REVOLVING DOORS REEXAMINED: OCCUPATIONAL SEX SEGREGATION OVER THE LIFE COURSE*

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Scholars have argued that although occupational sex segregation is high in aggregate terms, women frequently move between sex-typical and sex-atypical occupations over the life course—hence the "revolving doors." I reexamine the revolving doors thesis using career history data from Great Britain. I argue that the conventional boundaries for occupational sex types need revision, at least for Britain. Specifically, female-dominated occupations should be distinguished from heavily female-dominated occupations. I show that although the strong version of the revolving doors thesis (which rules out path dependence) does not apply to both "female" and "heavily female" occupations, a weak version describes the former better than it does the latter. This result points to a ghetto effect.

In his path-breaking work on occupational sex segregation, J. Jacobs (1989) proposes the idea of "revolving doors": although occupational sex segregation is high (in the United States) in aggregate terms, women frequently move between sex-typical and sex-atypical occupations over their life course. The key evidence he gives to support this claim comes from a sex-type mobility table (J. Jacobs 1989, chap. 7). Using data from the National Longitudinal Survey of Mature Women (NLS), Jacobs constructs a mobility table that shows the occupational sex types of the NLS respondents in 1967 and 1977. He shows that if those respondents who stayed in the same occupation in 1967 and 1977 are dropped from the table, the independence model fits the mobility table very well: In other words, for those women who had changed occupations between 1967 and 1977, their occupational sex type in 1967 does not predict their occupational sex type 10 years later.

This finding is interesting because it suggests that the disadvantages associated with "female" occupations are, unlike other forms of social disadvantages, not cumulative in their impact—that women working in female occupations are not trapped. Instead, many of these women will move into "male" or "integrated" occupations later in the life course.

The revolving doors thesis has been tested empirically. Rosenfeld and Spenner (1992) also find considerable occupational–sex-type mobility among women in the United States. But S. Jacobs (1995) reports negative findings using British data. Following J. Jacobs, she drops the "occupational stayers" from her sample. Then, in a series of logistic regressions, she shows that occupational sex type in Britain at an earlier time point has consistent and significant effects on subsequent occupational sex type. She suggests that her findings imply that this aspect of gender inequality in Europe may differ from that in the United States. While this may be true, it is important to note that both J. Jacobs (1989) and S. Jacobs (1995) study sex-type mobility between only two time points: Their question is essentially about whether there is random movement in occupational sex types 10 years apart.

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Testing for independence between two time points misses the crucial life-course nature of the original concept of revolving doors. Consider the distinction made by J. Jacobs (1989) between “cumulative disadvantage” and “revolving doors” as different mechanisms that may perpetuate occupational sex segregation. Cumulative disadvantage sees the penalties associated with female occupations, such as poorer training, as lasting and compounding. The longer one works in female occupations, the more difficult it is to make a change. Pushed to its extreme, the cumulative disadvantage thesis implies that female occupations are one-way trap doors.

In contrast, the revolving doors thesis, if taken strongly, has a first-order Markovian assumption (i.e., transition probabilities are conditionally independent of past history once the current state has been taken into account). This view is consistent with situations in which women in sex-atypical occupations face adverse social forces pushing them back into female occupations, and those already in female occupations find it difficult to move into sex-atypical occupations. The social forces that generate these tendencies and inertia may be strong, but they apply with the same strength regardless of how long a woman has stayed in her current position. This “strong version” of the revolving doors thesis rules out path dependence.

J. Jacobs (1989:51) also formulates three corollaries of the revolving doors thesis:

**Corollary 1:** Net of period effects, there is no increase in the extent of occupational sex segregation within a cohort over time.

**Corollary 2:** There is substantial mid-career mobility among women into, as well as out of, male occupations.

**Corollary 3:** Overall decline in occupational sex segregation is brought about not so much by cohort replacement as by a general decline in segregation across all cohorts.

The cumulative disadvantage thesis predicts the opposite implication for all three corollaries. Thus, “revolving doors” and “cumulative disadvantage” represent competing micro-models for occupational sex segregation. Their relative merits can be empirically examined through the corollaries outlined above. I test corollaries 1 and 2, as well as the Markovian assumption of the revolving doors thesis, using career history data from Great Britain.

**DATA**

The data set I use is the same one analyzed by S. Jacobs (1995). The data were collected in 1986 as part of the “Social Change and Economic Life Initiative” (SCELI) (Gallie, Marsh, and Vogler 1994). The SCEL data include the noninstitutional population, ages 20 to 60, from six local labor markets in Britain. Altogether a random sample of 6,111 people was interviewed, and detailed work and life histories were collected from the respondents retrospectively. The response rate was about 75 percent. Because it is desirable to use benchmarks for occupational sex segregation that are close in time to the starting date of each job spell, I analyze a subsample of the SCEL respondents: women who entered the labor market between 1967 and 1986 (N = 1,493).

From official publications on the 1971 census in Britain, I calculate the percentage of women workers found in each of the 161 OPCS occupation units (U.K. Office of Population Censuses and Surveys 1984). The 161 occupations are then grouped into 10 categories—each category represents one decile level of occupational sex segregation. I repeat this procedure with the 1981 census to obtain a second benchmark of sex segregation. The two benchmarks are then appended to the work history of each respon-

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1 The six local labor markets, defined as the Department of Employment’s 1984 “Travel to Work Areas,” are Aberdeen, Coventry, Kirkcaldy, Northampton, Rochdale, and Swindon. The SCEL researchers chose these areas because they reflect contrasting patterns of recent economic change: Coventry (West Midlands), Kirkcaldy (Fife, Scotland), and Rochdale (north of Manchester) suffered high unemployment in the early and mid-1980s, while Aberdeen (northeast Scotland), Northampton (East Midlands), and Swindon (central southern England) experienced relatively low unemployment during the same period.
dent—the 1971 benchmark for job spells starting between 1967 and 1976, and the 1981 benchmark for job spells starting between 1977 and 1986. An occupational–sex-type history is thus constructed for each respondent. Each of these histories may contain up to 11 distinct categories: the 10 decile levels plus a residual category for episodes of nonwork (i.e., unemployment, economic inactivity, or resumed full-time education).

Career histories, by their very nature, are complex. I begin with two simple cross-classifications. The first table cross-classifies the respondents by their first and last occupation according to the degree of sex segregation—the First-Last Table (FLT). This is akin to a standard mobility table. The second cross-classification is the “Cumulative Spells Table” (CST), in which each cell entry represents a job shift (Halpin 1992). Note that while each respondent contributes exactly one count to the FLT, those with more job-changing experience contribute more to the CST. The main diagonal of the CST contains transitions between occupations at the same decile level of occupational sex segregation as well as right-censored spells.2

IDENTIFYING OCCUPATIONAL–SEX-TYPE BOUNDARIES

The first thing I wish to find out about the FLT and the CST is whether they can be simplified. This is the same as asking: Where are the boundaries for male, integrated, and female occupations? Using procedures proposed by Goodman (1981) and Breiger (1981), J. Jacobs (1989) has empirically identified the following boundaries: “male occupations” are those occupations in which women account for 0 to 29.9 percent of the work force; “female occupations” are those in which women make up 70 to 100 percent of the work force; the remaining occupations are “integrated occupations.”

I follow J. Jacobs and apply the same tests to the FLT and the CST. In operational terms, my aim is to test which, if any, of the 10 categories of occupations can be combined. Both the Goodman and the Breiger tests are loglinear models. They are based on the idea that a necessary condition for combining two or more categories of a mobility table is that independence should prevail among the cells of the relevant rows and columns. Goodman’s (1981) homogeneity test considers one pair of adjacent rows and one pair of adjacent columns at a time. It can be implemented by weighting out the cells outside of the relevant rows and columns, and then fitting the quasi-independence model. For Breiger’s (1981) internal homogeneity test, the mobility table is first partitioned into rectangular subregions according to boundaries proposed by the researcher, and then independence is tested within all subregions.3 Note that both the Goodman and the Breiger tests, as applied here, are exploratory in nature. Thus, the results I report should be interpreted with caution, and replication using other data sets is needed before these results can be considered to be confirmed.

Applying the Goodman test to the FLT, I find that categories 1 and 2, 2 and 3, 4 and 5, 5 and 6, and 8 and 9 can be combined. Almost the same result is obtained for the CST, except that categories 7 and 8 of the CST also can be combined (see note 2). Table 1 reports the results of the Breiger tests. I have tested three models for partitioning the mobility tables. Model A uses the boundaries proposed by J. Jacobs. Models B and C follow the boundaries as suggested by the Goodman test as applied to the FLT and the CST respectively. Only Model C fits the FLT satisfactorily by the conventional standard of 5 percent. For the CST, a satisfactory fit is achieved by Models B (p-value = .09) and C (p-value = .09). Further comparison between Models B and C suggest that Model C is preferable to Model B (an increase of G2 of 10.8 for 9 degrees of freedom is not significant). Thus I take Model C as my final model.

Note that Model C suggests four rather than three occupational sex types. I label

3 Formally, the Breiger model can be represented as

\[ F_{ij} = \alpha \beta_i \gamma_j \delta_i B_{ij} \Gamma_{jk}, \] for \((i,j) \in S_k\) and \(i \neq j\),

where \(i\) and \(j\) index origin and destination respectively, \(F_{ij}\) is the fitted value, and \(S_k\) defines the \(k\) rectangular subtables.
Table 1. Internal Homogeneity Test for Combining Categories Representing Levels of Occupational Sex Segregation, Applied to First-Last Occupation Table (FLT) and Cumulative Spell Table (CST): Women in Britain, 1967 to 1986

<table>
<thead>
<tr>
<th>Partition Model</th>
<th>FLT (10 × 10 Cells)</th>
<th>CST (11 × 11 Cells)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>G²</td>
<td>d.f.</td>
</tr>
<tr>
<td>A²</td>
<td>71.9</td>
<td>39</td>
</tr>
<tr>
<td>B²</td>
<td>31.1</td>
<td>18</td>
</tr>
<tr>
<td>C²</td>
<td>39.2</td>
<td>27</td>
</tr>
</tbody>
</table>

Model Comparison for CST:
Model C–B
\[ \Delta G^2 = 10.8 \quad \Delta d.f. = 9 \quad p = .29 \]

Resulting Category Combinations for:
Model A: (1,2,3) (4,5,6,7) (8,9,10) [11]
Model B: (1,2,3) (4,5,6) (7) (8,9) (10) [11]
Model C: (1,2,3) (4,5,6) (7,8,9) (10) [11]

Note: Internal homogeneity test is from Breiger (1981); N = 1,493.

a Uses boundaries as proposed by J. Jacobs (1989).
b Uses boundaries suggested by the Goodman test (Goodman 1981).

dose as “male occupations” (where women account for 0 to 30 percent of the labor force), “integrated occupations” (30 to 60 percent), “female occupations” (60 to 90 percent), and “heavily female occupations” (90 to 100 percent).4

TRENDS IN OCCUPATIONAL SEX SEGREGATION BY COHORT

Having determined the boundaries for occupational sex types, I now compare how the cumulative disadvantage thesis and the revolving doors thesis fit the data. As I have noted, the cumulative disadvantage thesis implies that, net of period effect, the aggregate level of occupational sex segregation within a cohort of women will increase over the life course (Corollary 1). More specifically, this thesis predicts that over time more and more women will be located in female occupations. Figure 1d plots the percentage of women workers found in the four types of occupations by labor market experience. Since I am looking for trends over the life course, I restrict my analyses to the three “older” cohorts in the sample—those who entered the labor market in 1967–1971 (N = 416), 1972–1976 (N = 379) and 1977–1981 (N = 347).

The most notable feature of these graphs is the contrast between female occupations (1c) and heavily female occupations (1d). Consistent with the cumulative disadvantage thesis, Figure 1d shows an upward trend for the percentage of women workers found in heavily female occupations. However, the trend for female occupations (Figure 1c), for about the first 10 years, is downward. Over 60 percent of the respondents worked in female occupations when they first entered the labor market. Ten years later, only 40 percent of the 1967–1971 cohort were still working in female occupations. This was followed by a rebound to about 50 percent in the next 5 years.

We must follow more cohorts of women over a reasonably long period of time before we can confirm the contrast just described. However, if this contrast is real, then the possibility arises that while the cumulative disadvantage thesis applies to heavily female occupations, the revolving doors thesis

4 Note that the approach I take here is a direct extension of J. Jacobs’s approach. See Xie and Shauman (1997) for an alternative approach.
Figure 1. Percentage of Women Workers Employed in Four Occupational Sex Types, by Years of Labor Market Experience: Women in Britain, 1967 to 1986

Note: Scales for the y-axes differ for all four graphs.

applies to female occupations. That is, while the disadvantages of previous experience accumulate for women employed in heavily female occupations, the disadvantages for those employed in female occupations, at least during their first 10 years in the labor market, fade more quickly. Working in extremely segregated settings (i.e., heavily female occupations) may make the associated penalties particularly lasting—a *ghetto effect*.5

5 It can be shown that the contrast between Figures 1c and 1d cannot be accounted for by a period effect. Details are available from the author.

**EVENT HISTORY ANALYSIS**

The results above, then, suggest the possibility of a ghetto effect. I test this idea further using individual-level data in an event history framework. Recall that the cumulative disadvantage thesis implies that the longer a woman stays in a female occupation, the more difficult it is for her to leave it. In contrast, the revolving doors thesis implies the opposite: The exit rate out of female occupations does *not* depend on the amount of time already spent there. In other words, the revolving doors thesis assumes a first-order Markovian process.
The cumulative disadvantage thesis also predicts that “delayed entry into male-dominated occupations would be difficult; at the very least, delayed entries of women into male-dominated occupations should be less frequent than exits [from male-dominated occupations]” (J. Jacobs 1989:51). In contrast, the revolving doors thesis implies substantial mid-career occupational—sex-type mobility in both directions. I test this corollary (Corollary 2) as well as the first-order Markovian assumption of the revolving doors thesis using an event history framework. In particular, I use the strategy of episode-splitting and the exponential transition rate model (Blossfeld and Rohwer 1995:139–61). I split the career histories of the respondents into quarterly subepisodes. Each subepisode contains information about the occupational sex types at the beginning and end of the quarter, the starting and ending time for the spell in question, and the current values of time-varying covariates. The dependent variables are the transition rates among the various occupational sex types, and these rates are assumed to be related to the covariates through the following model:⁶

\[
 r_{ij}(t) = r_{ij} = \exp(\beta_{1ij} \text{Age} + \beta_{2ij} \text{Femexp} + \beta_{3ij} \text{Hfemexp} + \alpha_{ij} A),
\]

where \( r_{ij} \) is the transition rate from origin occupational sex type \( i \) to destination occupational sex type \( j \); \( \beta_{1ij}, \beta_{2ij}, \) and \( \beta_{3ij} \) are the coefficients for three key variables—age, previous experience in female occupations (Femexp), and previous experience in heavily female occupations (Hfemexp); \( A \) is a vector for the other covariates included in the model; and \( \alpha_{ij} \) is the vector of coefficients associated with these covariates.

Two sets of covariates are both time-varying in nature.⁷ The first set describes the personal and family characteristics of the respondents: number of children under age six, marital status, and education, as well as the three key covariates—age, previous work experience in female occupations, and previous experience in heavily female occupations. The second set of covariates describes the current job held by the respondents: hours worked, supervisory responsibilities, promotion prospects, supervision, employment sector, job security, and job desirability.

A central theme in the study of women’s employment concerns how women’s domestic roles and responsibilities restrict their occupational choices and behavior. To the extent that jobs in female and heavily female occupations allow women to combine more easily domestic roles and formal employment, being married and having young children should increase the transition rates into these occupations and slow down mobility out of them.

The effect of age on occupational—sex-type mobility should be interpreted with care. The general tendency for job-changing rate to decline with age is well known. Thus I expect to observe a negative effect of age for all types of transitions. The cumulative disadvantage thesis predicts that women’s mid-career entries into male occupations will be rarer than exits. This can be taken to imply that the negative age effect for the “female”-to-“male” transition is stronger than that for the opposite transition. The same comparison should be true for the pairs of transition between “heavily female” occupations and “male” occupations. In other words, it is the relative magnitude of the age effect that is of interest here.

The two variables on the percentage of previous labor force experience spent in female occupations and in heavily female occupations provide a direct test for path dependence. If the strong version of the re-

⁶ To allow for duration dependence of transition rates, I have also analyzed the data using two piecewise constant rate models. One model is the same as the exponential model except the baseline transition rate is allowed to vary across intervals. The second piecewise constant rate model differs from the first in that the covariate of age is fixed for each spell (i.e., fixed as age at the beginning of the spell), thus preventing age from absorbing the effect of duration dependence. It turns out that for both piecewise constant rate models, the estimated baseline rates do not differ significantly across intervals, after including the time-varying covariates. The only exception is transitions out of the state of “nonwork.” Since I am concerned primarily with transitions between male and female or heavily female occupations, the simpler exponential model seems adequate.

⁷ Further details on the covariates and the complete set of parameter estimates are available from the author on request.
Table 2. Parameter Estimates from the Exponential Model of Transition Out of and into Female-Type Occupations: Women in Britain, 1967 to 1986

<table>
<thead>
<tr>
<th>Variable</th>
<th>Transition Out of Female Occupations into:</th>
<th>Transition into Female Occupations Out of:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male Occupations</td>
<td>Integrated Occupations</td>
</tr>
<tr>
<td>Intercept</td>
<td>-3.062***</td>
<td>-1.324</td>
</tr>
<tr>
<td></td>
<td>(.780)</td>
<td>(.742)</td>
</tr>
<tr>
<td>Hope-Goldthorpe score</td>
<td>-0.04*</td>
<td>-0.038***</td>
</tr>
<tr>
<td></td>
<td>(.011)</td>
<td>(.010)</td>
</tr>
<tr>
<td>Number of children under age six</td>
<td>-0.579*</td>
<td>.028</td>
</tr>
<tr>
<td></td>
<td>(.268)</td>
<td>(.182)</td>
</tr>
<tr>
<td>Married*</td>
<td>.153</td>
<td>-0.235</td>
</tr>
<tr>
<td></td>
<td>(.222)</td>
<td>(.234)</td>
</tr>
<tr>
<td>Divorced/separated/widowed*</td>
<td>.096</td>
<td>-0.021</td>
</tr>
<tr>
<td></td>
<td>(.551)</td>
<td>(.494)</td>
</tr>
<tr>
<td>Age (in months)</td>
<td>-0.004</td>
<td>-0.007**</td>
</tr>
<tr>
<td></td>
<td>(.002)</td>
<td>(.002)</td>
</tr>
<tr>
<td>Previous experience in female occupations</td>
<td>-0.013***</td>
<td>-0.011**</td>
</tr>
<tr>
<td></td>
<td>(.004)</td>
<td>(.003)</td>
</tr>
<tr>
<td>Previous experience in heavily female occupations</td>
<td>-0.017*</td>
<td>-0.013</td>
</tr>
<tr>
<td></td>
<td>(.008)</td>
<td>(.007)</td>
</tr>
<tr>
<td>Number of subepisodes</td>
<td>147</td>
<td>169</td>
</tr>
</tbody>
</table>

Note: Numbers in parentheses are standard errors. Key variables of interest are shaded. The reported parameters are net of a set of job characteristic variables (see note 7).

*p < .05   **p < .01   ***p < .001 (two-tailed tests)

The revolving doors thesis is correct, these two variables will have no effect on transition rates.

The second set of covariates describes a respondent’s current job; the variables are included primarily as control variables. I do not have strong views on the direction and strength of many of these covariates, but I note here that the Hope-Goldthorpe score of job desirability can be understood as a prestige score.

The event history model I use has 312 parameters. There are so many parameters because this model considers all possible flows among the five states (i.e., 20 types of transitions). Given limited space, I only present those results that are particularly relevant for the revolving doors thesis—transitions into and out of female occupations and heavily female occupations (Tables 2 and 3). Also, since the effect of most of the job attributes variables, with the exception of the Hope-Goldthorpe score, are not statistically significant and their signs are inconsistent across destinations, I do not report these parameters (see note 7).

Table 2 concerns the transitions into and out of female occupations. Women in more desirable occupations, as measured by the Hope-Goldthorpe scale, have a stronger tendency to stay put. It also can be seen that, with one exception, marital status and the number of young children do not affect mobility between occupations, but these variables do affect movement to and from nonwork. For instance, having one additional child under age six reduces the nonwork-to-female-occupation transition rate by 23 percent ($e^{-0.266} - 1$). Not surprisingly, the transition rate for married women going from female occupations to nonwork is almost three times as high ($e^{1.029}$) as the rate for those who had never been married. For mobility in the opposite direction, the transition rate for
Table 3. Parameter Estimates from the Exponential Model of Transition into and Out of Heavily Female-Type Occupations: Women in Britain, 1967 to 1986

<table>
<thead>
<tr>
<th>Variable</th>
<th>Transition Out of Heavily Female Occupations into:</th>
<th>Transition into Heavily Female Occupations Out of:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male Occupations</td>
<td>Integrated Occupations</td>
</tr>
<tr>
<td>Intercept</td>
<td>-5.397**</td>
<td>-2.222</td>
</tr>
<tr>
<td></td>
<td>(1.669)</td>
<td>(1.176)</td>
</tr>
<tr>
<td>Hope-Goldthorpe score</td>
<td>-0.008</td>
<td>-0.043**</td>
</tr>
<tr>
<td></td>
<td>(.017)</td>
<td>(.014)</td>
</tr>
<tr>
<td>Number of children under age six</td>
<td>0.486</td>
<td>-0.226</td>
</tr>
<tr>
<td></td>
<td>(.408)</td>
<td>(.346)</td>
</tr>
<tr>
<td>Married\textsuperscript{a}</td>
<td>0.321</td>
<td>0.293</td>
</tr>
<tr>
<td></td>
<td>(.478)</td>
<td>(.385)</td>
</tr>
<tr>
<td>Divorced/separated/ widowed\textsuperscript{a}</td>
<td>-9.170</td>
<td>0.853</td>
</tr>
<tr>
<td></td>
<td>(109.433)</td>
<td>(.691)</td>
</tr>
<tr>
<td>Age (in months)</td>
<td>-0.003</td>
<td>-0.005</td>
</tr>
<tr>
<td></td>
<td>(.004)</td>
<td>(.003)</td>
</tr>
<tr>
<td>Previous experience in female occupations</td>
<td>-0.011</td>
<td>-0.008</td>
</tr>
<tr>
<td></td>
<td>(.012)</td>
<td>(.008)</td>
</tr>
<tr>
<td>Previous experience in heavily female occupations</td>
<td>-0.005</td>
<td>-0.011</td>
</tr>
<tr>
<td></td>
<td>(.010)</td>
<td>(.007)</td>
</tr>
<tr>
<td>Number of subepisodes</td>
<td>31</td>
<td>51</td>
</tr>
</tbody>
</table>

Note: Numbers in parentheses are standard errors. Key variables of interest are shaded. The reported parameters are net of a set of job characteristic variables (see note 7).

\textsuperscript{a} Reference category is never-married.

\textsuperscript{*}p < .05 \quad \textsuperscript{**}p < .01 \quad \textsuperscript{***}p < .001 (two-tailed tests)

married women is only half of that for the never-married (e\textsuperscript{-0.03}).

For the three key variables of interest (shaded in Table 2), readers can see that, with the notable exception of the female-to-male occupational transition, aging dampens all transitions. This means that while the male-to-female transition rate declines by .5 percent (e\textsuperscript{-0.03} = 1) each month,\textsuperscript{8} the transition rate for moving from female occupations to male occupations stays constant. This is inconsistent with the cumulative disadvantage thesis. The negative age effect is also stronger for the integrated-to-female transition than for the female-to-integrated transition: Transition rates decline more rapidly with age for women entering female occupations than for those leaving them.

Previous experience in female occupations increases the transition rates into female occupations, but decreases the transition rates out of them. The effects are strong and significant (with the exception of the male-to-female transition). This result offers clear evidence for path dependence. It must be concluded that the strong version of the revolving doors thesis, with its first-order Markovian assumption, is not true for the female occupations.

Table 3 reports the parameter estimates for the transitions into and out of heavily female occupations.\textsuperscript{9} The results here are generally similar to those in Table 2. For example, women in desirable occupations exhibit a strong tendency to stay put, and other

\textsuperscript{8} This parameter is only marginally significant (p < .10). Note also that the magnitude of this parameter is larger than that of the opposite transition.

\textsuperscript{9} The small N of some of the columns of Table 3 may partly explain why some covariates are not statistically significant.
job attributes (not shown here) tend not to have significant effects. Also, marital status and the presence of children under age six do not affect transitions between occupations. However, marriage does increase the heavily-female-to-nonwork transition rate by a factor of three ($e^{1.312}$), and each additional young child depresses the opposite transition rate by 39 percent ($e^{-501} - 1$).

Again, similar to Table 2, previous work experience in heavily female occupations speeds up movement into (and slows down movement out of) this occupational type.\(^\text{10}\) This points again to path dependence. However, contrary to expectation, aging does not affect the transition rates between heavily female occupations and male or integrated occupations.

To help visualize the many pairs of opposite effects discussed above, and also to bring the baseline transition rates (i.e., the intercepts) into the picture, Figure 2 plots two pairs of lines to show the relationship between occupational–sex-type transition rate and age for (1) mobility between male and female occupations, and (2) mobility between male and heavily female occupations. Where appropriate, I allow for possible composition effects of the key covariates. This is done by including in the plot, for each combination of age and origin occupational sex type, the mean observed value of those key covariates that are significant for the transition in question (weighted by the corresponding coefficients).

Figure 2 illustrates a clear contrast between female occupations and heavily female occupations. The rates for entering and leaving heavily female occupations (vis-à-vis male occupations) are stable over the age range of 20 to 35 years. More important, the entry rate for heavily female occupations is always higher than the exit rate. This is in line with the cumulative disadvantage thesis.

The same cannot be said of female occupations. At age 20, the entry and exit rates for female occupations (vis-à-vis male occu-
pations) are about the same. However, the entry rate for female occupations declines steadily with age, while the exit rate remains roughly constant. As a result, there is a growing gap between entry and exit rates in a direction that is inconsistent with the cumulative disadvantage thesis: For example, the female-to-male transition rate at age 30 is much higher than the male-to-female transition rate.

In summary, two points are especially notable. First, there is strong evidence of path dependence for both female and heavily female occupations. Previous employment in these two types of occupations increases the entry rates into them and reduces the exit rates out of them. The strong version of the revolving doors thesis, with its Markovian assumption, does not stand up to this empirical test. Second, female occupations differ from heavily female occupations in one important aspect: While the cumulative disadvantage thesis applies to heavily female occupations, it does not describe female occupations very well. There seems to be a ghetto effect for heavily female occupations—disadvantages are cumulative only for those occupations that are highly segregated by sex. In this sense, one may argue that a weak version of the revolving doors thesis applies to the female occupations.

SUMMARY AND DISCUSSION

This paper builds on J. Jacobs’ s (1989) pathbreaking work by comparing “revolving doors” and “cumulative disadvantage” as mechanisms that perpetuate occupational sex segregation. I show that the conventional boundaries for occupational sex types need revision, at least for Britain. Specifically, “female” occupations should be distinguished from “heavily female” occupations. Making this distinction reveals interesting patterns. There is some evidence at the aggregate level to suggest that women in these two types of occupations behave differently: While the percentage of women workers in heavily female occupations increases over the life course of a cohort (in line with the cumulative disadvantage thesis), the percentage of women workers in female occupations declines during a cohort’s first 10 years in the labor market.

The event history analysis reported here shows that mobility between occupational sex types is not driven by job characteristics, except in the sense that women in more desirable occupations have a stronger tendency to stay put. For the most part, young children and marital status do not affect transitions among the occupational sex types directly, but they do affect transitions between nonwork and being employed in female occupations or heavily female occupations.

I have demonstrated clear evidence of path dependence in occupational–sex-type mobility among women in Britain. It follows that the strong version of the revolving doors thesis, with its Markovian assumption, does not apply to female occupations or to heavily female occupations. At the same time, the cumulative disadvantage thesis does not apply to female occupations either. This result suggests a ghetto effect: There may be certain factors associated with working in extremely segregated settings that make the associated penalties particularly lasting.

What factors could contribute to this ghetto effect? What factors make the disadvantages associated with female occupations less cumulative? And what are the implications of these findings? To address these issues, perhaps we should first consider the following question: Does this ghetto effect reflect specific features of the British labor market, such as the prevalence of part-time work, especially among women? A concentration of part-time jobs in the heavily female occupations may explain the results reported here, if part-time jobs offer less prospect for mobility. Unfortunately, empirical evidence from this study does not support this line of argument.11

The irrelevance of the full-time/part-time work distinction notwithstanding, a key issue for future research is to relate the dynamics of occupational sex segregation to the prominent institutional and structural features of society. It will be important, for example, to study if equal opportunity legis-

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11 Our respondents reported 3,102 job spells in female occupations; 23 percent of these were part-time jobs. By comparison, there were 1,259 job spells in heavily female occupations; 21 percent were part-time jobs. Also, the covariate of “hours worked” is not significant in the event history model.
lation and general trends in women’s employment have had any effect on occupational–sex-type mobility. I leave these issues for future research.

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**REFERENCES**


