

SMALL IS BOUNTIFUL: LABOR MARKETS AND ESTABLISHMENT SIZE*

MARK GRANOVETTER

State University of New York at Stony Brook

Although there exist no detailed published studies on trends in workplace size, most research in stratification and industrial sociology has operated with the implicit assumption that, in the course of the twentieth century, workers have found themselves in increasingly larger establishments. This assumption has focused considerable attention on such concomitants of the assumed increase as growth in bureaucratic control and internal labor markets. This paper gives the first systematic empirical account of the evolution of workplace size, and presents results that call into question the appropriateness of the current allocation of research energy. It is suggested that far more attention be paid to analysis of small firms and establishments.

It is well known that one of the major changes in the organization of work during the twentieth century has been the shift from small to large employers. In *Contested Terrain*, Edwards (1979:vii) notes that seventy-five or a hundred years ago, "nearly all employees worked for small firms, while today large numbers toil for the giant corporations." From the theory of segmented labor markets we know that the internal labor market in the large company has become an increasingly standard locale for intragenerational mobility, and that, as Thurow points out, the need for on-the-job training leads employers to eliminate competition for jobs among those who must train one another; the "net result is the formation of a series of internal labor markets with limited ports of entry" (Thurow, 1975:85-86). Dunlop (1966:32) observes, in a similar vein, that for the "typical enterprise, hiring-in jobs are only a small fraction of the total number of job classifications."

The forces that have brought about this transformation of the workplace have been extensively documented. Advances in technology have facilitated increasingly large operations with corresponding scale economies. Increases in the concentration of

firm ownership have occurred unevenly, in waves, but without serious reversals during this century, and are associated with an increasing level of "dualism" in the economic structure, which has bifurcated into a "core" consisting of large and powerful firms and a "periphery" of small, weak and dependent operations that are marginal though useful to the core for the absorption of risk. The end result for labor markets is that workers increasingly spend their work lives in large, relatively impersonal bureaucratic structures featuring centralized personnel departments that construct complex schemes of job evaluation and rating systems for promotion in well-defined and highly differentiated ladders (see, e.g., Gordon et al., 1982: Ch. 5).

As this paper's title may already have given away, it is argued here that much of this is wrong. While there can be no doubt that large corporations have increased in importance during this century, we will show nevertheless that the size of the workplace has hardly changed since 1920 and is, for large numbers of workers, too small to be consistent with the picture sketched above. Workplace size has not been absent from research, but has appeared mainly as an independent variable. Organization theorists have demonstrated the impact of size on such organization-level properties as structural differentiation, average span of control and bureaucratic formalization (e.g., Blau and Schoenherr, 1971; Child, 1973; Kimberley, 1976; Marsh and Mannari, 1981). The association of large workplaces with "core" firms in the dual-economy dichotomy has stimulated research showing a significant net impact of size on the income of employees (Stolzenberg, 1978; Kalleberg et al., 1981) and of owners (Aldrich and Weiss, 1981).

One might suppose that the frequently dem-

* Direct all correspondence to: Mark Granovetter, Department of Sociology, SUNY Stony Brook, Stony Brook, NY 11794.

This paper was mainly written in sabbatical facilities kindly provided by the Department of Sociology, Harvard University; the work was supported in part by National Science Foundation Science Faculty Professional Development Grant #SPI 81-65055. I am grateful for the helpful suggestions offered by Katharine Abraham, Howard Aldrich, James Baron, Yinon Cohen, Andrew Gordon, Peter Hedstrom, Hiroshi Ishida, Arne Kalleberg, Hiroshi Uchida, Ezra Vogel, and two anonymous referees.

onstrated importance of size would have stimulated an interest in its determinants, or at least its marginals; but such discussions are absent from the sociological literature on stratification and labor markets, and the studies cited above shed little light on this matter since size is used typically as an independent variable whose regression coefficient thus offers no information on marginals or causally prior variables. The marginals have been discussed by writers in the population ecology school of organizational analysis. Their interest in "selection" has directed their attention to small organizations since these are more likely than large established ones to be eliminated; thus the small size of most organizations has been noted (e.g., Aldrich, 1979:40-44). But organizational sociology rarely connects with stratification or labor market analysis, and these findings have thus had little impact on research in those areas.

This paper concentrates on the proportion of workers who are in organizations of various sizes, thus providing what is believed to be the only systematic available discussion of the history and significance of this size distribution. A paper more oriented to the population of organizations would discuss, instead, the proportion of organizations with given numbers of employees (e.g., Aldrich, 1979:41); but since the concern here is with labor markets, focus is on "where the workers are." (For those interested in the organizational question, note that the data sources used here are generally also informative on that question.) Data presented will mostly be at the level of the plant or "establishment," as is typical in the literature, and, as will be argued below, is theoretically appropriate for the study of labor markets; some limited comparison is offered, however, to similar data for firms.

The official statistics relied on here are not much oriented to the size of the organization in which workers find themselves. The data exist but must be painfully pieced together from scattered reports, while other kinds of labor market information are routinely reported with extensive time series and discussion. Since labor market analysts have also paid little attention to this question, it is difficult to know, without a survey, what they believe about workplace size. But if we take the distribution of labor market research locales as an indicator of implicit assumptions, we would have to conclude that conservative and radical writers alike, from the Western Electric studies to recent Marxist analyses of the labor process, have assumed the typical worker to reside in a large manufacturing establishment with at least one thousand workers. Both the old and the new industrial sociology concentrate their ef-

forts on such settings, reinforcing our implicit image of these as typical labor markets.

The radical labor-market-segmentation literature, though it makes no explicit claims about workplace size, also contributes to this image. Edwards (1979), for example, focuses on the displacement of "simple" control, carried out personally by an entrepreneur and a small group of managers, by "structural" control, embedded in the technical and bureaucratic structure of organizations. The latter is seen as an attempt by firms to resolve new labor control problems that arose as workplace size increased. Simple control requires workplaces to be "small enough for all or nearly all the workers to have some personal relationship with the capitalist, and that the group of managers . . . [be] small enough for each to be effectively directed, motivated and supervised by the capitalist" (Edwards, 1979:26). Such control, common in the nineteenth century, now "persists in the small firms of the industrial periphery . . ." (Edwards, 1979:20), but this periphery, "although it continues to be important in aggregate production and especially in certain industries, . . . generally is a declining sector, as the large corporations continually encroach on its markets" (Edwards, 1979:35). Edwards makes no direct estimate of numbers of workers subject to different types of control, but does associate simple control with the "secondary labor market," whose size he estimates at from one-quarter to one-third of the labor force (Edwards, 1979:166); it is thus implied that two-thirds to three-quarters of the workforce are now subject to the "structural" control associated with large "core" workplaces.

The empirical results reported below cast doubt on the image of workplace size that results from the concentration of most empirical work in industrial sociology and from the tenor of discussion in the radical literature.

INDUSTRY AND ESTABLISHMENT SIZE

The image that "industrial sociology" brings to mind is that of work groups in manufacturing plants. The equation of such plants with workplaces in general was more statistically reasonable in earlier periods than today. Manufacturing employment in 1920 made up 42.7% of the private sector, in 1950, 38.9% and in 1982, 25.5%. An historic watershed was reached in 1982, when the proportion of the labor force in services, 25.7%, first overtook that in manufacturing (*Monthly Labor Review*, April, 1983:58). In 1950, the proportion in services was only 13.7%.

The neglect of nonmanufacturing workers has helped shape our image of workers as toil-

ing in large establishments since manufacturing establishments are significantly larger than others. Table 1 indicates average establishment size by industry for 1977.

A more refined view of the size of establishments that "typical" workers actually experience in everyday life can be developed by looking at the size distribution of workers by establishment size. For the United States, the best time series on this distribution is given by the Census of Manufactures (size data available from 1909), the Census of Selected Services, and the Censuses of Wholesale and Retail Trade (size data available from 1939). For 1977, these four censuses accounted for 67.2% of employees in the private sector, so that discussion of these will give some overall picture of conditions in that labor market. This paper makes no attempt to discuss public employees, who do, however, constitute 17.6% of total U.S. 1982 employment. Data exist for establishment size in state, local and federal government, but the meaning of "establishment" seems arbitrary in this setting, and the boundary between establishment and "firm" even more so.

Begin with manufacturing. What discussion one finds in the historical literature on establishment size relies mainly on time series for the average number of workers per establishment (see, e.g., Gordon et al., 1982:134). But such average figures are potentially misleading since they are exceedingly sensitive to changes in the proportion of establishments accounted for by very small plants. Thus, between 1919 and 1923, the average number of production workers per manufacturing establishment increased by 42.6%, from 31.3 to 44.7. But much of this increase, in fact, is accounted for by the decrease in the proportion of establishments employing five or less production workers from 62.0% in the earlier year to 44.6% in the latter (Census of Manufactures, 1919 and

1923). By a measure more keyed to the situation of actual employees, namely, the proportion working in plants of various sizes, the two years look nearly identical, as is indicated in Table 2.

Table 2 presents data from 1904 to 1977 on the proportion of manufacturing workers in establishments employing less than 20, 100 and 1000. Figures from 1904 to 1939 pertain only to "wage earners," a category approximately equivalent to production workers, while those from 1947 on are given for all employees. For the earlier figures to be comparable to later ones, two sources of bias resulting from the exclusion of nonproduction workers must be taken into account: (1) establishments are classified as smaller than they would be if all employees were counted; thus, an establishment with 90 production workers and 15 nonproduction workers would be classified as in the "less than 100" category in the earlier data, and in the "over 100" category later; (2) if nonproduction workers are disproportionately to be found in larger establishments, as one might guess (see, e.g., Oi, 1983), their omission from the earlier data leads to understatement of the proportion of the total workforce in larger establishments. Both biases run in the same direction and suggest the need to deflate the earlier figures for purposes of comparability. Though the exact deflation necessary is unclear, some sense of it can be obtained by noting that the proportion of employees made up of production workers in manufacturing ranged, during this period, from a high of 91.2% in 1904 to a low of 82.0% in 1939 (Census of Manufactures, 1947, Vol. 1:23). This order of magnitude of deflation would almost certainly flatten the trendline of figures from Table 2, but perhaps not be sufficient to reverse its slight negative slope.

The figures in Table 2 show that in manufacturing there was a decline between 1904 and 1923 in the proportion of workers in smaller establishments, but that there has been almost no change since in the distribution, and that from 1967 to 1977 the proportion increased. That increase may be explained in part by studies indicating that most of the net growth in jobs in recent years has been concentrated in quite small firms (Greene, 1982). Notice that at no point in the twentieth century have more than one in three manufacturing workers been employed in establishments of more than 1000 employees, even though most industrial sociology and probably the best developed job ladders and internal labor markets have been located in such establishments.

Time series for the size of retail, wholesale and service establishments can be assembled only back to 1939, from the Censuses of Retail

Table 1. Establishment Size by Industry Group^a

Industry Group	Average Establishment Size
Agricultural Services, Forestry,	
Fish	14.9
Mining	29.9
Construction	8.1
Manufacturing	59.9
Transportation & Public Utilities	24.2
Wholesale Trade	12.2
Retail Trade	10.6
Finance, Insurance & Real Estate	11.1
Services	11.4

^a Source: County Business Patterns, 1968-1977: Ten Year History. U.S. Bureau of the Census, July, 1981.

Table 2. Proportion of Employees in U.S. Manufacturing Establishments of Various Sizes^a

Year	Proportion in establishments less than 20 ^b	Proportion in establishments less than 100 ^b	Proportion in establishments less than 1000 ^b
1904 ^c	13.6	39.2	88.1
1909	14.4	37.8	84.7
1914	13.1	35.0	82.2
1919	10.3	29.2	73.6
1921	11.8	34.3	80.3
1923	9.4	28.8	75.9
1929	9.8	29.1	na
1933	10.0	30.8	na
1935	9.5	28.9	na
1937	8.0	26.7	73.6
1939	9.5	30.0	77.6
1947 ^d	7.2	25.0	na
1954	7.7	25.6	67.4
1958	7.8	27.0	na
1963	7.3	26.2	69.5
1967	5.6	23.2	67.2
1972	6.2	24.8	71.3
1977	6.5	25.3	72.5

^a Source: Census of Manufactures, various years.

^b From 1904 to 1939, the figure represents all those in establishments smaller than or equal to the size of the upper limit; after 1939, strictly smaller than.

^c 1904 data are extrapolated. Published data give only the number of establishments in each size category, but no information on the number of employees accounted for by each category. Extrapolation is based on the assumption that the average number of employees per establishment in each size category is the same in 1904 as in 1909, when these figures are published. The assumption seems reasonable as a rough approximation, since these averages were extremely stable from 1909 to 1914.

^d From 1947 on, figures represent all employees; from 1904 to 1939, only "wage earners," i.e., approximately, production workers are counted.

na = not available.

Trade, Wholesale Trade and Selected Services, collectively referred to in the earlier years as the Census of Business. Figures for these are presented in Table 3.

Certain trends are clear from this table. In retail trade, the proportion of the workforce in very small (under 20) establishments has declined strongly since 1939, but there has been

little change in the proportion in stores with less than 100 employees. This is not surprising if we keep in mind that a store with 100 employees is already a sizeable operation. The size distribution in wholesale trade shows no consistent trend over this period, while that in services shows a fairly steady tendency for workers to be in larger establishments.

Table 3. Proportion of Employees in Retail, Wholesale and Service Establishments of Various Sizes^a

Year	Retail		Wholesale		Services	
	% in ests. less than 20	% in ests. less than 100	% in ests. less than 20	% in ests. less than 100	% in ests. less than 20	% in ests. less than 100
1939	63.8	85.0	44.4	83.0	55.6	na
1948	58.3	82.4	37.6	na	55.5	83.5
1954	56.0	83.0	41.9	81.5	47.4	76.1
1958	55.6	83.7	43.7	83.2	50.6	77.5
1963	53.4	83.4	45.0	84.1	48.2	75.2
1967	48.8	82.4	41.6	81.4	43.6	71.7
1972	46.3	82.5	na ^b	na	42.3	71.7
1977	42.7	81.9	40.1 ^c	79.7 ^c	40.0	68.1

^a Source: Censuses of Wholesale Trade, Retail Trade and Selected Services, U.S. Bureau of the Census; County Business Patterns, 1976.

^b Size distribution for 1972 and 1977 published only for merchant wholesalers and therefore not comparable to earlier years.

^c These figures are for 1976, from County Business Patterns, a series broadly comparable to the Census of Wholesale Trade.

It should be remembered that the Census of Selected Services is just that—not a census of all service employment. The size distribution in the latter is somewhat less skewed, with 32.2% of 1976 employees in establishments under 20 employees, and 57.5% in those under 100 (County Business Patterns, 1976:75). This series, unfortunately, does not go back very far. Still another series, *Employment and Wages of Workers Covered by State Unemployment Insurance Laws*, hereafter EW (U.S. Department of Labor, Bureau of Labor Statistics), runs from 1959 to the present, and confirms that the distribution in all services is less skewed than in "Selected Services," but also that there is a steady trend over time for workers to be in larger establishments. Thus, though the absolute level of the numbers for services in Table 3 must be interpreted cautiously, the trend evident there appears generally applicable.

Figures for the size distribution of employees for the entire (private) economy are available from several sources. These are shown in Table 4. The CPS figures show the highest proportion in small establishments; but note that these data result from the employee's estimate rather than from a census of establishments, in which personnel records are the source of numbers. It is interesting to notice that the direction of the error (if error it is) is for workers to perceive themselves as working in establishments even smaller than they do, a small bit of evidence that workers do not see themselves as being swallowed up in large, impersonal organizations. It seems safe to conclude, then, that in the United States, in recent years, at least one in four private-sector workers find themselves in establishments with less than 20 employees, one in two in those with less than 100, and more than four in five in those with less than 1000.

Of the available data sources, EW has the longest time series of comparable data, and this series runs only from 1959 to the present. Table 5 presents some figures from this series. During the 1960s there was some trend for workers to find themselves in larger establishments, but this was reversed in the 1970s, and the move to

Table 5. Proportion of Employees in Establishments of Various Sizes, from 1960 to 1981^a

Year	% in ests. less than 20	% in ests. less than 100	% in ests. less than 1000
1960	23.9	48.0	78.4
1969	21.6	46.5	78.5
1974	23.0	47.7	80.5
1981	23.2	49.0	81.3

^a Source: *Employment and Wages*, U.S. Bureau of Labor Statistics, various years (EW).

smaller establishments that we have seen previously in manufacturing characterizes the entire private economy as well. This should not seem surprising in light of the substantial shift of the labor force in this latter period from manufacturing, with its relatively large establishments, to the service industry, with its small ones. Only the gradual increase in the size of service establishments in recent years has kept this trend from assuming even larger proportions. It seems likely in the future that the balance between these two trends will determine the prevailing size distribution. Since these trends work in opposite directions and seem likely to continue, one may hazard the guess that the distribution will not undergo dramatic changes in the near future.

ESTABLISHMENTS VERSUS FIRMS AS UNITS OF ANALYSIS

Some readers may object that the conclusions reached to this point rest on analysis of establishments rather than the larger firms of which they may be a part. The argument that workers are parts of much larger operations now than fifty or seventy-five years ago is probably correct when applied to firms rather than to establishments, since mergers may take place without introducing substantial changes in the size or organization of component establishments.

But there are several reasons why the establishment is a reasonable unit of analysis. First, and least compelling, most results in the literature on size relate to establishments rather than firms. This is almost certainly because firm-level data are much more scarce. But

Table 4. Proportion of Employees in Establishments of Various Sizes, from Three Sources

Source and Year	% in ests. less than 20	% in ests. less than 100	% in ests. less than 1000
Current Population Survey, May, 1979 ^a	38.3 ^b	60.3	86.7
EW, 1981 ^a	23.2	49.0	81.4
County Business Patterns			
1976	26.7	54.0	85.2
1981	26.1	54.4	85.8

^a Unpublished tabulations kindly supplied to me by Professor Katharine Abraham.

^b This figure is for private establishments less than 25.

there are other justifications, particularly for the study of labor markets. When production workers are employed in one plant of a larger corporation, that plant typically defines the internal labor market in which their career line can progress. This is probably the case for lower-level white-collar workers as well, and it seems unlikely, before one reaches the level of middle manager, that much movement among component plants in a corporation can be expected, either ideally or in fact. Thus, to the extent one's interest in establishment size lies in a discussion of what kind of labor market situation workers find themselves in (and this is the major intent of the present paper), establishments rather than firms are the appropriate unit. If our discussion concentrated rather on the structure of capital markets, it would be more difficult to defend an exclusive focus on establishments.

Some data on firms do exist. The May 1979 Current Population Survey, whose data on establishments are reported in Table 4, also asked respondents for the size of the firm. The proportion reporting that they worked in a firm of less than 25 employees was 29.5%; less than 100, 43.7%; and less than 1000, 60.7%. These figures are based on the employee's estimate and may therefore be less accurate than if compiled from personnel records; but no firm-level data covering the entire private economy, that are so compiled, could be found. For manufacturing, retail trade and selected services, explicit comparisons of the size distributions of employees in establishments versus those in firms are available, and are presented in Table 6 for the year 1977.

This table indicates that the distinction between firm and establishment has greatest significance in manufacturing and least in services. This is because single-establishment firms, though overwhelmingly predominant in numbers in all three sectors, account for a far smaller proportion of employment in manufacturing than in retailing or services, as

shown in Table 7. One further set of figures is illuminating: the proportion of employment accounted for by firms with 100 or more establishments is 38.9% in manufacturing, 29.3% in retail trade, and 8.0% in selected services. That the figure is as high as it is in retail trade indicates a substantial bifurcation in this sector between single-store companies, on the one hand, and large multi-store units, with a relatively smaller middle sector: companies with from 2 to 99 stores account for just 22.3% of employment.

A final stab at the question of what proportion of American workers are employed by large firms can be made by using the annual figures published by *Fortune* magazine. In 1982, the *Fortune* 500 Industrials—approximately the 500 largest manufacturing firms, since "Industrial" is defined by the criterion that at least half the revenue must come from manufacturing or mining—employed 14.4 million workers, which is 19.5% of all private, nonagricultural, non-self-employed workers. (Numerator: *Fortune*, May 2, 1983; denominator: *Monthly Labor Review*, July, 1983:58). *Fortune* also publishes data on the 100 largest diversified service companies, commercial banks and diversified financial companies, and the 50 largest life insurance, retail, transportation and utility companies, making another 500 large firms. This second group of firms employed 9.4 million workers in 1982, or 12.7% of the private economy (*Fortune*, June 13, 1983). Together, then, we have 32.2% of that economy. *Fortune* also publishes data on the second 500 Industrials; data for 1981 indicate that these 500 employed about 2% of private employees (*Fortune*, June 14, 1982). How large are the 1500 firms discussed here? The vast majority employ more than 1000 workers, but within every category except retailing and utilities some companies employing less than 1000 were included in the top 500, 100 or 50. Since size in these rankings is based on various criteria such as assets and sales, it is likely that

Table 6. Percent of Employees in U.S. Establishments and Firms of Various Sizes, 1977

Industry	Percent in Units Less Than							
	20		100		1000		10000	
	Ests.	Firms	Ests.	Firms	Ests.	Firms	Ests.	Firms
Manufacturing	6.5 ^a	4.9 ^b	25.3 ^a	16.2 ^b	72.5 ^a	34.3 ^a	na	54.9 ^b
Retail	42.7 ^c	33.0 ^c	81.9 ^c	56.3 ^c	na	67.5 ^c	na	74.6 ^b
Selected Services	40.0 ^d	36.3 ^d	68.1 ^d	58.2 ^d	na	79.9 ^d	na	na

Sources: a: Census of Manufactures, 1977; b: 1977 Enterprise Statistics, Report ES77-1, General Report on Industrial Organization, Bureau of the Census; c: 1977 Census of Retail Trade, Report RC77-S-1, Establishment and Firm Size; d: 1977 Census of Service Industries, Report SC77-S-1, Establishment and Firm Size. Note that figures from a are computed on slightly different bases from those in b, since the total number of manufacturing employees is defined differently in the two reports. Comparisons between these figures should thus be made with caution; error does not appear to exceed 5%.

Table 7. Proportion of Firms and Employment Accounted for by Single-Establishment Firms, by Industry, 1977^a

Industry	Proportion of firms consisting of one establishment	Proportion of employment accounted for by single-establishment firms
Manufacturing	94.6	22.1
Retail	97.4	48.4
Selected Services	99.0	62.9

^a Source: 1977 Enterprise Statistics, Report ES77-1, General Report on Industrial Organization, U.S. Bureau of the Census.

some companies with more than 1000 employees are not included in the lists. Furthermore, privately held companies are excluded for lack of public information. On the other hand, these figures presumably include, for the multinational companies, foreign employees. Given the various sources of under- and over-estimation, it seems safe to say, from these data, that the proportion of privately employed American workers in firms of more than 1000 lies between 30 and 40%. This is broadly consistent with the Current Population Survey estimate for 1979 of 39.3% reported above.

To summarize these figures on firms versus establishments, the size of the former is (necessarily) greater than the latter, but even taking this into account we see that more than four out of ten work in a firm of less than 100 employees, and more than six out of ten in one of less than 1000. The breakdown by industry further indicates that to the extent any objection to the use of establishments rather than firms is to be taken seriously, it pertains much more to the dwindling manufacturing sector than to the stable retail one, and least to the fast-growing service sector. Nevertheless, the proportion of employment accounted for by multi-establishment firms is not negligible, and to the extent that small establishments that are part of

such firms constitute labor market settings different from those of similar sized but independent establishments—a matter difficult to determine from available data—it would be desirable to collect data that permit this distinction to be made clearly.

SOME CROSS-NATIONAL COMPARISONS

If U.S. workers are found in smaller establishments than we might have expected, the question naturally arises whether this distribution is low or high in cross-national perspective. No attempt is made here at systematic comparison: rather, data are presented for two countries, Sweden and Japan, whose economies are widely studied by Americans, seem importantly different from ours, though also highly industrialized, and for which good time series on this question were located. Both, moreover, are countries where one might expect to find relatively large establishments, Sweden because it is centralized with strong governmental participation in the economy, and Japan for the same reason, but also because of the wide publicity given to the system of "permanent employment" in large plants with extensive internal labor markets. Table 8 gives

Table 8. Percent of Wage Earners in Swedish Mining and Manufacturing in Establishments of Various Sizes^a

Year	% of wage earners in ests. of 50 or less	% of wage earners in ests. of 100 or less	% of wage earners in ests. of 1000 or less
1913.	25.8	39.3	91.8
1920	27.9	39.9	92.2
1925	17.6	39.6	91.0
1930	28.6	39.3	89.5
1935	31.3	41.8	88.6
1940	29.4	39.5	84.8
1945	31.1	42.6	86.4
1958	28.0	40.0	83.1
1968	26.5	38.9	83.2
1978 ^b	17.0 ^{b,c}	27.5 ^b	74.9 ^b

^a Source: Statistical Abstract of Sweden, various years.

^b Figures before 1978 are for "wage earners," i.e., production workers; for 1978, all employees are counted.

^c Includes only establishments strictly less than 50.

Table 9. Percent of Employees in Japanese Manufacturing in Establishments of Various Sizes^a

Year	% of employees in ests. of less than 50 ^c	% of employees in ests. of less than 100 ^c	% of employees in ests. of less than 1000 ^c
1909 ^b	44.3	56.5	86.1
1914	38.7	51.4	83.0
1919	33.3	44.4	77.2
1924	33.2	43.6	76.8
1929	34.4	45.0	80.3
1931	37.5	48.8	86.0
1934	37.9	48.7	81.4
1939	38.1	46.4	74.4
1942	33.2	41.4	66.7
1951 ^b	51.6	60.6	82.8
1966	43.3	54.7	na
1978	46.9	58.4	86.7

^a Sources: 1909–1942: *Nihon rōdo undo shiryō* (Documents on the History of the Japanese Labor Movement, Vol. 10, 1975, Tokyo). 1951–1978, Japan Statistical Yearbook. Also see, for prewar period, *Resumé Statistique de l'Empire de Japon*, an annual handbook. (I am indebted to Andrew Gordon and Hiroshi Ishida for their help in locating and interpreting these data.)

^b From 1909 to 1942, data are given for "ouvriers"—approximately, production workers. Postwar data are for all "persons engaged."

^c From 1909 to 1942, these tabulations omitted establishments of less than five employees. Data from the one year when these were included (1921) suggest that all figures for these years should be adjusted upward by four or five percentage points to compensate for this omission.

data for Sweden on mining and manufacturing from 1913 to 1978.

This table indicates that the distribution of Swedish production workers by size of establishment has been quite stable over the twentieth century, and for most of that time more workers were in small establishments than in the U.S. Though the 1978 figure appears to indicate a large shift, this is an artifact of a change in procedures, since it includes all workers, not just production workers as in earlier figures. For reasons indicated in the discussion of Table 2, proportions given for production workers only, as here before 1978, must be deflated to be comparable to figures that include all employees. The 1978 figures are presented mainly because postwar American data are also tabulated for all workers, and comparison can thus be made. Note that the 1978 Swedish and 1977 American data are almost identical.

Before concluding that all modern industrial economies have "converged" to a similar workplace-size situation, we should inspect Table 9, which gives data for Japan, from 1909 to 1978, for employees in manufacturing establishments. From 1909 to 1942, data pertain to a category called "ouvriers"—approximately, production workers; postwar data are for all "persons engaged."

Figures from 1909 to 1942 must be deflated to compensate for the limitation to production workers, as in American data from this period; they must also, however, be inflated to take account of the omission of establishments with

less than five employees (see Table 9, note b). They may thus be approximately correct. The trendline is unclear. The proportion of workers in small manufacturing establishments undulates over the course of the century, and while there are numerous plausible stories one could suggest for the ups and downs, these would be idle speculation without much more research. The range within which these undulations occur, however, is clearly different from that in the U.S. and Sweden. If the reader is convinced that small manufacturing establishments are bountiful in these two countries, then he or she must now conclude that they are positively ubiquitous in Japan. Whereas the typical proportion of workers in U.S. manufacturing plants of less than 100 employees has hovered around 25% for much of this century, the comparable Japanese figure has been much closer to 50%. Given the enormous interest in large Japanese internal labor markets, it is interesting to note that at no time from 1909 on (excepting the 1942 figure, which is likely distorted by the war effort) have more than one in four manufacturing workers found themselves in establishments of 1000 or more, and that recent figures are more on the order of one in seven.¹

¹ Japan scholars with whom I have informally discussed these figures have found the extent of employment in small establishments surprising. That this extent may not be properly reflected in research is suggested by a recent study by Marsh and Mannari (1981): in an investigation of the impact of establish-

Table 10. Percent of Employees in all Japanese Industries, in Establishments of Various Sizes^a

Year	% of employees in ests. of less than 50	% of employees in ests. of less than 100	% of employees in ests. of less than 1000
1951 ^b	65.8	73.0	88.7
1963 ^b	59.4	69.9	na
1966	61.5	72.0	92.7
1969	60.8	71.2	92.4
1972	60.9	71.5	93.0
1975	63.6	73.9	93.5
1978	65.9	76.2	94.7

^a Source: Japan Statistical yearbook, various years.

^b The years 1951 and 1963 appear to include government employees; subsequent years are for private establishments only.

Since one may expect manufacturing establishments to be among the largest in any modern economy, these data suggest that when all industries are taken into account, the bountiful presence of small establishments would be even more pronounced in Japan. Relevant data for the period 1951–1978 are displayed in Table 10.

Here, the proportion of employees in small establishments is overwhelming—nearly two in three in establishments of less than fifty, three in four in those of one hundred or less, and barely one in twenty in workplaces of one thousand workers or more. The trends here, for this period, are similar to those in Japanese manufacturing and to American trends in both manufacturing and total workforce: some tendency away from concentration of workers in small establishments up to a certain point—here the middle '60s—followed by increases in that concentration up to the present time.

CAUSES AND CONSEQUENCES OF THESE PATTERNS

Why should small establishments be not only persistent at a level higher than that suggested by received thinking, but even increasing in recent years? The question of what constitutes "optimal plant size" has generated a substantial literature in the economics of industrial organization, though little of it is easily applied outside of manufacturing. This literature is dominated by analysis of the relation between technical methods of production and cost curves over different ranges of production vol-

ume. Though there are conflicting findings, in part the result of the various methodologies applied, a frequent conclusion is that economies of scale in production show up for relatively small plants and that profit maximization does not generally dictate very large ones (see Scherer, 1980:81–100 for a comprehensive review of these studies).

A different line of argument comes from the literature on "dual economy" (e.g., Averitt, 1968), in which small firms are generally seen as peripheral to the main economy, but necessary in part so that larger and more powerful firms may shift away from themselves the risks associated with the business cycle or with new and untried products and/or services. This shift of risk often takes the form of subcontracting, and it is not uncommon for small contractors to bear the brunt of layoffs when aggregate demand declines (Doeringer and Piore, 1971:173; Gordon et al., 1982:191, 200–201). The subcontracting pattern has been especially noted for Japan and may be in part responsible for the recent predominance of small manufacturing plants, though it seems doubtful that it can account for this predominance early in the century. But the dual-economy literature also focuses heavily on manufacturing, and it is unclear to what extent establishment size can be associated with a core-periphery distinction in trade or services. In this connection, it is worth mentioning that while average weekly wages of employees in manufacturing rise almost monotonically with establishment size—as suggested by dual-economy arguments—there is almost no correlation between these wages and establishment size in services (*Employment and Wages*, 1974:19). These relations are zero order, and size could still have the expected positive correlation with wages net of such factors as occupation or education. But it is not clear that the kinds of arguments adduced to explain the peripheral status of small manufacturing firms can readily be generalized beyond manufacturing, and the entire

ment size and technology on organizational characteristics, they defined the sampling universe as "all industrial manufacturing establishments employing 100 or more persons" (March and Mannari, 1981:35). But, this "universe" omits nearly six out of ten manufacturing workers and more than 98% of establishments, by 1978 figures (their data were collected in 1976), a truncation that must affect the estimation of regression coefficients.

question needs to be considered more carefully in light of the observation that manufacturing is a declining part of the workforce which now accounts for only about one in four private-sector workers.

One might also speculate that the structure of capital markets affects the health of small establishments and especially firms. In particular, large, nationally based banks, insurance companies and pension funds may find it difficult to develop the information about small, localized economic units required to determine which are credit worthy; thus, to the extent capital is centralized in such institutions, small units may be discouraged. By contrast, it has been suggested to me that in Japan local and regional banks are important suppliers of credit and are extremely active in developing information about the risks associated with small, local firms. In addition, the large trading companies, unlike wholesalers in the United States, are important allocators of credit and acquire information about small firms in a natural way, by dealing with them, and are thus in an excellent position to assess the risks of lending.²

Each of these three quite different lines of argument is plausible and deserving of further research. They can offer only an incomplete account, however, of the distribution of workers by establishment size, since none of them directly addresses what determines the exact proportion of *large* establishments in the economy. It is not enough to explain why most establishments are *small*, since this alone does not guarantee that most workers will work in small establishments: witness the situation in manufacturing, where 90.0% of establishments in 1977 have less than 100 employees but account, all together, for only 25.3% of all manufacturing employees (Census of Manufactures, 1977). I have found fewer explanations in the literature for the development of very large establishments than for small; a recent and interesting effort, but one unlikely to be satisfactory to sociologists, is that of Oi (1983), whose model assumes that firm size is determined by "entrepreneurial ability."

It is a little easier to say what some consequences are of workers' being found in smaller establishments than previously supposed. First, it throws into doubt whether mobility opportunity is indeed heavily concentrated in internal labor markets, and whether such markets have the importance generally attributed to them. While establishment size does not correspond exactly to the existence or extent of internal labor markets (see, e.g., the

conceptual discussion in Althaus and Kal-leberg, 1981), and small establishments could in principle have well-defined promotion ladders and clearly graded positions, there are two factors that make such markets difficult to sustain in small plants. One is that the number of promotion opportunities that occur is related to establishment size. This is not only because vacancies will occur more frequently in large plants, but also because the number of hierarchical levels will increase with plant size (see, e.g., Simon, 1957; and the evidence summarized by Hall, 1972: Ch. 4), leading to an increase in the length of intraplant vacancy chains (cf. White, 1970). Where promotion opportunities are limited, workers will be unlikely to dedicate their career to a single company, and will be correspondingly more responsive to opportunities outside the establishment; there is evidence from both the U.S. and Japan that the level of interfirm mobility is an inverse function of firm size (Cole, 1979). Conversely, the chance that employers will find the right person for each opening from within the ranks must diminish as the size of those ranks does, and the temptation to go outside the establishment to tap a larger labor pool increases as the internal pool shrinks. Reasonable as these considerations may be, they are abstract, and the question of what size establishment is required for or empirically associated with well-developed internal markets is poorly understood and could bear much more investigation. (For a general discussion of conditions favorable to internal labor markets, see Granovetter 1983:55-58.)

This argument is qualified to the extent that firms with multiple establishments move workers freely among them or mandate internal labor market practices within each plant owned. The former is more likely to the extent that a firm's establishments are geographically concentrated and are largely equivalent in operations; the latter depends on the extent of centralization of personnel policy. As multiple-establishment firms are much more important in manufacturing than other sectors, it is here that such factors would most probably enter.

Empirical evidence on the imposition of internal labor market policies by corporations on component plants is sparse; two recent studies are relevant. Pfeffer and Cohen (1983) reanalyzed data on 309 San Francisco Bay area establishments collected by Margaret Gordon and Margaret Thal-Larsen in 1966-1968. The sample overrepresents manufacturing and omits entirely plants with 100 employees or less. They find that whether an establishment is a single unit or the branch of a larger firm is the most important determinant of internal

² The ideas in this paragraph resulted from conversations with Ezra Vogel and Hiroshi Uchida.

labor market practices, with branches more likely to have such practices. The standardized regression coefficient is .23; size of plant is also important, however, with a coefficient of .11. Bielby and Baron (1983) analyze data from a 1967 survey conducted by the Institute for Social Research on a nationally representative cross-section of the labor force. They did not investigate internal labor market practices in general, but rather length of tenure with and recent promotion by the current employer. Since long tenures and promotions are closely associated with the existence of internal labor markets, this study may shed some light on our problem. They found that plant size was significantly associated with tenure for both males and females, but that being a branch establishment of a larger firm was associated with tenure only for females. For promotion, plant size has modest positive effects for males and females, while being a branch establishment has no statistically significant effect for males, but a substantial one for females. These findings raise the possibility of complex centralized personnel policies that differently affect different categories of workers.

Findings on establishment size are of *prima facie* relevance to the kind of working environment in which employees find themselves. Images of workers facing a large, impersonal bureaucracy, and constituting but a cog in a wheel of a giant productive machine, cannot stand scrutiny against the numbers reported here. Size 100 is a breakpoint of some sociological significance in the sense that it is easy in establishments of this size for all employees to know each other, and for supervisory personnel to know their workers in a fairly detailed and intimate way. In this connection, it is interesting to note that in my study of job information networks, workers entering small (less than 100) firms were substantially more likely to do so through contacts than in larger firms (Granovetter, 1974:128). This must be, in part, because small firms are not sufficiently visible to attract large numbers of "blind" applications. That many workers enter small firms through contacts reinforces the likelihood that workers in such firms are in an environment structured more by personal relationships than by bureaucratic procedures.

It does not follow, of course, that work life in small establishments is idyllic, as the paternalistic relations (Doeringer, 1982) and the arbitrary and exploitative practices of "simple control" (Edwards, 1979) are easier to organize the smaller the scale of operations. Edwards offers no systematic discussion of the size requirements for the operation of simple control, but does suggest in passing that plant size of two to five hundred employees is still quite

consistent with its operation (Edwards, 1979:26, 35). In the present paper, a breakpoint of one hundred has been used to signify "small," a procedure that, compared to Edwards' implicit criterion, appears conservative in that it carries a bias against our hypothesis that small units are more numerous than usually assumed. If five hundred is a more appropriate boundary of smallness, the results are all the more striking; according to the May 1979 Current Population Survey, more than 80% of the private nonagricultural, nonconstruction workforce find themselves in establishments smaller than this, and 55.8% in such firms. Personalized relations, then, whether rewarding or not, cannot be seen as a relic of the nineteenth century or as a declining aspect of the labor market.

CONCLUSIONS

This paper argues that much of what has been done in some otherwise splendid work on the sociology of economic life and complex organizations has proceeded as if the entire waterfront had been covered, when in fact work has been concentrated in one important but receding pool. There is much in modern sociological theory and ideology that militates against the study of small units. That the study of organizations is often taken to be synonymous with that of "complex organizations" in modern life bespeaks our assumption that modernity begets complexity; complexity in organizations is highly correlated with size, and smaller, "simpler" organizations are thought to be "backwaters," implicitly unworthy of study. Case studies of any kind are suspect anyway in sociology, as detractors are certain to assert that one's case bears no generalization whatever. If engaging in this suspect activity, we can at least hedge our bets by studying a large unit; even if generality cannot be claimed—though for some reason large units are more likely to be thought all similar than small ones—we can at least argue that the large unit studied has intrinsic importance. In the radical literature, the assertion that workers are overwhelmed by economic forces beyond their control has often been linked to the emergence of the factory system and of large establishments. Marxist interest in corporate concentration, and disdain for the petty bourgeoisie who own small firms as an historically regressive and anachronistic class, have combined to influence Marxist labor studies in such a way that small units are rarely taken seriously as sites where the "labor process" occurs.

Large units are more visible and, if only for perceptual reasons, even in the absence of all

these other sources of skew in the size distribution of units studied, it is difficult not to have our conception of economic processes shaped by what we know of the largest operations. Sociologists are not alone in this tunnel vision: George Stigler ([1951] 1968:135), in a classic essay on vertical integration, remarked that the "number of economic views based chiefly on half-a-dozen giant corporations would repay morbid study." The present paper means to begin redressing the balance. Small may or may not be beautiful, as claimed by the economist from whom our title is shamelessly pirated, but it certainly is bountiful, and thereby deserving of its fair share of attention.

REFERENCES

- Aldrich, Howard
1979 *Organizations and Environments*. Englewood Cliffs, NJ: Prentice-Hall.
- Aldrich, Howard and Jane Weiss
1981 "Differentiation within the U.S. capitalist class." *American Sociological Review* 57:59-72.
- Althauser, Robert and Arne Kalleberg
1981 "Firms, occupations and the structure of labor markets: a conceptual analysis." Pp. 119-49 in Ivar Berg (ed.), *Sociological Perspectives on Labor Markets*. New York: Academic Press.
- Averitt, Robert
1968 *The Dual Economy*. New York: Norton.
- Bielby, William and James Baron
1983 "Organizations, technology, and worker attachment to the firm." *Research in Social Stratification and Mobility* 2:77-113.
- Blau, Peter and Richard Schoenherr
1971 *The Structure of Organizations*. New York: Basic Books.
- Child, John
1973 "Predicting and understanding organization 'structure.'" *Administrative Science Quarterly* 18:168-85.
- Cole, Robert
1979 *Work, Mobility and Participation: A Comparative Study of American and Japanese Industry*. Berkeley: University of California Press.
- Doeringer, Peter
1982 "Internal labor markets and paternalism in rural areas." Mimeo, Department of Economics, Boston University.
- Doeringer, Peter and Michael Piore
1971 *Internal Labor Markets and Manpower Analysis*. Lexington, MA: D.C. Heath.
- Dunlop, John
1966 "Job vacancy measures and economic analysis." In Robert Ferber (ed.), *The Measurement and Interpretation of Job Vacancies*. New York: Columbia University Press.
- Edwards, Richard
1979 *Contested Terrain*. New York: Basic Books.
- Gordon, David, Richard Edwards and Michael Reich
1982 *Segmented Work, Divided Workers*. New York: Cambridge University Press.
- Granovetter, Mark
1974 *Getting a Job: A Study of Contacts and Careers*. Cambridge, MA: Harvard University Press.
- 1983 "Labor mobility, internal markets and job-matching: a comparison of the sociological and economic approaches." Mimeo, Department of Sociology, SUNY Stony Brook.
- Greene, Richard
1982 "Tracking job growth in private industry." *Monthly Labor Review* 105 (September):3-9.
- Hall, Richard
1972 *Organizations: Structure and Process*. Englewood Cliffs, NJ: Prentice-Hall.
- Kalleberg, Arne, Michael Wallace and Robert Althauser
1981 "Economic segmentation, worker power and income inequality." *American Journal of Sociology* 87:651-83.
- Kimberley, John
1976 "Organizational size and the structuralist perspective: a review, critique and proposal." *Administrative Science Quarterly* 21:571-97.
- Marsh, Robert M. and Hiroshi Mannari
1981 "Technology and size as determinants of the organizational structure of Japanese factories." *Administrative Science Quarterly* 26:33-57.
- Oi, Walter
1983 "The fixed employment costs of specialized labor." In Jack Triplett (ed.), *The Measurement of Labor Costs*. Chicago: University of Chicago Press.
- Pfeffer, Jeffrey and Yinon Cohen
1983 "Understanding the employment relationship: correlates of internal labor market arrangements in organizations." Mimeo, Graduate School of Business, Stanford University.
- Scherer, Frederick M.
1980 *Industrial Market Structure and Economic Performance*. Second Edition. Chicago: Rand McNally.
- Simon, Herbert
1957 "The compensation of executives." *Sociometry* 20:32-35.
- Stigler, George
[1951] "The division of labor is limited by the extent of the market." Pp. 131-45 in George Stigler (ed.), *The Organization of Industry*. Chicago: University of Chicago Press.
- Stolzenberg, Ross
1978 "Bringing the boss back in." *American Sociological Review* 43:813-28.
- Thurow, Lester
1975 *Generating Inequality*. New York: Basic Books.
- White, Harrison C.
1970 *Chains of Opportunity*. Cambridge: Harvard University Press.