the strength of ties proposition.

In a 1975 study of job-seeking activities for a sample of 399 males, aged 20–64, residing in the Albany-Schenectady-Troy, New York area, about 57 percent used personal contacts to find their first jobs and 50 percent did so to find their last jobs (Lin, Vaughn and Ensel, 1981; Lin, Ensel and Vaughn, 1981). Focusing on those who used personal contacts, the investigators found the zero-order correlation between contact status and the attained status of the first job to be 0.65 and 0.68 between contact status and the last job status. When the usual status variables (father's occupational prestige and their own educational achievement) were incorporated into the analysis, contact status remained the dominant variable explaining the first job status. In fact, it was as important as education in predicting the status attained in the last job. Thus if contact status is taken as an indicator of social resources and if the status of attained jobs is taken as an indicator of the success of an instrumental act, then the social resources proposition received strong support.

When father's occupation was considered an indicator of the initial

socioeconomic position of each respondent, the regression analysis showed that for seeking the first job nearly 85 percent of the explained variance in contact status could be attributed to family background, directly or through its effect on education. In addition, family background, directly or indirectly, accounted for 71 percent of the explained variance of the status of the contact in seeking the last job. Thus, the strength of positions proposition received empirical support.

To test the relationship between the strength of ties and social resources, the relationship between each respondent and their contact was analyzed. Strong ties were represented by relatives, friends and neighbors, and weak ties by acquaintances. It was found that strength of ties was significantly related to contact status in seeking both the first and last jobs, although the strength of ties had no direct effect on the attained status. The results supported the strength of ties proposition.

In 1978, a third study was conducted which examined the theory of social resources. A representative sample of both adult male and females in the State of New York was surveyed (Ensel 1979; Ensel and Lin 1981). The data on male respondents generally confirmed the findings from the 1975 study. The social resources proposition, the strength of positions proposition and the strength of ties proposition were also confirmed for the female sample. In fact, such effects were stronger for females than for males, because reaching up in the social hierarchy requires crossing the sexual boundary. Consequently, females were more likely to reach better contact status through male contacts rather than female contacts.

Hurlbert and Marsden (1985) examined the relations between social resources and socioeconomic attainment with the 1970 Detroit Area Study (DAS) data. They confirmed the effects of social resources (contact's job prestige) on job prestige. Further, they found contact's industry also affecting getting a job in the core sector of the industry. On the other hand, they failed to find any effect tie strength had on occupational attainment.

The problem

Although these studies have lent empirical support to the theory, each has limited its focus to the linkage between *actual* use of social

resources and the success of instrumental action. The other important part of the theory, concerning general *access to* social resources, has not been investigated. The theory will gain credibility if it can also be demonstrated that certain personal and structural factors affect general access to better social resources. Only when such evidence is provided will the final part of the theory be testable; that is, the linkage between access to social resources and the actual use of social resources in the context of instrumental action. Therefore, the purpose of this discussion is to examine factors affecting access to social resources. Specifically we propose to examine factors associated with access to various positions in the occupational structure, on the assumption that positions in the occupational structure constitute reasonable indicators of social resources. The significance of the notion of access lies in the way in which a person's network may connect him/her with a diversity of positions. Used in this sense, our focus is on reachability rather than use; the extent to which individuals have access to social resources and not on whether they have mobilized their social relationships in terms of a specific action. The validity of the theory would be considerably strengthened if it could be demonstrated that the strength of positions and the strength of ties affect access to social resources as well. The study reported here attempts to address this need by examining the morphological characteristics of social resources, represented by positions in the occupational structure. Specifically, it will examine (1) the extent to which individuals have access to various occupational positions through their social ties, and (2) whether the nature of the social tie as well as an individual's origin status have any influence on the kinds of occupations accessed. In this formulation, we use the accessed occupational position as the indicator of social resources; the occupation of the individual's father as the indicator of the strength of positions, and the nature of the social tie as the indicator of the strength of ties. Thus, what will be examined is directly related to the two propositions introduced earlier: (1) the relation between the strength of positions and social resources and (2) the relations between the strength of ties and social resources. Because our concern centers on factors which affect access to social resources, indicated by position within the occupational structure, the third proposition dealing directly with instrumental action will not be examined.

Although the research question is straightforward, the data requirement is more complex. Ideally, data should be gathered from a repre-

sentative sample of adults over a meaningful population, which would include all their social ties as well as each tie's resources (in this case, their occupational characteristics). Realistically, such a requirement is almost impossible to meet. Consequently, a modified approach has been adopted.

From a list of 20 occupations, respondents were asked to identify whether any of their relatives, friends, or acquaintances had such occupations. This research strategy generated data on each respondent concerning each type of tie (relative, friend and acquaintance) and measures ego's access to social resources by virtue of his/her link to positions in the occupational structure through specific social relations. This strategy is not intended to measure the number of linkages or ties which ego has to alter. Rather, it maps the access structure by focusing on different positions within the occupational structure and examines the linkages to those positions. Relative to such access, the strength of positions (measured by parental status) and the strength of ties (in terms of relative, friend or acquaintance) will then be examined. The use of a selected set of occupations is not new. For example, Laumann (1966) used a list of preselected occupations in his examination of social distances. The validity of this strategy depends on the extent to which the 20 occupations approximately represent both the range and the salience of these occupations in the American occupational structure. The final set of occupations was selected after an examination of the frequency distributions of occupations of the American labor force from the 1970 Census of Population, Classified Index of Occupations. A set of high-frequency occupations which spread across the white-blue and upper-lower occupational divisions as well as representing the full range of scores on the Duncan SEI scale were selected.

Data

The data for this study came from the 1975 data set used by Lin and his associates to examine the job-seeking process which was described earlier. In the interview schedule, each respondent was presented with a list of the twenty occupations and asked to indicate whether any of his relatives, friends, or acquaintances had such an occupation.

The question designed to elicit from the respondent information regarding the availability of social resources to him was the following:

> Here is a list of jobs (SHOW CARD). I would like you to look over these jobs and tell me whether any of your relatives have jobs like these? ... How about your friends? ... Do you have any close friends ... People that you know but seldom see. Do any of your acquaintances have jobs like any of these?

Thus, the nature of available social resources was indicated by the types of occupations and occupational status levels (Duncan SEI) to which respondents had access by virtue of their social ties with incumbents in each occupational type.

Social ties were distinguished by the strength of the tie. We have operationalized the strength of tie by the respondent's relation to the incumbent of the occupation: relative, friend or acquaintance. Usually the strength of the tie is indexed as being either weak (acquaintances and indirect ties) or strong (relatives and friends) (Granovetter 1973; Lin, Vaughn and Ensel, 1981; Lin, Ensel and Vaughn, 1981). However, relatives and friends were analyzed separately for the purposes of ascertaining their independent effects.

The measures used to determine access to occupations through social ties do not provide any indication regarding the number of relatives, friends or acquaintances in each occupation. The question regarding how many ties are involved cannot be answered. However, our measures do indicate to a certain degree the range or the number of positions ego has direct contact with and do measure the extent that ego is connected to a diversity of positions by each type of tie. For example, a person in contact with 15 others of widely differing social positions would have a wider-range access network than a person in contact with 15 people of the same general social position. In other words, the data allows us to examine access to social resources insofar as we tap the range of ego's contact network or more precisely, the network of occupational positions to which ego has contact. We acknowledge that the definition of acquaintances ("People that you know but seldom see") poses a problem. Although a general definition of acquaintances is not available, it should include those one sees quite often or regularly but interacts with on a less intense, intimate or reciprocal basis. The potential effects of such restrictive measures on the analysis will be assessed later.

Two indicators were used to describe the nature of social resources: (1) the highest prestige score of an occupation to which a respondent had access through relatives, friends or acquaintances (HO); and (2)

the range of occupational prestige scores accessed (RANGEO). The range was measured by the difference between the lowest and the highest prestige scores of occupations to which the respondent had access through social ties. The HO index provided some indication of how high in the occupational structure the respondent was able to "reach" through his social ties. The range of occupational statuses provided some indication as to whether the contact network tended to cluster in a specific space or disperse throughout the entire occupational structure.

To determine the extent to which access to social resources is affected by the respondent's status of origin, the strength of position was measured by respondent's father's occupational status (Duncan SEI) as well as by a white-blue upper-lower four-way classification. It may be argued that the respondent's own occupational status also reflects the strength of the original position. Conceptually, however, father's occupational status is a more stable and reliable indicator because the current occupation may undergo change, depending on the age of a respondent. We will, nevertheless, examine the respondent's current occupation to ascertain if it exerts an effect similar to that of father's occupation on access to occupations.

The 20 selected occupations, and the white-blue upper-lower classifications are presented in Table 1.

As can be seen, access to occupations through social ties is very extensive. Access to a given sampled occupation ranged from 23 percent having access to a guard/watchman and 26 percent to an office machine operator to 58 percent having access to a skilled worker and 55 percent to laborers. In general, one-fourth to one-half of the respondent's have direct links to each occupational position. When the occupations were grouped in upper-white, lower-white, upper-blue and lower-blue categories, access to upper-white occupations seems highest, followed by access to upper-blue occupations, lower-white and lower-blue occupations, respectively. Since the occupations were preselected, the absolute numbers are of no substantive interest. Rather, percentages were calculated as baseline data with which further analyses will be compared.

Occupations were also arranged to their Duncan SEI scale scores. Again, the data indicated extensive access to status levels. On the average, each respondent had access to more than eight of the twenty selected occupations. Access seemed to reach very low and very high in

Table 1
Access to occupations through social ties.

Occupations Accessed (Duncan SEI score)	Percent of respondents ($N = 339$)	
	Any of the general class	Specific occupation
Upper-white occupations	89%	
Lawyer (92.3)		45.1%
Engineer (86.9)		45.4%
Manager (75.1)		34.1%
Department Head (70.6)		51.4%
Small business owner (62.0)		53.6%
Union official (59.8)		29.3%
Teacher (44.2)		48.6%
Lower-white occupations	77%	
Insurance Agent (66.0)		43.6%
Secretary (61.9%)		51.6%
Salesman (49.4%)		39.8%
Office Machine Operator (45.0)		25.6%
Office Clerk (44.0)		50.1%
Upper-blue occupations	83%	
Foreman (49.7)		48.1%
Skilled Worker (44.0)		58.1%
Mechanic/Repairman (27.0)		48.1%
Machinist (21.0)		39.3%
Lower-blue occupations	73%	
Guard/Watchman (18.02)		23.3%
Waiter/Bartender (17.0)		36.6%
Janitor/Porter (12.7)		26.6%
Laborer (7.9)		55.4%

the status levels and the range of occupational statuses accessed is a substantial 62 points. The mean SEI score (47.8) was slightly higher than the mean SEI score of the respondents' current jobs (45.4). Since theory (Homans 1950) informs us that people tend to associate with others of similar and slightly higher statuses, the data suggest the selected occupations may be successful representations of the occupational structure in the United States. Some summary statistics appear in Table 2.

These descriptive data provide the distribution phenomenon we wish to explain. Namely, is access to occupations contingent upon a person's initial position in the occupational structure or is access to occupations

Table 2
Access to occupations through social ties.

	Mean	S.D.
Number of occupations accessed	8.54	5.27
Lowest status (SEI) of occupation accessed	17.14	14.13
Average status of occupations accessed	47.79	11.71
Highest status (SEI) of occupation accessed	79.50	16.45
Range of statuses (SEI) of occupations accessed	62.35	22.24

contingent upon the type of social ties providing such access? We will now turn to the examination of the hypotheses.

Strength of positions and access

To test the strength of positions hypothesis, we used father's occupation as the indicator of each respondent's initial position. Again, the analyses were conducted in terms of both occupational groupings and occupational status scores. Panel A of Table 3 shows that respondents whose fathers had white-collar jobs had better access to white-collar occupations through social ties, compared to those whose fathers had blue-collar jobs. More than 96 percent of respondents of white-collar fathers (both upper and lower categories) had access to upper-white occupations through ties. They also had better access to lower-white occupations than others.

In Panel B of Table 3, the same phenomena can be observed in terms of prestige scores. For this purpose, father's occupational prestige scores were arranged in high (scoring 60 + on the SEI scale), medium (20–59), and low (less than 20) groups. In general, the lower the original position (as indicated by father's job prestige), the fewer the variety of occupations accessed (see the mean numbers of occupations accessed). Higher original positions offer the advantage of accessing high-prestige job ties (see the mean highest-status ties), whereas lower original positions do not reach any lower in the occupational structure than do higher original positions (see the similar mean lowest-status ties). As a result, higher original positions afford a wider range in the span of occupational levels than lower original positions (see the mean ranges).

Table 3
Access to occupational categories by father's occupation.

A.

Occupational category accessed by respondents (in percent)	Father's occupation (in category)					
	Upper-white ($N=105$) %	Lower-white ($N=29$) %	Upper-blue ($N=121$) %	Lower-blue ($N=136$) %	Total ($N=391$) %	p^*
Upper-White	96.2	96.6	87.6	32.4	89	< 0.01
Lower-White	86.7	93.1	73.6	68.4	77	< 0.01
Upper-Blue	78.1	82.8	85.1	85.3	83	< 0.01
Lower-blue	70.5	79.3	69.4	77.2	73	< 0.01

B.

Mean SEI scores for accessed occupations	Father's occupation (in SEI scores)				
	High (60+) ($N=93$)	Medium (20–59) ($N=161$)	Low (−20) ($N=129$)	Total ($N=383$)	p^*
Lowest status	19.1	18.0	16.3	17.7	< 0.20
	(18.67)	(15.44)	(13.97)	(15.8)	
Highest status	86.2	78.7	73.7	78.9	< 0.01
	(13.59)	(17.5)	(19.4)	(17.9)	
Range	69.0	61.8	58.7	62.5	< 0.01
	(21.49)	(22.62)	(21.6)	(22.3)	
Number of occupations	10.6	8.7	7.0	8.6	
	(5.3)	(5.3)	(4.4)	(5.2)	

* Significance test between underlined pairs.
Note: Standard deviations in parentheses.

These data support the strength of the positions hypothesis. They also clarify this hypothesis by demonstrating that the strength of a higher position is due to its access to higher occupations while maintaining its access to lower occupations. The advantage is in being able to reach upward in the occupational structure, without sacrificing access to lower positions.

Strength of ties and access

Next, we examined the strength of ties hypothesis. The strength of tie was operationalized into three of relations: relatives, friends and

acquaintances. Panel A of Table 4 shows the analyses for occupational categories. As expected, relatives, indicating strong ties, provided a relatively limited range of access to occupations. Relatives were especially deficient in reaching lower-blue collar occupations. However somewhat contrary to expectations, friends provided better access to occupational groups than acquaintances. While acquaintances were in general considered weak ties, friends provided better access to every occupational group. We note that the 399 respondents mentioned 350 friends in the selected occupations, while they mentioned only 299 relatives and 284 acquaintances. However, the relative percentages cannot be exclusively explained away by the frequencies of friends, relatives and acquaintances being mentioned. Although the frequencies of relatives and acquaintances mentioned were about the same (299 and 284), access to occupations provided by the groups show meaningful differences. Note, for example, that 37 percent of respondents had access to lower-blue occupations through acquaintances, as compared to only 23 percent who had access to such occupations through relatives.

Two other potential explanations may be more meaningful. One may argue that bias was introduced in structured question-answer situations where people tend to recall friends or their friends' jobs more easily than their acquaintances or their acquaintances' jobs. However, since we defined "friends" rather rigidly (Do you have any close friends who have jobs like the ones of this list?) and "acquaintances" rather loosely (How about acquaintances? People that you know but seldom see. Do any of your acquaintances have jobs like any of these?), we did take precaution against such recall problems. It is still possible, of course, that such subjective bias might have occurred. Also, as we mentioned earlier, a potential source of bias may be in the definition of acquaintances shown in this study. Recall that this definition excluded people whom one sees often or regularly but with whom interaction would not be defined as intense, intimate or reciprocal. Hence, it is quite plausible that their inclusion would have significantly increased access to occupations through acquaintances. We will return to this issue in the discussion section. Nevertheless, the data generated from this study clearly indicated that friends rather than relatives provided better access to different occupational groupings. Also, through friends, one reached more occupations (a mean of 4.66 occupations, compared to 3.28 for acquaintances and 2.37 for relatives).

Table 4
Access to occupations through relatives, friends and acquaintances

A.

Occupational groups	Percent of respondents mentioning ($N = 399$)				
	Relatives	Friends	Acquaintances	Any	p^*
Upper-white	51	68	50	89	< 0.01
Lower-white	39	49	43	77	< 0.01
Upper-blue	39	59	36		< 0.01
Lower-blue	23	49	37	73	< 0.01
Any	75	88	71	–	
Number of occupations accessed (S.D.)	2.37 (2.29)	4.66 (4.11)	3.28 (4.14)	8.54 (5.17)	< 0.01

B.

Mean SEI of accessed occupation	Relatives ($N = 299$)	Friends ($N = 350$)	Acquaintances ($N = 284$)	Any ($N = 399$)	p^*
SEI scores	49.8 (15.90)	48.8 (15.77)	49.22 (16.89)	47.8 (11.7)	< 0.01
Lowest status (SEI) of occupation accessed (S.D.)	33.86 (20.43)	25.71 (21.12)	29.78 (22.66)	17.14 (14.13)	< 0.01
Highest status (SEI) of occupation accessed (S.D.)	65.03 (20.93)	72.39 (21.96)	69.01 (22.97)	79.50 (16.45)	< 0.01
Range of occupational status (SEI) (S.D.)	31.17 (26.17)	46.68 (29.01)	39.23 (30.40)	62.35 (22.24)	< 0.01

* Significance test between underlined pairs.
Note: Standard deviations in parentheses.

We again analyzed the data in terms of the SEI scores. Panel B of Table 4 shows that through friendship ties, respondents had lower reaches than through ties with relatives and acquaintances. The mean lowest-status of occupations accessed is 25.71 for friends, as compared to 29.78 for acquaintances and 33.86 for relatives. They also enabled better access to the higher-status jobs than did either relatives or acquaintances (72.39 as compared to 65.03 and 69.01 respectively). Therefore through friends, respondents had access to a greater range of occupational statuses (46.68) than they did through acquaintances (39.23) or relatives 31.17).

The results confirm the strength of ties hypothesis, when only access provided by relatives and friends was compared. Weaker ties repre-

sented by friends, did enable better access to different occupational groupings and statuses than did strong ties, represented by relatives.

Further analyses and discussion

In the job-seeking study, Lin, Ensel and Vaughn (1980: 398–399) reported that the strength of weak ties depended on the original position. The lower the original position, the more effective a weak tie became in reaching up toward a high-status contact. They further showed that when the original position was sufficiently high, strong ties were just as effective as weak ties in reaching high-status contacts. To verify this relationship, we used father's occupational statuses (the low, medium and high groups) as the horizontal axis to indicate the original position, and plotted the mean highest and lowest statuses of occupations accessed through the three groups of social ties (relatives, friends and acquaintances). Figure 1 shows that the advantage of accessing high-status occupations through weaker ties (friends and acquaintances) rather than strong ties (relatives) was more significant for the low father's SEI group than for the high group. Thus, the data confirmed the interaction between the strength of ties and one's original position in the hierarchical structure.

Further, Figure 1 demonstrates that when one's original position is low, the ability to reach the lowest-status occupations depended on friends rather than relatives or acquaintances. On the other hand, acquaintances provided the best access to the lowest-status occupations when one's original position is high. Again the interaction between one's position in the hierarchical structure and the strength of ties is confirmed. As one's position becomes more removed from the lower reaches of the occupational structure, one increasingly relies on weak ties to reach down in the structure.

Since both the strength of positions and the strength of ties affect access to occupations, we decided to ascertain their relative importance. A multiple regression analysis was conducted for each of the two access variables, HO (the mean highest status of occupation accessed) and RANGEO (the mean range of occupational statuses accessed) on the strength of positions (father's occupational status) and the strength of ties (number of occupations accessed through relatives, friends and acquaintances, NOCREL, NOCFR, NOCACQ respectively). In the

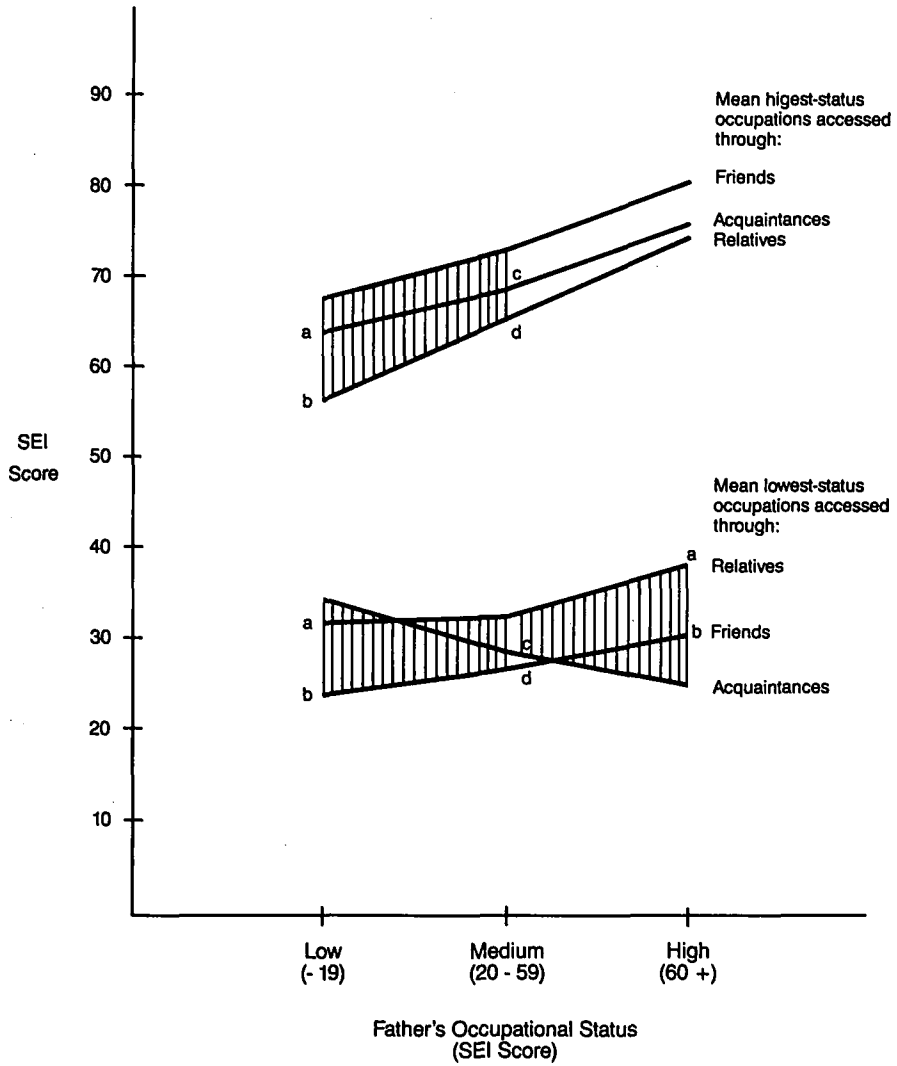

Figure 1. SEI scores of occupations of relatives, friends and acquaintances by father's occupational status. *Note*: The distances defining the shaded areas are statistically significant. Also, distances between *a*'s and *b*'s are significant. But, distances between *c*'s and *d*'s are not significant.

analyses, status scores were used because earlier analyses showed results to be consistent with occupational categories.

The results, appearing in Table 5, clearly show that the strength of

Table 5
Zero-order correlations among key variables

A.

Zero-order correlations								
Variables	FASEI	EDU	NOCREL	NOCFR	NOCACQ	HO	$\bar{X}$	S.D.
FASEIO	1.00						37.1	23.7
EDUCATION	0.57	1.00					12.7	3.2
NOCREL	0.12	0.12	1.00				2.4	2.3
NOCFR	0.15	0.22	0.23	1.00			4.6	4.1
NOCACQ	0.28	0.31	0.12	0.36	1.00		3.3	4.1
HO	0.27	0.34	0.24	0.48	0.41	1.00	78.8	17.8
RANGEO	0.20	0.16	0.28	0.60	0.46	0.77	62.3	22.3

B. Multivariate analyses of access to occupations

Dependent variables	Independent variables				
	FASEI	NOREL	NOFR	NOACQ	
	Metric coefficients				
Mean highest status of occupation accessed (HO)	0.105 (0.033)	0.868 (0.339)	1.53 (0.201)	0.979 (0.202)	62.57
Mean range of occupational status accessed (RANGEO)	0.034 (0.037)	1.33 (0.383)	2.52 (0.227)	1.39 (0.228)	41.63
	Standardized coefficients				R^2
HO	0.139	0.111	0.351	0.227	0.324
RANGEO	0.037	0.137	0.468	0.260	0.444

Note: Standard errors appear in parentheses below their corresponding metric coefficients.
FASEI: Father's occupational status;
NOCREL: Number of occupations accessed through relatives;
NOCFR: Number of occupations accessed through friends;
NOCACQ: Number of occupations accessed through acquaintances;
HO: Mean highest status of occupations accessed;
RANGEO: Mean range of occupational statuses accessed.

ties' variables were, as a whole, more important than the strength of positions in affecting the access variables (see the beta weights). There is some indirect effect of father's occupational status on the access variables, especially through acquaintance ties. Thus, the strength of positions seems to extend one's weak ties which, in turn, provide greater access to occupational positions. After the direct effect of father's occupational status is taken into account, the remaining effects of the strength of ties on access to occupations remain significant. In

Table 6
A. Zero-order correlations among key variables

	Zero-order correlations							
Variables	SEIC	SONSED	NOCREL	NOCFR	NOCACQ	HO	$\bar{X}$	S.D.
SEIC	1.00						41.8	15.4
SONSED	0.61	1.00					12.7	3.2
NOCREL	0.06	0.12	1.00				2.4	2.3
NOCFR	0.16	0.22	0.23	1.00			4.6	4.1
NOCACQ	0.29	0.31	0.12	0.36	1.00		3.3	4.1
HO	0.28	0.34	0.24	0.48	0.41	1.00	78.8	17.8
RANGEO	0.14	0.16	0.28	0.60	0.46	0.77	62.3	22.1

B. Multivariate analysis of access to occupations

Dependent variables	Independent variables				
	SEIC	NOCREL	NOCFR	NOCACQ	INTERCEPT
	Metric coefficients				
Mean highest status of occupation accessed (HO)	0.178 (0.050)	0.933 (0.331)	1.504 (0.197)	0.960 (0.198)	59.02
Mean range of occupational status accessed (RANGEO)	−0.032 (0.057)	1.358 (0.376)	2.539 (0.223)	1.477	43.85
	Standardized coefficients				R^2
HO	0.153	0.120	0.346	0.222	0.329
RANGEO	−0.023	0.140	0.470	0.275	0.443

Note: Standard errors appear in parentheses below their corresponding metric coefficients.

fact, even when the respondent's education was included in the regression equation the relationship held.

It is appropriate here to ascertain whether the respondent's occupational status as an alternative indicator of original position may differentially affect access to occupations. Replacing father's occupational status, the respondent's occupational status (SEIC) is shown in Table 6A to be correlated with other key variables in a pattern similar to that of father's occupational status. Regression results show (Table 6B) no significant changes of coefficients for the strength of ties variables.

What the data suggest is that structural positions, as represented by father's occupational statuses (or respondent's current occupational status), are important factors in determining, to some extent, the reaches through weak ties and therefore access to high-status positions, as well as affecting the range of positions accessed in the occupational

structure. Nevertheless, they cannot explain all the co-variations between the strength of ties and access to occupations. In other words, individuals of similar positions have different social ties who access different occupational positions. To what extent such co-variation is due to strategic action on the part of the individuals constitutes an interesting and important issue for future research.

Summary

In the examination of the theory linking resources to instrumental action previous studies have focused on a particular activated set of social ties relative to a specific action (finding a job or finding a stranger). This paper reported a study on the morphological characteristics of social resources – general access to occupations through one's social ties.

By examining access to 20 selected occupations through social ties, we have found evidence to support two major propositions in the theory proposed by Lin and others about social resources and instrumental action. We found that the strength of positions (as indicated by father's occupation) as well as the strength of ties (as indicated by the nature of the tie being a relative, friend or acquaintance) affect one's access to high-prestige occupations and the range of occupations accessed. There is also some evidence that through friends, as compared to relatives and acquaintances, one may have the widest access to different positions in the occupational structure. However, acquaintances, the weak-strength ties, may have greater direct effect on the success of instrumental action (getting a good job).

When the original position (father's occupation) is high, the strong ties (relatives) and the weak ties (friends, acquaintances) provide equally good access to prestigious occupations. When the original position is low, weak ties provide better access to prestigious occupations than do strong ties. These data confirm the interaction between the strength of positions and the strength of ties advanced in the theory. While structural positions affect both the reaches through ties (especially weak ties) as well as access to positions, the data suggest that other factors (e.g., strategic action) affect individuals' social ties and their effect on access to both high-status positions and the range of positions in the occupational structure.

While the data are illuminating, they were marred by some measurement limitations. Our measures of social ties might have underestimated the significance of acquaintances due to recall and definition problems. Because "acquaintances" was defined in the questionnaire as being those whom the respondent knew but seldom saw, it excluded those whom the respondent saw often or regularly. These shortcomings should have "dampened" the effect of weak ties (acquaintances) on access to occupations. Despite the possible underestimations of the strength of weak ties, the data did show consistent results concerning the effects of friends and acquaintances as compared to relatives. With proper design and measurement, future research should bring even stronger support to the theory under examination.

In the future research, three directions may be fruitful. Greater attention needs to be given to the measurement of the strength of ties. When one uses relatives, friends and acquaintances as classifications, it is wise not to automatically lump relatives and friends into a single category. In terms of access to resources, they apparently operate quite differently. Also, other measurements of the strength of ties should be incorporated. Granovetter (1973) has suggested the amount of time, the emotional intensity, intimacy (mutual confiding), and reciprocal services as indicators of the strength of ties. Other characteristics such as density and multiplexity (Mitchel 1969) may also be relevant.

Access to social resources can be indicated by two types: morphological characteristics (a general index of access to social resources) and the activated access for a particular action. It has now become clear that both access to and use of social resources are affected by the strength of positions and the strength of ties. Past research has also confirmed the effect of use of social resources on instrumental actions. The next logical step is to explore the linkage between the morphological characteristics and the action-set.

The hypothesis to be tested is that access to social resources positively affects the actual use of social resources. The relationship is strong when weak ties rather than strong ties are evoked. In addition, because of the interaction nature between the strength of ties and social resources, we also expect that the linkage between access to and use of social resources via weak ties to be stronger for persons toward the lower strata of the resource structure.

Finally, social resources involve both the extensity and up-reaching dimensions in the structure. Our studies so far have demonstrated that,

at least in the occupational structure, access to resources can be indexed by both the extent of access and up-reaching. Further, the extent of access is primarily affected by the up-reaching while the lower limit of access is of limited variation and insignificant impact. Future development of the theory should incorporate these conceptual and methodological refinements.

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